DAIKIN

R-410A

Engineering Data

- Heat Pump -

Multi-Split Type Air Conditioners

RMXS-L Series

INVERTER

Part 5   Options 469

Cautions

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided and choose an outdoor unit with anti-corrosion treatment.

Part 1   1
Selection Procedure

1. Selection Procedure

1.1 Outdoor Unit

Model name		RMXS48LVJU
Rated capacity (kBtu/h)	Cooling	48
	Heating	54
Connectable indoor units	Number of indoor units	2 ~ 8 units
	Total indoor unit capacity (kBtu/h)	24 ~ 62
Maximum number of connectable BP units		3 units

1.2 Indoor Unit

Class		07	09	12	15	18	24
Rated capacity (kBtu/h)		7	9	12	15	18	24
RA	CTXG-Q Series	—	●	●	—	●	—
	CTXS-J Series	●	—	—	—	—	—
	CTXS-H Series	—	●	●	—	—	—
	CTXS-L Series	●	—	—	—	—	—
	FTXS Series	—	●	●	●	●	●
	FDXS Series	—	●	●	—	—	—
	CDXS Series	—	—	—	●	●	●
	FDMQ Series	—	●	●	●	●	●
	FVXS Series	—	●	●	●	●	—
SA	FFQ Series	—	●	●	●	●	—

1.3 BP Unit

Model name	BPMKS048A2U	BPMKS049A3U
Type	2 rooms	3 rooms
Maximum capacity (kBtu/h)	48	62
Maximum number of BP units for 1 system	3 units	

1.4 REFNET JOINT

Model name		KHRP26A22T
Number of BP units	1	Not necessary
	2	KHRP26A22T × 1
	3	KHRP26A22T × 2

1.5 Remote Controller

Choose the suitable remote controller for FDMQ series and FFQ series.

FDMQ Series	Wired remote controller	BRC1E73
	Wireless remote controller	BRC082A43
FFQ Series	Wired remote controller	BRC1E73
	Wireless remote controller	BRC082A41W / BRC082A42W / BRC082A42S

1.6 Decoration Panel

A decoration panel (BYFQ60B3W1, BYFQ60C2W1W or BYFQ60C2W1S) is required for FFQ series.

1.7 Options

You can choose various optional accessories for control system, indoor unit, and outdoor unit.
(→ See "Part 5 Options" for details.)

Part 2
Multi-Split Type
Air Conditioners
RMXS-L Series

2

CTXG09QVJUW	FDXS09LVJU	RMXS48LVJU
CTXG09QVJUS	FDXS12LVJU	BPMKS048A2U
CTXG12QVJUW	CDXS15LVJU	BPMKS049A3U
CTXG12QVJUS	CDXS18LVJU	
CTXG18QVJUW	CDXS24LVJU	
CTXG18QVJUS	FDMQ09RVJU	
CTXS07JVJU	FDMQ12RVJU	
CTXS09HVJU	FDMQ15RVJU	
CTXS12HVJU	FDMQ18RVJU	
CTXS07LVJU	FDMQ24RVJU	
FTXS09LVJU	FVXS09NVJU	
FTXS12LVJU	FVXS12NVJU	
FTXS15LVJU	FVXS15NVJU	
FTXS18LVJU	FVXS18NVJU	
FTXS24LVJU	FFQ09Q2VJU	
	FFQ12Q2VJU	
	FFQ15Q2VJU	
	FFQ18Q2VJU	

1. Power Supply

Indoor Unit		Outdoor Unit	Power Supply
Wall Mounted Type	CTXG09QVJUW	RMXS48LVJU BPMKS048A2U BPMKS049A3U	1 phase, 208 - 230 V, 60 Hz
	CTXG09QVJUS		
	CTXG12QVJUW		
	CTXG12QVJUS		
	CTXG18QVJUW		
	CTXG18QVJUS		
	CTXS07JVJU		
	CTXS09HVJU		
	CTXS12HVJU		
	CTXS07LVJU		
	FTXS09LVJU		
	FTXS12LVJU		
	FTXS15LVJU		
	FTXS18LVJU		
	FTXS24LVJU		
Duct Connected Type (Low static pressure)	FDXS09LVJU		
	FDXS12LVJU		
	CDXS15LVJU		
	CDXS18LVJU		
	CDXS24LVJU		
Duct Connected Type (Medium static pressure)	FDMQ09RVJU		
	FDMQ12RVJU		
	FDMQ15RVJU		
	FDMQ18RVJU		
	FDMQ24RVJU		
Floor Standing Type	FVXS09NVJU		
	FVXS12NVJU		
	FVXS15NVJU		
	FVXS18NVJU		
Ceiling Mounted Cassette Type	FFQ09Q2VJU		
	FFQ12Q2VJU		
	FFQ15Q2VJU		
	FFQ18Q2VJU		

Note: Power Supply Intake ; Outdoor Unit, BP Unit

2. Functions

Category	Functions	RMXS48LVJU	Category	Functions	RMXS48LVJU
Basic Functions	Inverter (with inverter power control)	●	Health & Cleanliness	Air-purifying filter	—
	Operation limit for cooling	Refer to P. 63		Air-purifying filter with deodorizing function	—
	Operation limit for heating			Titanium apatite deodorizing filter	—
	PAM control	—		Longlife filter	—
Compressor	Oval scroll compressor	●		Air filter (prefilter)	—
	Swing compressor	—		Wipe-clean flat panel	—
	Rotary compressor	—		Washable grille	—
	Reluctance DC motor	●		Filter cleaning indicator	—
Comfortable Airflow	Power-airflow flap (horizontal blade)	—		Good-sleep cooling operation	—
	Power-airflow dual flaps (horizontal blade)	—	Timer	WEEKLY TIMER operation	—
	Power-airflow diffuser	—		24-hour ON/OFF TIMER	—
	Wide-angle louvers (vertical blades)	—		72-hour ON/OFF TIMER	—
	Auto-swing (up and down)	—		NIGHT SET mode	—
	Auto-swing (right and left)	—	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	—
	3-D airflow	—		Self-diagnosis (R/C, LED)	●
	COMFORT AIRFLOW operation	—		Wiring error check function	●
Comfort Control	Auto fan speed	—		Automatic test operation	●
	Indoor unit quiet operation	—		Memory function	●
	NIGHT QUIET mode (automatic)	●		Anti-corrosion treatment of outdoor heat exchanger	●
	OUTDOOR UNIT QUIET operation (manual)	●			
	INTELLIGENT EYE operation (auto energy saving)	—	Flexibility	Multi-split/split type compatible indoor unit	—
	2-area INTELLIGENT EYE operation (comfort)	—		Flexible power supply correspondence	—
	Quick warming function	●		High ceiling application	—
	Hot-start function	—		Chargeless	—
	Automatic defrosting	●		Either side drain (right or left)	—
Operation	Automatic operation	—		Power selection	—
	Program dry function	—		°F/°C changeover R/C temperature display (factory setting: °F)	—
	Fan only	—	Remote Control	Remote control adaptor (normal open pulse contact) (option)	—
Lifestyle Convenience	POWERFUL operation (non-inverter)	—			
	POWERFUL operation (inverter)	—		Remote control adaptor (normal open contact) (option)	—
	Priority-room setting	—		DIII-NET compatible (adaptor) (option)	—
	COOL/HEAT mode lock	—		Wireless LAN connection (option)	—
	HOME LEAVE operation	—	Remote Controller	Wireless	—
	ECONO operation	—		Wired	—
	Indoor unit **ON/OFF** button	—			
	Signal receiving sign	—			
	R/C with back light	—			
	Temperature display	—			

Note: ● : Available

— : Not available

2

Category	Functions	CTXG09/12/18QVJUW(S)	Category	Functions	CTXG09/12/18QVJUW(S)
Basic Functions	Inverter (with inverter power control)	●	Health & Cleanliness	Air-purifying filter	—
	Operation limit for cooling	—		Air-purifying filter with deodorizing function	—
	Operation limit for heating	—		Titanium apatite deodorizing filter (option)	●
	PAM control	—		Longlife filter (option)	—
Compressor	Oval scroll compressor	—		Air filter (prefilter)	●
	Swing compressor	—		Wipe-clean flat panel	●
	Rotary compressor	—		Washable grille	—
	Reluctance DC motor	—		Filter cleaning indicator	—
Comfortable Airflow	Power-airflow flap (horizontal blade)	—		Good-sleep cooling operation	—
	Power-airflow dual flaps (horizontal blade)	●	Timer	WEEKLY TIMER operation	●
	Power-airflow diffuser	—		24-hour ON/OFF TIMER	●
	Wide-angle louvers (vertical blades)	●		72-hour ON/OFF TIMER	—
	Auto-swing (up and down)	●		NIGHT SET mode	●
	Auto-swing (right and left)	●	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●
	3-D airflow	●		Self-diagnosis (R/C, LED)	●
	COMFORT AIRFLOW operation	●		Wiring error check function	—
Comfort Control	Auto fan speed	●		Automatic test operation	—
	Indoor unit quiet operation	●		Memory function	—
	NIGHT QUIET mode (automatic)	—		Anti-corrosion treatment of outdoor heat exchanger	—
	OUTDOOR UNIT QUIET operation (manual)	●			
	INTELLIGENT EYE operation (auto energy saving)	—	Flexibility	Multi-split/split type compatible indoor unit	—
				Flexible power supply correspondence	—
	2-area INTELLIGENT EYE operation (comfort)	●		High ceiling application	—
	Quick warming function	—		Chargeless	—
	Hot-start function	●		Either side drain (right or left)	●
	Automatic defrosting	—		Power selection	—
Operation	Automatic operation	●		°F/°C changeover R/C temperature display (factory setting: °F)	●
	Program dry function	●			
	Fan only	●	Remote Control	Remote control adaptor (normal open pulse contact) (option)	●
Lifestyle Convenience	POWERFUL operation (non-inverter)	—			
	POWERFUL operation (inverter)	●		Remote control adaptor (normal open contact) (option)	●
	Priority-room setting	—			
	COOL/HEAT mode lock	—		DIII-NET compatible (adaptor) (option)	●
	HOME LEAVE operation	—		Wireless LAN connection (option)	●
	ECONO operation	●	Remote Controller	Wireless	●
	Indoor unit **ON/OFF** button	●		Wired (option)	●
	Signal receiving sign	●			
	R/C with back light	●			
	Temperature display	—			

Note: ● : Available

　　　 — : Not available

Category	Functions	CTXS07JVJU CTXS09/12HVJU	CTXS07LVJU FTXS09/12LVJU	Category	Functions	CTXS07JVJU CTXS09/12HVJU	CTXS07LVJU FTXS09/12LVJU
Basic Functions	Inverter (with inverter power control)	●	●	Health & Cleanliness	Air-purifying filter	—	—
	Operation limit for cooling	—	—		Air-purifying filter with deodorizing function	●	—
	Operation limit for heating	—	—		Titanium apatite deodorizing filter	—	●
	PAM control	—	—		Longlife filter (option)	—	—
Compressor	Oval scroll compressor	—	—		Air filter (prefilter)	●	●
	Swing compressor	—	—		Wipe-clean flat panel	●	●
	Rotary compressor	—	—		Washable grille	—	—
	Reluctance DC motor	—	—		Filter cleaning indicator	—	—
Comfortable Airflow	Power-airflow flap (horizontal blade)	—	—		Good-sleep cooling operation	—	—
	Power-airflow dual flaps (horizontal blade)	●	●	Timer	WEEKLY TIMER operation	—	●
	Power-airflow diffuser	—	—		24-hour ON/OFF TIMER	●	●
	Wide-angle louvers (vertical blades)	●	●		72-hour ON/OFF TIMER	—	—
	Auto-swing (up and down)	●	●		NIGHT SET mode	●	●
	Auto-swing (right and left)	●	●	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●	●
	3-D airflow	●	●		Self-diagnosis (R/C, LED)	●	●
	COMFORT AIRFLOW operation	—	●		Wiring error check function	—	—
Comfort Control	Auto fan speed	●	●		Automatic test operation	—	—
	Indoor unit quiet operation	●	●		Memory function	—	—
	NIGHT QUIET mode (automatic)	—	—		Anti-corrosion treatment of outdoor heat exchanger	—	—
	OUTDOOR UNIT QUIET operation (manual)	●	●	Flexibility	Multi-split/split type compatible indoor unit	—	—
	INTELLIGENT EYE operation (auto energy saving)	●	●		Flexible power supply correspondence	—	—
	2-area INTELLIGENT EYE operation (comfort)	—	—		High ceiling application	—	—
	Quick warming function	—	—		Chargeless	—	—
	Hot-start function	●	●		Either side drain (right or left)	●	●
	Automatic defrosting	—	—		Power selection	—	—
Operation	Automatic operation	●	●		°F/°C changeover R/C temperature display (factory setting: °F)	●	●
	Program dry function	●	●	Remote Control	Remote control adaptor (normal open pulse contact) (option)	●	●
	Fan only	●	●		Remote control adaptor (normal open contact) (option)	●	●
Lifestyle Convenience	POWERFUL operation (non-inverter)	—	—		DIII-NET compatible (adaptor) (option)	●	●
	POWERFUL operation (inverter)	●	●		Wireless LAN connection (option)	—	—
	Priority-room setting	—	—	Remote Controller	Wireless	●	●
	COOL/HEAT mode lock	—	—		Wired (option)	●	●
	HOME LEAVE operation	●	—				
	ECONO operation	—	●				
	Indoor unit **ON/OFF** button	●	●				
	Signal receiving sign	●	●				
	R/C with back light	●	●				
	Temperature display	—	—				

Note: ● : Available

— : Not available

2

Category	Functions	FTXS15/18/24LVJU	Category	Functions	FTXS15/18/24LVJU
Basic Functions	Inverter (with inverter power control)	●	Health & Cleanliness	Air-purifying filter	—
	Operation limit for cooling	—		Air-purifying filter with deodorizing function	—
	Operation limit for heating	—		Titanium apatite deodorizing filter	●
	PAM control	—		Longlife filter (option)	—
Compressor	Oval scroll compressor	—		Air filter (prefilter)	●
	Swing compressor	—		Wipe-clean flat panel	●
	Rotary compressor	—		Washable grille	—
	Reluctance DC motor	—		Filter cleaning indicator	—
Comfortable Airflow	Power-airflow flap (horizontal blade)	—		Good-sleep cooling operation	—
	Power-airflow dual flaps (horizontal blade)	●	Timer	WEEKLY TIMER operation	●
	Power-airflow diffuser	—		24-hour ON/OFF TIMER	●
	Wide-angle louvers (vertical blades)	●		72-hour ON/OFF TIMER	—
	Auto-swing (up and down)	●		NIGHT SET mode	●
	Auto-swing (right and left)	●	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●
	3-D airflow	●		Self-diagnosis (R/C, LED)	●
	COMFORT AIRFLOW operation	●		Wiring error check function	—
Comfort Control	Auto fan speed	●		Automatic test operation	—
	Indoor unit quiet operation	●		Memory function	—
	NIGHT QUIET mode (automatic)	—		Anti-corrosion treatment of outdoor heat exchanger	—
	OUTDOOR UNIT QUIET operation (manual)	●	Flexibility	Multi-split/split type compatible indoor unit	●
	INTELLIGENT EYE operation (auto energy saving)	●		Flexible power supply correspondence	—
	2-area INTELLIGENT EYE operation (comfort)	—		High ceiling application	—
	Quick warming function	—		Chargeless	—
	Hot-start function	●		Either side drain (right or left)	●
	Automatic defrosting	—		Power selection	—
Operation	Automatic operation	●		°F/°C changeover R/C temperature display (factory setting: °F)	●
	Program dry function	●			
	Fan only	●	Remote Control	Remote control adaptor (normal open pulse contact) (option)	●
Lifestyle Convenience	POWERFUL operation (non-inverter)	—			
	POWERFUL operation (inverter)	●		Remote control adaptor (normal open contact) (option)	●
	Priority-room setting	—			
	COOL/HEAT mode lock	—		DIII-NET compatible (adaptor) (option)	●
	HOME LEAVE operation	—		Wireless LAN connection (option)	—
	ECONO operation	●	Remote Controller	Wireless	●
	Indoor unit **ON/OFF** button	●		Wired (option)	●
	Signal receiving sign	●			
	R/C with back light	●			
	Temperature display	—			

Note: ● : Available

— : Not available

Category	Functions	CDXS15/18/24LVJU FDXS09/12LVJU with wired R/C	CDXS15/18/24LVJU FDXS09/12LVJU with wireless R/C	Category	Functions	CDXS15/18/24LVJU FDXS09/12LVJU with wired R/C	CDXS15/18/24LVJU FDXS09/12LVJU with wireless R/C
Basic Functions	Inverter (with inverter power control)	●	●	Health & Cleanliness	Air-purifying filter	—	—
	Operation limit for cooling	—	—		Titanium apatite deodorizing filter	—	—
	Operation limit for heating	—	—		Longlife filter (option)	—	—
	PAM control	—	—		Air filter (prefilter)	●	●
Compressor	Oval scroll compressor	—	—		Wipe-clean flat panel	—	—
	Swing compressor	—	—		Washable grille	—	—
	Rotary compressor	—	—		Filter cleaning indicator	—	—
	Reluctance DC motor	—	—		Good-sleep cooling operation	—	—
Comfortable Airflow	Power-airflow flap (horizontal blade)	—	—	Timer	WEEKLY TIMER operation	—	—
	Power-airflow dual flaps (horizontal blade)	—	—		24-hour ON/OFF TIMER	●	●
	Power-airflow diffuser	—	—		72-hour ON/OFF TIMER	—	—
	Wide-angle louvers (vertical blades)	—	—		NIGHT SET mode	●	●
	Auto-swing (up and down)	—	—	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●	●
	Auto-swing (right and left)	—	—		Self-diagnosis (R/C, LED)	●	●
	3-D airflow	—	—		Wiring error check function	—	—
	COMFORT AIRFLOW operation	—	—		Anti-corrosion treatment of outdoor heat exchanger	—	—
Comfort Control	Switchable fan speed	●	●	Flexibility	Multi-split/split type compatible indoor unit	●★	●★
	Auto fan speed	●	●		Flexible power supply correspondence	—	—
	Indoor unit quiet operation	●	●		High ceiling application	—	—
	NIGHT QUIET mode (automatic)	—	—		Chargeless	—	—
	OUTDOOR UNIT QUIET operation (manual)	—	●		Either side drain (right or left)	—	—
	INTELLIGENT EYE operation (auto energy saving)	—	—		Power selection	—	—
	2-area INTELLIGENT EYE operation (comfort)	—	—		°F/°C changeover R/C temperature display (factory setting: °F)	●	●
	Quick warming function	—	—	Remote Control	Remote control adaptor (normal open pulse contact) (option)	●	●
	Hot-start function	●	●		Remote control adaptor (normal open contact) (option)	●	●
	Automatic defrosting	—	—				
Operation	Automatic operation	●	●		DIII-NET compatible (adaptor) (option)	●	●
	Program dry function	●	●		Wireless LAN connection (option)	—	—
	Fan only	—	●				
Lifestyle Convenience	POWERFUL operation (non-inverter)	—	—				
	POWERFUL operation (inverter)	—	●				
	Priority-room setting	—	—				
	COOL/HEAT mode lock	—	—				
	HOME LEAVE operation	—	—				
	ECONO operation	—	●				
	Indoor unit **ON/OFF** button	●	●				
	Signal receiving sign	●	●				
	R/C with back light	●	●				
	Temperature display	—	—				

Note: ● : Available   ★ FDXS series only
— : Not available

2

Category	Functions	FDMQ09/12/15/18/24RVJU with wired R/C	FDMQ09/12/15/18/24RVJU with wireless R/C	Category	Functions	FDMQ09/12/15/18/24RVJU with wired R/C	FDMQ09/12/15/18/24RVJU with wireless R/C
Basic Functions	Inverter (with inverter power control)	●	●	Health & Cleanliness	Air-purifying filter	—	—
	Operation limit for cooling	—	—		Titanium apatite deodorizing filter	—	—
	Operation limit for heating	—	—		Silver ion anti-bacterial drain pan	●	●
	PAM control	●	●		Longlife filter (option)	●	●
Compressor	Oval scroll compressor	—	—		Air filter	●	●
	Swing compressor	—	—		Filter cleaning indicator	●	●
	Rotary compressor	—	—		Wipe-clean flat panel	—	—
	Reluctance DC motor	—	—		Washable grille	—	—
Comfortable Airflow	Power-airflow flap (horizontal blade)	—	—		Good-sleep cooling operation	—	—
	Power-airflow dual flaps (horizontal blade)	—	—	Timer	Setpoint auto reset	●	—
	Power-airflow diffuser	—	—		Setpoint range restriction	●	
	Wide-angle louvers (vertical blades)	—	—		Schedule TIMER operation	●	—
	Auto-swing (up and down)	—	—		24-hour ON/OFF TIMER	●	—
	Auto-swing (right and left)	—	—		Count up/down ON/OFF TIMER	—	●
	3-D airflow	—	—		OFF Timer (turns unit off after set time)	●	—
	COMFORT AIRFLOW operation	—	—		NIGHT SET mode	—	—
	Switchable fan speed (3 steps)	●	●	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●	●
	Auto fan speed	●	—		Self-diagnosis (R/C, LED)	●	●
Comfort Control	Indoor unit quiet operation	—	—		Wiring error check function	—	—
	NIGHT QUIET mode (automatic)	—	—		Anti-corrosion treatment of outdoor heat exchanger	—	—
	OUTDOOR UNIT QUIET operation (manual)	—	—	Flexibility	Multi-split/split type compatible indoor unit	●	●
	2 selectable temperature sensors	●	—		Flexible power supply correspondence	—	—
	INTELLIGENT EYE operation (auto energy saving)	—	—		High ceiling application	—	—
					Chargeless	—	—
	2-area INTELLIGENT EYE operation (comfort)	—	—		Either side drain (right or left)	—	—
					Drain pump	●	●
	Quick warming function	●	●		Power selection	—	—
	Hot-start function	●	●		°F/°C changeover R/C temperature display (factory setting: °F)	●	—
	Automatic defrosting	—	—				
	Automatic operation	●	●	Remote Control	Remote control adaptor (normal open pulse contact) (option)	—	—
	Program dry function	●	●				
	Fan only	●	●		Remote control adaptor (normal open contact) (option)	—	—
Lifestyle Convenience	POWERFUL operation (non-inverter)	—	—				
	POWERFUL operation (inverter)	—	—		DIII-NET compatible (adaptor) (option)	●	●
	Priority-room setting	—	—		Wireless LAN connection (option)	—	—
	COOL/HEAT mode lock	—	—				
	HOME LEAVE operation	—	—				
	ECONO operation	—	—				
	Emergency operation switch	—	●				
	Signal receiving sign	—	●★				
	R/C with back light	●	—				
	Temperature display	—	—				

Note: ● : Available   ★ Receiving sound only
               — : Not available

Category	Functions	FVXS09/12/15/18NVJU	Category	Functions	FVXS09/12/15/18NVJU
Basic Functions	Inverter (with inverter power control)	●	Health & Cleanliness	Air-purifying filter	—
	Operation limit for cooling	—		Air-purifying filter with deodorizing function	—
	Operation limit for heating	—		Titanium apatite deodorizing filter	●
	PAM control	—		Longlife filter (option)	—
Compressor	Oval scroll compressor	—		Air filter (prefilter)	●
	Swing compressor	—		Wipe-clean flat panel	●
	Rotary compressor	—		Washable grille	—
	Reluctance DC motor	—		Filter cleaning indicator	—
Comfortable Airflow	Power-airflow flap (horizontal blade)	—		Good-sleep cooling operation	—
	Power-airflow dual flaps (horizontal blade)	—	Timer	WEEKLY TIMER operation	●
	Power-airflow diffuser	—		24-hour ON/OFF TIMER	●
	Wide-angle louvers (vertical blades)	●		72-hour ON/OFF TIMER	—
	Auto-swing (up and down)	●		NIGHT SET mode	●
	Auto-swing (right and left)	—	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●
	3-D airflow	—		Self-diagnosis (R/C, LED)	●
	COMFORT AIRFLOW operation	—		Wiring error check function	—
Comfort Control	Auto fan speed	●		Automatic test operation	—
	Indoor unit quiet operation	●		Memory function	—
	NIGHT QUIET mode (automatic)	—		Anti-corrosion treatment of outdoor heat exchanger	—
	OUTDOOR UNIT QUIET operation (manual)	●	Flexibility	Multi-split/split type compatible indoor unit	—
	INTELLIGENT EYE operation (auto energy saving)	—		Flexible power supply correspondence	—
	2-area INTELLIGENT EYE operation (comfort)	—		High ceiling application	—
	Quick warming function	—		Chargeless	—
	Hot-start function	●		Either side drain (right or left)	—
	Automatic defrosting	—		Power selection	—
Operation	Automatic operation	●		°F/°C changeover R/C temperature display (factory setting: °F)	●
	Program dry function	●			
	Fan only	●	Remote Control	Remote control adaptor (normal open pulse contact) (option)	●
Lifestyle Convenience	POWERFUL operation (non-inverter)	—			
	POWERFUL operation (inverter)	●		Remote control adaptor (normal open contact) (option)	●
	Priority-room setting	—			
	COOL/HEAT mode lock	—		DIII-NET compatible (adaptor) (option)	●
	HOME LEAVE operation	—		Wireless LAN connection (option)	—
	ECONO operation	●	Remote Controller	Wireless	●
	Indoor unit **ON/OFF** button	●		Wired (option)	—
	Signal receiving sign	●			
	R/C with back light	●			
	Temperature display	—			

Note: ● : Available

— : Not available

2

Category	Functions	FFQ09/12/15/18Q2VJU with BYFQ60B3W1	FFQ09/12/15/18Q2VJU with BYFQ60C2W1W(S)	Category	Functions	FFQ09/12/15/18Q2VJU with BYFQ60B3W1	FFQ09/12/15/18Q2VJU with BYFQ60C2W1W(S)
Basic Functions	Inverter (with inverter power control)	●	●	Health & Cleanliness	Auto cleaning filter	—	—
	Operation limit for cooling	—	—		Air-purifying filter	—	—
	Operation limit for heating	—	—		Air-purifying filter with deodorizing function	—	—
	PAM control	—	—				
	Standby electricity saving	—	—		Titanium apatite deodorizing filter (option)	—	—
Compressor	Oval scroll compressor	—	—				
	Swing compressor	—	—		Longlife filter (option)	●	●
	Rotary compressor	—	—		Air filter	—	—
	Reluctance DC motor	—	—		Filter cleaning indicator	●	●
Comfortable Airflow	Power-airflow flap (horizontal blade)	—	—		Wipe-clean flat panel	—	—
	Power-airflow dual flaps (horizontal blade)	—	—		Washable grille	●	●
					MOLD PROOF operation	—	—
	Power-airflow diffuser	—	—		Good-sleep cooling operation	—	—
	Wide-angle louvers (vertical blades)	—	—	Timer	Schedule TIMER operation	●★1	●★1
	Auto-swing (up and down)	●	●		72-hour ON/OFF TIMER	●★2	●★2
	Auto-swing (right and left)	—	—		Off Timer (turns unit off after set time)	●★1	●★1
	Individual flap control	—	●★1		NIGHT SET mode	—	—
	3-D airflow	—	—	Worry Free (Reliability & Durability)	Auto-restart (after power failure)	●	●
	COMFORT AIRFLOW operation	—	—		Self-diagnosis (R/C, LED)	●	●
Comfort Control	Auto fan speed	●★1	●★1		Wiring error check function	—	—
	Indoor unit quiet operation	—	—		Anti-corrosion treatment of outdoor heat exchanger	—	—
	NIGHT QUIET mode (automatic)	—	—				
	OUTDOOR UNIT QUIET operation (manual)	—	—	Flexibility	Multi-split/split type compatible indoor unit	●	●
	Presence and floor sensor (option)	—	●★1		H/P, C/O compatible indoor unit	—	—
	Hot-start function	●	●		Flexible power supply correspondence	—	—
	Draft prevention with sensor	●	●		Chargeless	—	—
	Automatic defrosting	●	●		Either side drain (right or left)	—	—
Operation	Automatic operation	●	●		Power selection	—	—
	Program dry function	●	●		°F/°C changeover R/C temperature display (factory setting: °F)	●★1	●★1
	Fan only	●	●				
	Setback function	●★1	●★1	Remote Control	Remote control adaptor (normal open pulse contact) (option)	—	—
Lifestyle Convenience	POWERFUL operation (non-inverter)	—	—				
	POWERFUL operation (inverter)	—	—		Remote control adaptor (normal open contact) (option)	—	—
	Priority-room setting	—	—				
	COOL/HEAT mode lock	—	—		DIII-NET compatible (adaptor) (option)	●	●
	HOME LEAVE operation	—	—	Remote Controller	Wireless (option)	●	●
	ECONO operation	—	—		Wired (option)	●	●
	Indoor unit **ON/OFF** button	—	—				
	Signal receiving sign	●★2 ★3	●★2 ★3				
	R/C with back light	●★1	●★1				

Note: ● : Available
　　　　— : Not available

★1: With wired remote controller
★2: With wireless remote controller
★3: Receiving sound only

3. Specifications

3.1 Outdoor Unit

<div align="right">60 Hz, 208 - 230 V</div>

Model			RMXS48LVJU
Cooling Capacity	Btu/h		48,000
Heating Capacity	Btu/h		54,000
COP ★	W/W		3.0 ~ 3.9
EER ★	Btu/W·h		9.3 ~ 10.3
SEER ★			14.1 ~ 18.8
HSPF ★			9.6 ~ 11.3
Casing Color			Ivory White
Heat Exchanger			Cross Fin Coil
Compressor	Type		Hermetically Sealed Scroll Type
	Piston Displacement	ft³/h	791.5
	Number of Revolutions	r.p.m	6,480
	Motor Output (2.2 kW / 60 rps)	kW	3.0
	Starting Method		Direct on line
Refrigerant Oil	Model		DAPHNE FVC68D
	Charge	L (floz)	1.7 (57.5)
Refrigerant	Type		R-410A
	Charge	Lbs (kg)	8.8 (4.0)
	Control		Electronic Expansion Valve
Fan	Type		Propeller Fan
	Motor Output	kW	0.070 × 2
	Airflow rate	cfm	3,740
	Drive		Direct Drive
Dimensions (H × W × D)	in. (mm)		52-15/16 × 35-7/16 × 12-5/8 (1,345 × 900 × 320)
Weight (Mass)	Lbs (kg)		283 (129)
Piping Connections	Liquid	in. (mm)	φ 3/8 (φ 9.5) C1220T (Flare Connection)
	Gas	in. (mm)	φ 3/4 (φ 19.1) C1220T (Brazing Connection)
Defrost Method			Reverse Cycle Defrosting
Drawing No.			C: 4D080735

Notes:

1. ★ Max.: for the combination of wall mounted type indoor units
   Min.: for the combination of duct connected type indoor units
2. The data are based on the conditions shown in the table below.

Cooling	Indoor ; 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB) Outdoor ; 95°FDB (35°CDB)
Heating	Indoor ; 70°FDB (21°CDB) Outdoor ; 47°FDB (8.3°CDB) / 43°FWB (6°CWB)
Piping Length	O.U. – BP : 16.4 ft (5 m) BP – I.U. : 9.8 ft (3 m) Level Difference: 0 ft (0 m)

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

3.2   Combination Capacity

Class	07	09	12	15	18	24
Rated Capacity (kBtu/h)	7	9	12	15	18	24

2

$$\text{Capacity of each indoor unit} = \frac{\text{Cooling / heating capacity on the following tables} \times \text{Rated capacity of each indoor unit}}{\text{Total rated capacity of indoor units}}$$

For Example: (cooling)

$$\begin{array}{ccccccc} \text{CTXS07J} & + & \text{CTXS12H} & + & \text{FTXS18L} & + & \text{FTXS24L} \\ \parallel & & \parallel & & \parallel & & \parallel \end{array}$$

Total rated capacity of indoor units = $7 + 12 + 18 + 24 = 61 < 62$

Cooling capacity of CTXS07J = $\dfrac{52 \times 7}{61} = 5.967$ Cooling capacity of FTXS18L = $\dfrac{52 \times 18}{61} = 15.344$

Cooling capacity of CTXS12H = $\dfrac{52 \times 12}{61} = 10.229$ Cooling capacity of FTXS24L = $\dfrac{52 \times 24}{61} = 20.459$

The following capacity tables are for wall mounted type and duct connected type models as representative.

3.2.1   Wall Mounted Type

Cooling Capacity

Total rated capacity of indoor units [kBtu/h]	Combination [%]	Cooling capacity [kBtu/h]	Power consumption [kW]	Total rated capacity of indoor units [kBtu/h]	Combination [%]	Cooling capacity [kBtu/h]	Power consumption [kW]
24.0	50.0%	24.0	1.78	43.2	90.0%	43.2	3.91
24.5	51.0%	24.5	1.81	43.7	91.0%	43.7	3.98
25.0	52.0%	25.0	1.85	44.2	92.0%	44.2	4.05
25.4	53.0%	25.4	1.89	44.6	93.0%	44.6	4.13
25.9	54.0%	25.9	1.92	45.1	94.0%	45.1	4.20
26.4	55.0%	26.4	1.96	45.6	95.0%	45.6	4.28
26.9	56.0%	26.9	2.00	46.1	96.0%	46.1	4.35
27.4	57.0%	27.4	2.04	46.6	97.0%	46.6	4.43
27.8	58.0%	27.8	2.09	47.0	98.0%	47.0	4.51
28.3	59.0%	28.3	2.13	47.5	99.0%	47.5	4.59
28.8	60.0%	28.8	2.17	48.0	100.0%	48.0	4.64
29.3	61.0%	29.3	2.22	48.5	101.0%	48.2	4.65
29.8	62.0%	29.8	2.26	49.0	102.0%	48.5	4.67
30.2	63.0%	30.2	2.31	49.4	103.0%	48.7	4.69
30.7	64.0%	30.7	2.35	49.9	104.0%	48.9	4.71
31.2	65.0%	31.2	2.40	50.4	105.0%	49.1	4.73
31.7	66.0%	31.7	2.45	50.9	106.0%	49.3	4.75
32.2	67.0%	32.2	2.50	51.4	107.0%	49.5	4.77
32.6	68.0%	32.6	2.55	51.8	108.0%	49.7	4.79
33.1	69.0%	33.1	2.60	52.3	109.0%	49.9	4.81
33.6	70.0%	33.6	2.66	52.8	110.0%	50.0	4.82
34.1	71.0%	34.1	2.71	53.3	111.0%	50.2	4.84
34.6	72.0%	34.6	2.76	53.8	112.0%	50.4	4.85
35.0	73.0%	35.0	2.82	54.2	113.0%	50.5	4.87
35.5	74.0%	35.5	2.88	54.7	114.0%	50.7	4.88
36.0	75.0%	36.0	2.93	55.2	115.0%	50.8	4.90
36.5	76.0%	36.5	2.99	55.7	116.0%	50.9	4.91
37.0	77.0%	37.0	3.05	56.2	117.0%	51.1	4.92
37.4	78.0%	37.4	3.11	56.6	118.0%	51.2	4.94
37.9	79.0%	37.9	3.17	57.1	119.0%	51.3	4.95
38.4	80.0%	38.4	3.24	57.6	120.0%	51.4	4.96
38.9	81.0%	38.9	3.30	58.1	121.0%	51.5	4.97
39.4	82.0%	39.4	3.36	58.6	122.0%	51.6	4.98
39.8	83.0%	39.8	3.43	59.0	123.0%	51.7	4.99
40.3	84.0%	40.3	3.49	59.5	124.0%	51.8	4.99
40.8	85.0%	40.8	3.56	60.0	125.0%	51.8	5.00
41.3	86.0%	41.3	3.63	60.5	126.0%	51.9	5.01
41.8	87.0%	41.8	3.70	61.0	127.0%	52.0	5.01
42.2	88.0%	42.2	3.76	61.4	128.0%	52.0	5.02
42.7	89.0%	42.7	3.84	61.9	129.0%	52.1	5.02
				62.0	129.2%	52.1	5.03

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Notes:

1. Cooling capacity is based on 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB) (Indoor temperature), 95°FDB (35°CDB) / 75°FWB (24°CWB) (Outdoor temperature).
2. The total capacity of indoor units: 24 ~ 62 kBtu/h
3. Quantity of indoor units: 2 ~ 8

Heating Capacity

Total rated capacity of indoor units [kBtu/h]	Combination [%]	Heating capacity [kBtu/h]	Power consumption [kW]	Total rated capacity of indoor units [kBtu/h]	Combination [%]	Heating capacity [kBtu/h]	Power consumption [kW]
24.0	50.0%	29.0	2.13	43.2	90.0%	49.0	3.67
24.5	51.0%	29.5	2.17	43.7	91.0%	49.5	3.70
25.0	52.0%	30.0	2.21	44.2	92.0%	50.0	3.74
25.4	53.0%	30.5	2.25	44.6	93.0%	50.5	3.77
25.9	54.0%	31.0	2.30	45.1	94.0%	51.0	3.81
26.4	55.0%	31.5	2.34	45.6	95.0%	51.5	3.84
26.9	56.0%	32.0	2.38	46.1	96.0%	52.0	3.87
27.4	57.0%	32.5	2.42	46.6	97.0%	52.5	3.91
27.8	58.0%	33.0	2.46	47.0	98.0%	53.0	3.94
28.3	59.0%	33.5	2.50	47.5	99.0%	53.5	3.98
28.8	60.0%	34.0	2.54	48.0	100.0%	54.0	3.98
29.3	61.0%	34.5	2.58	48.5	101.0%	54.1	3.99
29.8	62.0%	35.0	2.62	49.0	102.0%	54.2	3.99
30.2	63.0%	35.5	2.66	49.4	103.0%	54.3	4.00
30.7	64.0%	36.0	2.70	49.9	104.0%	54.4	4.00
31.2	65.0%	36.5	2.74	50.4	105.0%	54.5	4.01
31.7	66.0%	37.0	2.78	50.9	106.0%	54.6	4.01
32.2	67.0%	37.5	2.82	51.4	107.0%	54.7	4.02
32.6	68.0%	38.0	2.86	51.8	108.0%	54.8	4.02
33.1	69.0%	38.5	2.90	52.3	109.0%	54.9	4.02
33.6	70.0%	39.0	2.93	52.8	110.0%	55.0	4.03
34.1	71.0%	39.5	2.97	53.3	111.0%	55.1	4.03
34.6	72.0%	40.0	3.01	53.8	112.0%	55.2	4.04
35.0	73.0%	40.5	3.05	54.2	113.0%	55.3	4.04
35.5	74.0%	41.0	3.09	54.7	114.0%	55.4	4.04
36.0	75.0%	41.5	3.12	55.2	115.0%	55.5	4.05
36.5	76.0%	42.0	3.16	55.7	116.0%	55.6	4.05
37.0	77.0%	42.5	3.20	56.2	117.0%	55.7	4.05
37.4	78.0%	43.0	3.24	56.6	118.0%	55.8	4.06
37.9	79.0%	43.5	3.27	57.1	119.0%	55.9	4.06
38.4	80.0%	44.0	3.31	57.6	120.0%	56.0	4.06
38.9	81.0%	44.5	3.35	58.1	121.0%	56.1	4.06
39.4	82.0%	45.0	3.38	58.6	122.0%	56.2	4.07
39.8	83.0%	45.5	3.42	59.0	123.0%	56.3	4.07
40.3	84.0%	46.0	3.46	59.5	124.0%	56.4	4.07
40.8	85.0%	46.5	3.49	60.0	125.0%	56.5	4.08
41.3	86.0%	47.0	3.53	60.5	126.0%	56.6	4.08
41.8	87.0%	47.5	3.56	61.0	127.0%	56.7	4.08
42.2	88.0%	48.0	3.60	61.4	128.0%	56.8	4.08
42.7	89.0%	48.5	3.63	61.9	129.0%	56.9	4.08
				62.0	129.2%	57.0	4.09

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Notes:

1. Heating capacity is based on 70°FDB (21°CDB) / 60°FWB (15.6°CWB) (Indoor temperature), 47°FDB (8.3°CDB) / 43°FWB (6°CWB) (Outdoor temperature).
2. The total capacity of indoor units: 24 ~ 62 kBtu/h
3. Quantity of indoor units: 2 ~ 8

3.2.2   Duct Connected Type

Cooling Capacity

Total rated capacity of indoor units [kBtu/h]	Combination [%]	Cooling capacity [kBtu/h]	Power consumption [kW]	Total rated capacity of indoor units [kBtu/h]	Combination [%]	Cooling capacity [kBtu/h]	Power consumption [kW]
24.0	50.0%	24.0	1.92	43.2	90.0%	43.2	4.39
24.5	51.0%	24.5	1.97	43.7	91.0%	43.7	4.47
25.0	52.0%	25.0	2.01	44.2	92.0%	44.2	4.55
25.4	53.0%	25.4	2.06	44.6	93.0%	44.6	4.63
25.9	54.0%	25.9	2.11	45.1	94.0%	45.1	4.71
26.4	55.0%	26.4	2.16	45.6	95.0%	45.6	4.79
26.9	56.0%	26.9	2.21	46.1	96.0%	46.1	4.88
27.4	57.0%	27.4	2.26	46.6	97.0%	46.6	4.96
27.8	58.0%	27.8	2.31	47.0	98.0%	47.0	5.04
28.3	59.0%	28.3	2.36	47.5	99.0%	47.5	5.13
28.8	60.0%	28.8	2.42	48.0	100.0%	48.0	5.13
29.3	61.0%	29.3	2.47	48.5	101.0%	48.1	5.14
29.8	62.0%	29.8	2.53	49.0	102.0%	48.2	5.15
30.2	63.0%	30.2	2.58	49.4	103.0%	48.3	5.15
30.7	64.0%	30.7	2.64	49.9	104.0%	48.4	5.16
31.2	65.0%	31.2	2.70	50.4	105.0%	48.5	5.16
31.7	66.0%	31.7	2.75	50.9	106.0%	48.6	5.17
32.2	67.0%	32.2	2.81	51.4	107.0%	48.7	5.17
32.6	68.0%	32.6	2.87	51.8	108.0%	48.8	5.18
33.1	69.0%	33.1	2.93	52.3	109.0%	48.9	5.18
33.6	70.0%	33.6	2.99	52.8	110.0%	49.0	5.19
34.1	71.0%	34.1	3.06	53.3	111.0%	49.1	5.19
34.6	72.0%	34.6	3.12	53.8	112.0%	49.2	5.20
35.0	73.0%	35.0	3.18	54.2	113.0%	49.3	5.20
35.5	74.0%	35.5	3.25	54.7	114.0%	49.4	5.21
36.0	75.0%	36.0	3.31	55.2	115.0%	49.5	5.21
36.5	76.0%	36.5	3.38	55.7	116.0%	49.6	5.22
37.0	77.0%	37.0	3.45	56.2	117.0%	49.7	5.22
37.4	78.0%	37.4	3.51	56.6	118.0%	49.8	5.23
37.9	79.0%	37.9	3.58	57.1	119.0%	49.9	5.23
38.4	80.0%	38.4	3.65	57.6	120.0%	50.0	5.24
38.9	81.0%	38.9	3.72	58.1	121.0%	50.1	5.24
39.4	82.0%	39.4	3.79	58.6	122.0%	50.2	5.25
39.8	83.0%	39.8	3.87	59.0	123.0%	50.3	5.25
40.3	84.0%	40.3	3.94	59.5	124.0%	50.4	5.26
40.8	85.0%	40.8	4.01	60.0	125.0%	50.5	5.26
41.3	86.0%	41.3	4.09	60.5	126.0%	50.6	5.27
41.8	87.0%	41.8	4.16	61.0	127.0%	50.7	5.27
42.2	88.0%	42.2	4.24	61.4	128.0%	50.8	5.28
42.7	89.0%	42.7	4.32	61.9	129.0%	50.9	5.28
				62.0	129.2%	51.0	5.28

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Notes:

1.   Cooling capacity is based on 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB) (Indoor temperature), 95°FDB (35°CDB) / 75°FWB (24°CWB) (Outdoor temperature).
2.   The total capacity of indoor units: 24 ~ 62 kBtu/h
3.   Quantity of indoor units: 2 ~ 8

Heating Capacity

Total rated capacity of indoor units [kBtu/h]	Combination [%]	Heating capacity [kBtu/h]	Power consumption [kW]	Total rated capacity of indoor units [kBtu/h]	Combination [%]	Heating capacity [kBtu/h]	Power consumption [kW]
24.0	50.0%	29.0	2.56	43.2	90.0%	49.0	4.80
24.5	51.0%	29.5	2.62	43.7	91.0%	49.5	4.85
25.0	52.0%	30.0	2.68	44.2	92.0%	50.0	4.90
25.4	53.0%	30.5	2.74	44.6	93.0%	50.5	4.95
25.9	54.0%	31.0	2.80	45.1	94.0%	51.0	5.00
26.4	55.0%	31.5	2.86	45.6	95.0%	51.5	5.05
26.9	56.0%	32.0	2.92	46.1	96.0%	52.0	5.10
27.4	57.0%	32.5	2.98	46.6	97.0%	52.5	5.15
27.8	58.0%	33.0	3.04	47.0	98.0%	53.0	5.20
28.3	59.0%	33.5	3.10	47.5	99.0%	53.5	5.24
28.8	60.0%	34.0	3.16	48.0	100.0%	54.0	5.27
29.3	61.0%	34.5	3.21	48.5	101.0%	54.1	5.28
29.8	62.0%	35.0	3.27	49.0	102.0%	54.1	5.28
30.2	63.0%	35.5	3.33	49.4	103.0%	54.2	5.28
30.7	64.0%	36.0	3.39	49.9	104.0%	54.2	5.28
31.2	65.0%	36.5	3.45	50.4	105.0%	54.3	5.29
31.7	66.0%	37.0	3.50	50.9	106.0%	54.3	5.29
32.2	67.0%	37.5	3.56	51.4	107.0%	54.4	5.29
32.6	68.0%	38.0	3.62	51.8	108.0%	54.4	5.29
33.1	69.0%	38.5	3.67	52.3	109.0%	54.5	5.29
33.6	70.0%	39.0	3.73	52.8	110.0%	54.5	5.30
34.1	71.0%	39.5	3.79	53.3	111.0%	54.6	5.30
34.6	72.0%	40.0	3.84	53.8	112.0%	54.6	5.30
35.0	73.0%	40.5	3.90	54.2	113.0%	54.7	5.30
35.5	74.0%	41.0	3.95	54.7	114.0%	54.7	5.30
36.0	75.0%	41.5	4.01	55.2	115.0%	54.8	5.31
36.5	76.0%	42.0	4.06	55.7	116.0%	54.8	5.31
37.0	77.0%	42.5	4.12	56.2	117.0%	54.9	5.31
37.4	78.0%	43.0	4.17	56.6	118.0%	54.9	5.31
37.9	79.0%	43.5	4.22	57.1	119.0%	55.0	5.31
38.4	80.0%	44.0	4.28	57.6	120.0%	55.0	5.32
38.9	81.0%	44.5	4.33	58.1	121.0%	55.1	5.32
39.4	82.0%	45.0	4.38	58.6	122.0%	55.1	5.32
39.8	83.0%	45.5	4.44	59.0	123.0%	55.2	5.32
40.3	84.0%	46.0	4.49	59.5	124.0%	55.2	5.32
40.8	85.0%	46.5	4.54	60.0	125.0%	55.3	5.33
41.3	86.0%	47.0	4.59	60.5	126.0%	55.3	5.33
41.8	87.0%	47.5	4.64	61.0	127.0%	55.4	5.33
42.2	88.0%	48.0	4.70	61.4	128.0%	55.4	5.33
42.7	89.0%	48.5	4.75	61.9	129.0%	55.5	5.33
				62.0	129.2%	55.5	5.34

3D081287

Notes:

1. Heating capacity is based on 70°FDB (21°CDB) / 60°FWB (15.6°CWB) (Indoor temperature), 47°FDB (8.3°CDB) / 43°FWB (6°CWB) (Outdoor temperature).
2. The total capacity of indoor units: 24 ~ 62 kBtu/h
3. Quantity of indoor units: 2 ~ 8

3.3 BP Unit

60 Hz, 208 - 230 V

Model				BPMKS048A2U	BPMKS049A3U
Power Consumption			W	10	10
Running Current			A	0.05	0.05
Refrigerant Type				R-410A	
Dimensions (H × W × D)			in. (mm)	7-1/16 × 11-9/16 [26-11/16]* × 13-3/4 (180 × 294 [678]* × 350)	
Packaged Dimensions (H × W × D)			in. (mm)	10-1/8 × 29-1/16 × 16-13/16 (257 × 738 × 427)	
Weight (Mass)			Lbs (kg)	18 (8)	20 (9)
Gross Weight (Gross Mass)			Lbs (kg)	27 (12)	29 (13)
Number of Wiring Connections	Power Supply			3 (including ground wiring)	
	O.U. – BP			2 (for DIII transmission)	
	BP – I.U.			4 (including ground wiring)	
Piping Connection (Flare)	Liquid	O.U. side	in. (mm)	φ 3/8 (φ 9.5) × 1	
		I.U. side		φ 1/4 (φ 6.4) × 2	φ 1/4 (φ 6.4) × 3
	Gas	O.U. side	in. (mm)	φ 5/8 (φ 15.9) × 1	
		I.U. side		φ 5/8 (φ 15.9) × 2	φ 5/8 (φ 15.9) × 3
	Drain			Drain Processingless	
Heat Insulation				Both Liquid and Gas Pipes	
Min. Combination			Btu/h	7,000	
Max. Combination			Btu/h	48,000	62,000
Drawing No.				4D080441	

Note: [ ]* : including auxiliary piping length

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

3.4   Indoor Unit

60 Hz, 208 - 230 V

2

Model				CTXG09QVJUW		CTXG09QVJUS	
				Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★				9 kBtu/h Class		9 kBtu/h Class	
Front Panel Color				White		Silver	
Airflow Rate	H	cfm (m³/min)		279 (7.9)	367 (10.4)	279 (7.9)	367 (10.4)
	M			212 (6.0)	265 (7.5)	212 (6.0)	265 (7.5)
	L			162 (4.6)	205 (5.8)	162 (4.6)	205 (5.8)
	SL			134 (3.8)	117 (3.3)	134 (3.8)	117 (3.3)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output	W		29		29	
	Speed	Steps		5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A		0.07 - 0.07	0.13 - 0.12	0.07 - 0.07	0.13 - 0.12
Power Consumption (Rated)		W		13 - 13	26 - 26	13 - 13	26 - 26
Power Factor (Rated)		%		89.2 - 80.7	96.2 - 94.2	89.2 - 80.7	96.2 - 94.2
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)		11-15/16 × 39-5/16 × 8-3/8 (303 × 998 × 212)		11-15/16 × 39-5/16 × 8-3/8 (303 × 998 × 212)	
Packaged Dimensions (H × W × D)		in. (mm)		12-11/16 × 43-3/8 × 15-5/16 (322 × 1,101 × 389)		12-11/16 × 43-3/8 × 15-5/16 (322 × 1,101 × 389)	
Weight (Mass)		Lbs (kg)		27 (12)		27 (12)	
Gross Weight (Gross Mass)		Lbs (kg)		36 (16)		36 (16)	
Sound Pressure Level	H / M / L / SL	dB(A)		38 / 32 / 25 / 21	41 / 34 / 28 / 21	38 / 32 / 25 / 21	41 / 34 / 28 / 21
Sound Power Level		dB		—	—	—	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)		φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)		φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)		φ 11/16 (φ 18)		φ 11/16 (φ 18)	
Drawing No.				3D105562		3D105565	

Model				CTXG12QVJUW		CTXG12QVJUS	
				Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★				12 kBtu/h Class		12 kBtu/h Class	
Front Panel Color				White		Silver	
Airflow Rate	H	cfm (m³/min)		353 (10.0)	420 (11.9)	353 (10.0)	420 (11.9)
	M			230 (6.5)	300 (8.5)	230 (6.5)	300 (8.5)
	L			162 (4.6)	219 (6.2)	162 (4.6)	219 (6.2)
	SL			134 (3.8)	124 (3.5)	134 (3.8)	124 (3.5)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output	W		29		29	
	Speed	Steps		5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A		0.13 - 0.12	0.19 - 0.17	0.13 - 0.12	0.19 - 0.17
Power Consumption (Rated)		W		26 - 26	38 - 38	26 - 26	38 - 38
Power Factor (Rated)		%		96.1 - 94.2	96.1 - 97.1	96.1 - 94.2	96.1 - 97.1
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)		11-15/16 × 39-5/16 × 8-3/8 (303 × 998 × 212)		11-15/16 × 39-5/16 × 8-3/8 (303 × 998 × 212)	
Packaged Dimensions (H × W × D)		in. (mm)		12-11/16 × 43-3/8 × 15-5/16 (322 × 1,101 × 389)		12-11/16 × 43-3/8 × 15-5/16 (322 × 1,101 × 389)	
Weight (Mass)		Lbs (kg)		27 (12)		27 (12)	
Gross Weight (Gross Mass)		Lbs (kg)		36 (16)		36 (16)	
Sound Pressure Level	H / M / L / SL	dB(A)		45 / 34 / 26 / 22	45 / 37 / 29 / 22	45 / 34 / 26 / 22	45 / 37 / 29 / 22
Sound Power Level		dB		—	—	—	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)		φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)		φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)		φ 11/16 (φ 18)		φ 11/16 (φ 18)	
Drawing No.				3D105563		3D105566	

Notes: 1. ★ See page 15 ~ 19 "Combination Capacity".
                2. SL: The Quiet fan level of the airflow rate setting.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

Model				CTXG18QVJUW		CTXG18QVJUS	
				Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★				18 kBtu/h Class		18 kBtu/h Class	
Front Panel Color				White		Silver	
Airflow Rate	H		cfm (m³/min)	364 (10.3)	438 (12.4)	364 (10.3)	438 (12.4)
	M			286 (8.1)	350 (9.9)	286 (8.1)	350 (9.9)
	L			233 (6.6)	265 (7.5)	233 (6.6)	265 (7.5)
	SL			219 (6.2)	212 (6)	219 (6.2)	212 (6)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output	W		29		29	
	Speed	Steps		5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A		0.14 - 0.14	0.21 - 0.21	0.14 - 0.14	0.21 - 0.21
Power Consumption (Rated)		W		28 - 28	42 - 42	28 - 28	42 - 42
Power Factor (Rated)		%		96.1 - 87.0	96.2 - 87.0	96.1 - 87.0	96.2 - 87.0
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)		11-15/16 × 39-5/16 × 8-3/8 (303 × 998 × 212)		11-15/16 × 39-5/16 × 8-3/8 (303 × 998 × 212)	
Packaged Dimensions (H × W × D)		in. (mm)		12-11/16 × 43-3/8 × 15-5/16 (322 × 1,101 × 389)		12-11/16 × 43-3/8 × 15-5/16 (322 × 1,101 × 389)	
Weight (Mass)		Lbs (kg)		27 (12)		27 (12)	
Gross Weight (Gross Mass)		Lbs (kg)		36 (16)		36 (16)	
Sound Pressure Level	H / M / L / SL	dB(A)		46 / 40 / 35 / 32	47 / 41 / 35 / 32	46 / 40 / 35 / 32	47 / 41 / 35 / 32
Sound Power Level		dB		—	—	—	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)		φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)		φ 1/2 (φ 12.7)		φ 1/2 (φ 12.7)	
	Drain	in. (mm)		φ 11/16 (φ 18)		φ 11/16 (φ 18)	
Drawing No.				3D105564		3D105567	

Model				CTXS07JVJU		CTXS09HVJU	
				Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★				7 kBtu/h Class		9 kBtu/h Class	
Front Panel Color				White		White	
Airflow Rate	H		cfm (m³/min)	388 (11.0)	400 (11.3)	388 (11.0)	400 (11.3)
	M			335 (9.5)	357 (10.1)	335 (9.5)	357 (10.1)
	L			283 (8.0)	314 (8.9)	283 (8.0)	314 (8.9)
	SL			–	–	–	–
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output	W		40		40	
	Speed	Steps		5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A		0.18	0.20	0.18	0.20
Power Consumption (Rated)		W		40	45	40	45
Power Factor (Rated)		%		96.6	97.8	96.6	97.8
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)		11-7/16 × 31-5/16 × 9-3/8 (290 × 795 × 238)		11-7/16 × 31-5/16 × 9-3/8 (290 × 795 × 238)	
Packaged Dimensions (H × W × D)		in. (mm)		11 × 33-1/16 × 13-5/16 (280 × 840 × 338)		11 × 33-1/16 × 13-5/16 (280 × 840 × 338)	
Weight (Mass)		Lbs (kg)		20 (9)		20 (9)	
Gross Weight (Gross Mass)		Lbs (kg)		29 (13)		29 (13)	
Sound Pressure Level	H / M / L / SL	dB(A)		44 / 40 / 35 / –	44 / 39 / 34 / –	44 / 40 / 35 / –	44 / 39 / 34 / –
Sound Power Level		dB		–	–	–	–
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)		φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)		φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)		φ 11/16 (φ 18.0)		φ 11/16 (φ 18.0)	
Drawing No.				3D066156A		3D062870A	

Notes:
1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

Model			CTXS12HVJU		CTXS07LVJU	
			Cooling	Heating	Cooling	Heating
Rated Capacity ★			12 kBtu/h Class		7 kBtu/h Class	
Front Panel Color			White		White	
Airflow Rate	H	cfm (m³/min)	388 (11.0)	400 (11.3)	332 (9.4)	350 (9.9)
	M		335 (9.5)	357 (10.1)	261 (7.4)	290 (8.2)
	L		283 (8.0)	314 (8.9)	194 (5.5)	233 (6.6)
	SL		–	–	145 (4.1)	219 (6.2)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	40		23	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.18	0.20	0.09 - 0.08	0.11 - 0.10
Power Consumption (Rated)		W	40	45	18 - 18	21 - 21
Power Factor (Rated)		%	96.6	97.8	96.2 - 97.8	91.8 - 91.3
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	11-7/16 × 31-5/16 × 9-3/8 (290 × 795 × 238)		11-5/8 × 31-1/2 × 8-7/16 (295 × 800 × 215)	
Packaged Dimensions (H × W × D)		in. (mm)	11 × 33-1/16 × 13-5/16 (280 × 840 × 338)		10-13/16 × 34-1/4 × 14-7/16 (274 × 870 × 366)	
Weight (Mass)		Lbs (kg)	20 (9)		20 (9)	
Gross Weight (Gross Mass)		Lbs (kg)	29 (13)		29 (13)	
Sound Pressure Level	H / M / L / SL	dB(A)	45 / 41 / 36 / –	45 / 40 / 35 / –	38 / 32 / 25 / 22	38 / 33 / 28 / 25
Sound Power Level		dB	–	–	54	54
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)	φ 11/16 (φ 18.0)		φ 5/8 (φ 16.0)	
Drawing No.			3D062871A		3D075490	

Model			FTXS09LVJU		FTXS12LVJU	
			Cooling	Heating	Cooling	Heating
Rated Capacity ★			9 kBtu/h Class		12 kBtu/h Class	
Front Panel Color			White		White	
Airflow Rate	H	cfm (m³/min)	381 (10.8)	420 (11.9)	403 (11.4)	438 (12.4)
	M		279 (7.9)	321 (9.1)	307 (8.7)	335 (9.5)
	L		194 (5.5)	233 (6.6)	205 (5.8)	240 (6.8)
	SL		145 (4.1)	219 (6.2)	155 (4.4)	212 (6.0)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	23		23	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.09 - 0.08	0.11 - 0.10	0.13 - 0.12	0.14 - 0.13
Power Consumption (Rated)		W	18 - 18	21 - 21	26 - 26	28 - 28
Power Factor (Rated)		%	96.2 - 97.8	91.8 - 91.3	96.2 - 94.2	96.2 - 93.6
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	11-5/8 × 31-1/2 × 8-7/16 (295 × 800 × 215)		11-5/8 × 31-1/2 × 8-7/16 (295 × 800 × 215)	
Packaged Dimensions (H × W × D)		in. (mm)	10-13/16 × 34-1/4 × 14-7/16 (274 × 870 × 366)		10-13/16 × 34-1/4 × 14-7/16 (274 × 870 × 366)	
Weight (Mass)		Lbs (kg)	20 (9)		22 (10)	
Gross Weight (Gross Mass)		Lbs (kg)	29 (13)		31 (14)	
Sound Pressure Level	H / M / L / SL	dB(A)	41 / 33 / 25 / 22	42 / 35 / 28 / 25	45 / 37 / 29 / 23	45 / 39 / 29 / 26
Sound Power Level		dB	57	58	61	61
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)	φ 5/8 (φ 16)		φ 5/8 (φ 16)	
Drawing No.			3D075491A		3D075492A	

Notes:
1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

Model			FTXS15LVJU		FTXS18LVJU	
			Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★			15 kBtu/h Class		18 kBtu/h Class	
Front Panel Color			White		White	
Airflow Rate	H	cfm (m³/min)	568 (16.1)	593 (16.8)	583 (16.5)	625 (17.7)
	M		477 (13.5)	505 (14.3)	484 (13.7)	526 (14.9)
	L		385 (10.9)	417 (11.8)	385 (10.9)	431 (12.2)
	SL		360 (10.2)	371 (10.5)	360 (10.2)	399 (11.3)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	48		48	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.31 - 0.29	0.31 - 0.29	0.32 - 0.30	0.32 - 0.30
Power Consumption (Rated)		W	38 - 38	38 - 38	38 - 38	38 - 38
Power Factor (Rated)		%	58.9 - 57.0	58.9 - 57.0	57.1 - 55.1	57.1 - 55.1
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	13-3/8 × 41-5/16 × 9-3/4 (340 × 1,050 × 248)		13-3/8 × 41-5/16 × 9-3/4 (340 × 1,050 × 248)	
Packaged Dimensions (H × W × D)		in. (mm)	13 × 45-11/16 × 16-7/8 (331 × 1,160 × 429)		13 × 45-11/16 × 16-7/8 (331 × 1,160 × 429)	
Weight (Mass)		Lbs (kg)	31 (14)		31 (14)	
Gross Weight (Gross Mass)		Lbs (kg)	44 (20)		44 (20)	
Sound Pressure Level	H / M / L / SL	dB(A)	45 / 40 / 35 / 32	43 / 38 / 33 / 30	46 / 41 / 36 / 33	45 / 40 / 35 / 32
Sound Power Level		dB	61	59	62	61
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 1/2 (φ 12.7)		φ 1/2 (φ 12.7)	
	Drain	in. (mm)	φ 5/8 (φ 16)		φ 5/8 (φ 16)	
Drawing No.			3D075043A		3D075044A	

Model			FTXS24LVJU	
			Cooling	**Heating**
Rated Capacity ★			24 kBtu/h Class	
Front Panel Color			White	
Airflow Rate	H	cfm (m³/min)	643 (18.2)	699 (19.8)
	M		494 (14.0)	572 (16.2)
	L		350 (9.9)	445 (12.6)
	SL		328 (9.3)	403 (11.4)
Fan	Type		Cross Flow Fan	
	Motor Output	W	48	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward	
Air Filter			Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.57 - 0.51	0.57 - 0.51
Power Consumption (Rated)		W	69 - 68	69 - 68
Power Factor (Rated)		%	58.2 - 58.0	58.2 - 58.0
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	13-3/8 × 41-5/16 × 9-3/4 (340 × 1,050 × 248)	
Packaged Dimensions (H × W × D)		in. (mm)	13 × 45-11/16 × 16-7/8 (331 × 1,160 × 429)	
Weight (Mass)		Lbs (kg)	31 (14)	
Gross Weight (Gross Mass)		Lbs (kg)	46 (21)	
Sound Pressure Level	H / M / L / SL	dB(A)	51 / 44 / 37 / 34	48 / 42 / 37 / 34
Sound Power Level		dB	67	64
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 5/8 (φ 15.9)	
	Drain	in. (mm)	φ 5/8 (φ 16)	
Drawing No.			3D075045A	

Notes:
1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

Model			FDXS09LVJU		FDXS12LVJU	
			Cooling	Heating	Cooling	Heating
Rated Capacity ★			9 kBtu/h Class		12 kBtu/h Class	
External Static Pressure		inAq (Pa)	0.12 (30)		0.12 (30)	
Airflow Rate	H	cfm (m³/min)	305 (8.6)	305 (8.6)	305 (8.6)	305 (8.6)
	M		280 (7.9)	280 (7.9)	280 (7.9)	280 (7.9)
	L		260 (7.4)	260 (7.4)	260 (7.4)	260 (7.4)
	SL		235 (6.7)	235 (6.7)	235 (6.7)	235 (6.7)
Fan	Type		Sirocco Fan		Sirocco Fan	
	Motor Output	W	62		62	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.58 - 0.52	0.58 - 0.52	0.58 - 0.52	0.58 - 0.52
Power Consumption (Rated)		W	72 - 72	72 - 72	72 - 72	72 - 72
Power Factor (Rated)		%	59.7 - 60.2	59.7 - 60.2	59.7 - 60.2	59.7 - 60.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	7-7/8 × 27-9/16 × 24-7/16 (200 × 700 × 620)		7-7/8 × 27-9/16 × 24-7/16 (200 × 700 × 620)	
Packaged Dimensions (H × W × D)		in. (mm)	10-13/16 × 36-5/16 × 30-1/4 (274 × 923 × 768)		10-13/16 × 36-5/16 × 30-1/4 (274 × 923 × 768)	
Weight (Mass)		Lbs (kg)	47 (21)		47 (21)	
Gross Weight (Gross Mass)		Lbs (kg)	64 (29)		64 (29)	
Sound Pressure Level	H / M / L	dB(A)	35 / 33 / 31	35 / 33 / 31	35 / 33 / 31	35 / 33 / 31
Sound Power Level		dB	51	51	51	51
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)	φ 25/32 (φ 20)		φ 25/32 (φ 20)	
Drawing No.			3D075493		3D075494	

Notes: 1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.

Model			CDXS15LVJU		CDXS18LVJU	
			Cooling	Heating	Cooling	Heating
Rated Capacity ★			15 kBtu/h Class		18 kBtu/h Class	
External Static Pressure		inAq (Pa)	0.16 (40)		0.16 (40)	
Airflow Rate	H	cfm (m³/min)	424 (12.0)	424 (12.0)	424 (12.0)	424 (12.0)
	M		388 (11.0)	388 (11.0)	388 (11.0)	388 (11.0)
	L		353 (10.0)	353 (10.0)	353 (10.0)	353 (10.0)
	SL		297 (8.4)	297 (8.4)	297 (8.4)	297 (8.4)
Fan	Type		Sirocco Fan		Sirocco Fan	
	Motor Output	W	130		130	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.79	0.79	0.79	0.79
Power Consumption (Rated)		W	172	172	172	172
Power Factor (Rated)		%	94.4	94.4	94.4	94.4
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	7-7/8 × 35-7/16 × 24-7/16 (200 × 900 × 620)		7-7/8 × 35-7/16 × 24-7/16 (200 × 900 × 620)	
Packaged Dimensions (H × W × D)		in. (mm)	10-1/2 × 43-9/16 × 29-9/16 (266 × 1,106 × 751)		10-1/2 × 43-9/16 × 29-9/16 (266 × 1,106 × 751)	
Weight (Mass)		Lbs (kg)	60 (27)		60 (27)	
Gross Weight (Gross Mass)		Lbs (kg)	75 (34)		75 (34)	
Sound Pressure Level	H / M / L / SL	dB(A)	37 / 35 / 33 / 31	37 / 35 / 33 / 31	37 / 35 / 33 / 31	37 / 35 / 33 / 31
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 1/2 (φ 12.7)		φ 1/2 (φ 12.7)	
	Drain	in. (mm)	VP20 (O.D. φ 1-1/32 (φ 26), I.D. φ 25/32 (φ 20))		VP20 (O.D. φ 1-1/32 (φ 26), I.D. φ 25/32 (φ 20))	
Drawing No.			C: 3D075721		C: 3D075722	

Notes: 1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.
3. The operating sound is based on the rear side suction inlet and the external static pressure 0.16 inH2O (40 Pa).
Operating sound for bottom suction inlet : [operating sound for rear side suction inlet] +5 dB.
However, when installation resulting in lower external static pressure becomes low is carried out,
the operation sound may rise by more than 5 dB.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

Model			CDXS24LVJU	
			Cooling	**Heating**
Rated Capacity ★			24 kBtu/h Class	
External Static Pressure		inAq (Pa)	0.16 (40)	
Airflow Rate	H	cfm (m³/min)	565 (16.0)	565 (16.0)
	M		523 (14.8)	523 (14.8)
	L		477 (13.5)	477 (13.5)
	SL		395 (11.2)	395 (11.2)
Fan	Type		Sirocco Fan	
	Motor Output	W	130	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Filter			Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.79	0.79
Power Consumption (Rated)		W	160	160
Power Factor (Rated)		%	90.3	92.8
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	7-7/8 × 43-5/16 × 24-7/16 (200 × 1,100 × 620)	
Packaged Dimensions (H × W × D)		in. (mm)	10-1/2 × 52-1/16 × 30-1/4 (266 × 1,323 × 768)	
Weight (Mass)		Lbs (kg)	66 (30)	
Gross Weight (Gross Mass)		Lbs (kg)	84 (38)	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 36 / 34 / 32	38 / 36 / 34 / 32
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 5/8 (φ 15.9)	
	Drain	in. (mm)	VP20 (O.D. φ 1-1/32 (φ 26), I.D. φ 25/32 (φ 20))	
Drawing No.			3D080590	

Notes: 1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.
3. The operating sound is based on the rear side suction inlet and the external static pressure 0.16 inH2O (40 Pa).
   Operating sound for bottom suction inlet : [operating sound for rear side suction inlet] +5 dB.
   However, when installation resulting in lower external static pressure becomes low is carried out,
   the operation sound may rise by more than 5 dB.

Model			FDMQ09RVJU		FDMQ12RVJU	
			Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★1			9 kBtu/h Class		12 kBtu/h Class	
Casing Color			—		—	
Dimensions (H × W × D)		in. (mm)	9-5/8 × 27-9/16 × 31-1/2 (245 × 700 × 800)		9-5/8 × 27-9/16 × 31-1/2 (245 × 700 × 800)	
Coil	Type		Cross Fin Coil		Cross Fin Coil	
	Rows × Stages × Fin per Inch		3 × 26 × 18		3 × 26 × 18	
	Face Area	ft² (m²)	1-15/16 (0.178)		1-15/16 (0.178)	
Fan	Type		Sirocco Fan		Sirocco Fan	
	Motor Output	W	130		130	
	Airflow Rate H / M / L	cfm (m³/min)	343 / 290 / 240 (9.7 / 8.2 / 6.8)	343 / 290 / 240 (9.7 / 8.2 / 6.8)	392 / 332 / 275 (11.1 / 9.4 / 7.8)	392 / 332 / 275 (11.1 / 9.4 / 7.8)
	External Static Pressure ★2	inH2O	0.20 (0.60 - 0.12)		0.20 (0.60 - 0.12)	
		Pa	50 (150 - 30)		50 (150 - 30)	
Sound Pressure Level		dB(A)	32	32	33	33
Sound Power Level		dB(A)	46	46	47	47
Air Filter ★3			—		—	
Weight (Mass)		Lbs (kg)	64 (29)		64 (29)	
Piping Connections	Liquid	in. (mm)	φ 1/4 (6.4) (Flare)		φ 1/4 (6.4) (Flare)	
	Gas	in. (mm)	φ 3/8 (9.5) (Flare)		φ 3/8 (9.5) (Flare)	
	Drain	in. (mm)	I.D. φ 1 (25) / O.D. φ 1-1/4 (32)		I.D. φ 1 (25) / O.D. φ 1-1/4 (32)	
Remote Controller (Option)	Wired		BRC1E73		BRC1E73	
	Wireless		BRC082A43		BRC082A43	
Drawing No.			3D112997B		3D112997B	

Notes: ★1 See page 15 ~ 19 "Combination Capacity".
★2 External static pressure is changeable in 13 stages by remote controller.
★3 Air filter is not standard accessory, but please mount it in the duct system of the suction side.
   Select its dust collection efficiency (gravity method) 50% or more.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

Model			FDMQ15RVJU		FDMQ18RVJU	
			Cooling	Heating	Cooling	Heating
Rated Capacity ★1			15 kBtu/h Class		18 kBtu/h Class	
Casing Color			—		—	
Dimensions (H × W × D)		in. (mm)	9-5/8 × 39-3/8 × 31-1/2 (245 × 1,000 × 800)		9-5/8 × 39-3/8 × 31-1/2 (245 × 1,000 × 800)	
Coil	Type		Cross Fin Coil		Cross Fin Coil	
	Rows × Stages × Fin per Inch		2 × 26 × 18		3 × 26 × 18	
	Face Area	ft² (m²)	3-1/8 (0.288)		3-1/8 (0.288)	
Fan	Type		Sirocco Fan		Sirocco Fan	
	Motor Output	W	230		230	
	Airflow Rate H / M / L	cfm (m³/min)	516 / 438 / 360 (14.6 / 12.4 / 10.2)	516 / 438 / 360 (14.6 / 12.4 / 10.2)	675 / 572 / 473 (19.1 / 16.2 / 13.4)	675 / 572 / 473 (19.1 / 16.2 / 13.4)
	External Static Pressure ★2	inH2O	0.20 (0.60 - 0.20)		0.20 (0.60 - 0.20)	
		Pa	50 (150 - 50)		50 (150 - 50)	
Sound Pressure Level		dB(A)	34	34	35	35
Sound Power Level		dB(A)	48	48	49	49
Air Filter ★3			—		—	
Weight (Mass)		Lbs (kg)	77 (35)		82 (37)	
Piping Connections	Liquid	in. (mm)	φ 1/4 (6.4) (Flare)		φ 1/4 (6.4) (Flare)	
	Gas	in. (mm)	φ 1/2 (12.7) (Flare)		φ 1/2 (12.7) (Flare)	
	Drain	in. (mm)	I.D. φ 1 (25) / O.D. φ 1-1/4 (32)		I.D. φ 1 (25) / O.D. φ 1-1/4 (32)	
Remote Controller (Option)	Wired		BRC1E73		BRC1E73	
	Wireless		BRC082A43		BRC082A43	
Drawing No.			3D112997B		3D112997B	

Model			FDMQ24RVJU	
			Cooling	Heating
Rated Capacity ★1			24 kBtu/h Class	
Casing Color			—	
Dimensions (H × W × D)		in. (mm)	9-5/8 × 39-3/8 × 31-1/2 (245 × 1,000 × 800)	
Coil	Type		Cross Fin Coil	
	Rows × Stages × Fin per Inch		3 × 26 × 18	
	Face Area	ft² (m²)	3-1/8 (0.288)	
Fan	Type		Sirocco Fan	
	Motor Output	W	230	
	Airflow Rate H / M / L	cfm (m³/min)	798 / 678 / 558 (22.6 / 19.2 / 15.8)	798 / 678 / 558 (22.6 / 19.2 / 15.8)
	External Static Pressure ★2	inH2O	0.20 (0.60 - 0.20)	
		Pa	50 (150 - 50)	
Sound Pressure Level		dB(A)	40	40
Sound Power Level		dB(A)	54	54
Air Filter ★3			—	
Weight (Mass)		Lbs (kg)	82 (37)	
Piping Connections	Liquid	in. (mm)	φ 1/4 (6.4) (Flare)	
	Gas	in. (mm)	φ 5/8 (15.9) (Flare)	
	Drain	in. (mm)	I.D. φ 1 (25) / O.D. φ 1-1/4 (32)	
Remote Controller (Option)	Wired		BRC1E73	
	Wireless		BRC082A43	
Drawing No.			3D112997B	

Notes:
★1 See page 15 ~ 19 "Combination Capacity".
★2 External static pressure is changeable in 11 stages by remote controller.
★3 Air filter is not standard accessory, but please mount it in the duct system of the suction side.
    Select its dust collection efficiency (gravity method) 50% or more.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

Model			FVXS09NVJU		FVXS12NVJU	
			Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★			9 kBtu/h Class		12 kBtu/h Class	
Front Panel Color			White		White	
Airflow Rate	H	cfm (m³/min)	290 (8.2)	311 (8.8)	300 (8.5)	332 (9.4)
	M		230 (6.5)	244 (6.9)	237 (6.7)	258 (7.3)
	L		169 (4.8)	177 (5.0)	173 (4.9)	184 (5.2)
	SL		145 (4.1)	155 (4.4)	159 (4.5)	166 (4.7)
Fan	Type		Turbo Fan		Turbo Fan	
	Motor Output	W	12.3		13.4	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.14 - 0.13	0.15 - 0.14	0.14 - 0.13	0.15 - 0.14
Power Consumption (Rated)		W	15 - 15	17 - 17	15 - 15	17 - 17
Power Factor (Rated)		%	51.5 - 50.2	54.5 - 52.8	51.5 - 50.2	54.5 - 52.8
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	23-5/8 × 27-9/16 × 8-1/4 (600 × 700 × 210)		23-5/8 × 27-9/16 × 8-1/4 (600 × 700 × 210)	
Packaged Dimensions (H × W × D)		in. (mm)	27-3/8 × 30-15/16 × 11 (696 × 786 × 280)		27-3/8 × 30-15/16 × 11 (696 × 786 × 280)	
Weight (Mass)		Lbs (kg)	31 (14)		31 (14)	
Gross Weight (Gross Mass)		Lbs (kg)	40 (18)		40 (18)	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 32 / 26 / 23	38 / 32 / 26 / 23	39 / 33 / 27 / 24	39 / 33 / 27 / 24
Sound Power Level		dB	—	—	—	—
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)	φ 13/16 (φ 20)		φ 13/16 (φ 20)	
Drawing No.			3D101722		3D101724	

Model			FVXS15NVJU		FVXS18NVJU	
			Cooling	**Heating**	**Cooling**	**Heating**
Rated Capacity ★			15 kBtu/h Class		18 kBtu/h Class	
Front Panel Color			White		White	
Airflow Rate	H	cfm (m³/min)	378 (10.7)	417 (11.8)	378 (10.7)	417 (11.8)
	M		325 (9.2)	357 (10.1)	325 (9.2)	357 (10.1)
	L		275 (7.8)	300 (8.5)	275 (7.8)	300 (8.5)
	SL		233 (6.6)	251 (7.1)	233 (6.6)	251 (7.1)
Fan	Type		Turbo Fan		Turbo Fan	
	Motor Output	W	23.3		23.3	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter			Removable, Washable, Mildew Proof		Removable, Washable, Mildew Proof	
Running Current (Rated)		A	0.19 - 0.17	0.21 - 0.19	—	—
Power Consumption (Rated)		W	27 - 27	34 - 34	—	—
Power Factor (Rated)		%	68.3 - 69.1	77.8 - 77.8	—	—
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	23-5/8 × 27-9/16 × 8-1/4 (600 × 700 × 210)		23-5/8 × 27-9/16 × 8-1/4 (600 × 700 × 210)	
Packaged Dimensions (H × W × D)		in. (mm)	27-3/8 × 30-15/16 × 11 (696 × 786 × 280)		27-3/8 × 30-15/16 × 11 (696 × 786 × 280)	
Weight (Mass)		Lbs (kg)	31 (14)		31 (14)	
Gross Weight (Gross Mass)		Lbs (kg)	40 (18)		40 (18)	
Sound Pressure Level	H / M / L / SL	dB(A)	44 / 40 / 36 / 32	45 / 40 / 36 / 32	44 / 40 / 36 / 32	45 / 40 / 36 / 32
Sound Power Level		dB	—	—	—	—
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 1/2 (φ 12.7)		φ 1/2 (φ 12.7)	
	Drain	in. (mm)	φ 13/16 (φ 20.0)		φ 13/16 (φ 20)	
Drawing No.			3D101718		3D094866	

Notes:
1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

60 Hz, 208 - 230 V

2

Model			FFQ09Q2VJU		FFQ12Q2VJU	
			Cooling	Heating	Cooling	Heating
Rated Capacity ★			9 kBtu/h Class		12 kBtu/h Class	
Decoration Panel (1)	Model		BYFQ60B3W1		BYFQ60B3W1	
	Color		White		White	
	Dimensions (H × W × D)	in. (mm)	2-3/16 × 27-9/16 × 27-9/16 (55 × 700 × 700)		2-3/16 × 27-9/16 × 27-9/16 (55 × 700 × 700)	
	Weight (Mass)	Lbs (kg)	6 (2.7)		6 (2.7)	
Decoration Panel (2)	Model		BYFQ60C2W1W / BYFQ60C2W1S		BYFQ60C2W1W / BYFQ60C2W1S	
	Color		White / Silver		White / Silver	
	Dimensions (H × W × D)	in. (mm)	1-13/16 × 24-7/16 × 24-7/16 (46 × 620 × 620)		1-13/16 × 24-7/16 × 24-7/16 (46 × 620 × 620)	
	Weight (Mass)	Lbs (kg)	6.2 (2.8)		6.2 (2.8)	
Airflow Rate	H	cfm (m³/min)	378 (10.7)	399 (11.3)	406 (11.5)	427 (12.1)
	M		339 (9.6)	357 (10.1)	353 (10.0)	371 (10.5)
	L		268 (7.6)	282 (8.0)	268 (7.6)	282 (8.0)
Fan	Type		Turbo Fan		Turbo Fan	
	Motor Output	W	—		—	
	Speed	Steps	3 Steps		3 Steps	
Air Direction Control			—		—	
Running Current (Rated)		A	0.23 - 0.21	0.23 - 0.21	0.27 - 0.24	0.27 - 0.24
Power Consumption (Rated)		W	23	23	27	27
Power Factor (Rated)		%	48.1 - 47.6	48.1 - 47.6	48-1 - 48.9	48-1 - 48.9
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	10-1/4 × 22-5/8 × 22-5/8 (260 × 575 × 575)		10-1/4 × 22-5/8 × 22-5/8 (260 × 575 × 575)	
Packaged Dimensions (H × W × D)		in. (mm)	11 × 27 × 23-1/2 (280 × 686 × 597)		11 × 27 × 23-1/2 (280 × 686 × 597)	
Weight (Mass)		Lbs (kg)	36 (16)		36 (16)	
Gross Weight (Gross Mass)		Lbs (kg)	40 (18)		40 (18)	
Sound Pressure Level	H / M / L	dB(A)	38 / 35 / 29	38 / 35 / 29	39 / 36 / 30	39 / 36 / 30
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 3/8 (φ 9.5)		φ 3/8 (φ 9.5)	
	Drain	in. (mm)	VP20 (O.D. φ 1-1/32 (φ 26))		VP20 (O.D. φ 1-1/32 (φ 26))	
Drawing No.			3D106061A		3D106062	

Model			FFQ15Q2VJU		FFQ18Q2VJU	
			Cooling	Heating	Cooling	Heating
Rated Capacity ★			15 kBtu/h Class		18 kBtu/h Class	
Decoration Panel (1)	Model		BYFQ60B3W1		BYFQ60B3W1	
	Color		White		White	
	Dimensions (H × W × D)	in. (mm)	2-3/16 × 27-9/16 × 27-9/16 (55 × 700 × 700)		2-3/16 × 27-9/16 × 27-9/16 (55 × 700 × 700)	
	Weight (Mass)	Lbs (kg)	6 (2.7)		6 (2.7)	
Decoration Panel (2)	Model		BYFQ60C2W1W / BYFQ60C2W1S		BYFQ60C2W1W / BYFQ60C2W1S	
	Color		White / Silver		White / Silver	
	Dimensions (H × W × D)	in. (mm)	1-13/16 × 24-7/16 × 24-7/16 (46 × 620 × 620)		1-13/16 × 24-7/16 × 24-7/16 (46 × 620 × 620)	
	Weight (Mass)	Lbs (kg)	6.2 (2.8)		6.2 (2.8)	
Airflow Rate	H	cfm (m³/min)	420 (11.9)	441 (12.5)	448 (12.7)	498 (14.1)
	M		367 (10.4)	385 (10.9)	378 (10.7)	420 (11.9)
	L		293 (8.3)	307 (8.7)	275 (7.8)	307 (8.7)
Fan	Type		Turbo Fan		Turbo Fan	
	Motor Output	W	—		—	
	Speed	Steps	3 Steps		3 Steps	
Air Direction Control			—		—	
Running Current (Rated)		A	0.29 - 0.26	0.29 - 0.26	0.52 - 0.47	0.52 - 0.47
Power Consumption (Rated)		W	28	28	51 - 51	51 - 51
Power Factor (Rated)		%	46.4 - 46.8	46.4 - 46.8	47.2 - 47.2	47.2 - 47.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		in. (mm)	10-1/4 × 22-5/8 × 22-5/8 (260 × 575 × 575)		10-1/4 × 22-5/8 × 22-5/8 (260 × 575 × 575)	
Packaged Dimensions (H × W × D)		in. (mm)	11 × 27 × 23-1/2 (280 × 686 × 597)		11 × 27 × 23-1/2 (280 × 686 × 597)	
Weight (Mass)		Lbs (kg)	36 (16)		39.0 (17.5)	
Gross Weight (Gross Mass)		Lbs (kg)	40 (18)		42.0 (19.0)	
Sound Pressure Level	H / M / L	dB(A)	40 / 37 / 31	40 / 37 / 31	44 / 40 / 32	44 / 40 / 32
Heat Insulation			Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connections	Liquid	in. (mm)	φ 1/4 (φ 6.4)		φ 1/4 (φ 6.4)	
	Gas	in. (mm)	φ 1/2 (φ 12.7)		φ 1/2 (φ 12.7)	
	Drain	in. (mm)	VP20 (O.D. φ 1-1/32 (φ 26))		VP20 (O.D. φ 1-1/32 (φ 26))	
Drawing No.			3D106063A		3D106064	

Notes:
1. ★ See page 15 ~ 19 "Combination Capacity".
2. SL: The Quiet fan level of the airflow rate setting.

Conversion Formulae
kcal/h = kW × 860
Btu/h = kW × 3412
cfm = m³/min × 35.3

4. Dimensions

4.1 Outdoor Unit

RMXS48LVJU

NO.	Parts name	Remarks
7	Drain pipe connection	Outside diameterφ1" 3points
6	Power supply wiring or transmission wiring intake	φ7/8" Knockout hole
5	Refrigerant piping intake	
4	Grounding terminal	In switch box (M5)
3	Service port	In the unit
2	Liquid pipe connection	3/8" Flare
1	Gas pipe connection	3/4" Brazing

3D080736

4.2   BP Unit

BPMKS048A2U

Manufacturer's label
4-Suspension bolt (M8~M10)
Suspension bolt pitch
(12)
10
12-11/16
Suspension bolt pitch

(26-11/16)
Terminal (For A room)
Terminal (For B room)
Terminal (For transmission)
Wiring clamp
Electrical box
E
(12)
1-3/4
Wiring clamp
2-1/4 3-3/4   6
7-9/16   (11-9/16)   7-9/16
F
R
7/8   2-7/8
(7-1/16)
2-7/8
ROOM A   ROOM B
2-ϕ5/8
2-ϕ1/4
Terminal (For Power supply)
Ground (M4)   Ground (M4)
ϕ5/8
7/8
INDOOR UNIT SIDE
6-9/16   11-9/16   6-9/16
(24-11/16)
ϕ3/8
Wiring clamp
OUTDOOR UNIT SIDE
7-3/4   4-1/4

Installation restrictions
(servicing space) (installation and service space) (servicing space)
Min 15-3/8   Min 15-3/8

Characteristics:
1. No drain treatment necessary.
2. This unit can be installed so that F or R side faces forward. (Chosen by servicing direction).
3. The unit can be installed by either suspending from the ceiling or mounting on the wall.

Cautions:
1. This unit must be installed so that side of E is facing up.
2. The slant of face E must be within ±5° for front and rear, right and left.
3. Before mounting on the wall, installation becomes easy by hanging this unit on screw for temporary fixing. (2 places)

Wall-mounting
Screw for temporary fixing (Cautions 3.)
12-11/16~14
4-7/16
1
○ : screw for fixing. (4 places)

(servicing space) Min 12
The opening for Inspection
A square opening of 25-9/16 inches is needed for service and maintenance.

C: 3D080436A

BPMKS049A3U

Manufacturer's label
4-Suspension bolt (M8~M10)
Suspension bolt pitch
(12)
10
12-11/16
Suspension bolt pitch

(26-11/16)
Terminal (For A room)
Terminal (For B room)
Terminal (For C room)
Terminal (For transmission)
Wiring clamp
Electrical box
E
(12)
1-3/4
Wiring clamp
2-1/4 3-3/4 3-3/4 2-1/4
7-9/16   (11-9/16)   7-9/16
F
R
7/8   2-7/8
(7-1/16)
2-7/8
ROOM A ROOM B ROOM C
3-ϕ5/8
3-ϕ1/4
Terminal (For Power supply)
Ground (M4)   Ground (M4)
ϕ5/8
7/8
INDOOR UNIT SIDE
6-9/16   11-9/16   6-9/16
(24-11/16)
ϕ3/8
Wiring clamp
OUTDOOR UNIT SIDE
7-3/4   4-1/4

Installation restrictions
(servicing space) (installation and service space) (servicing space)
Min 18-1/8   Min 15-3/8

Characteristics:
1. No drain treatment necessary.
2. This unit can be installed so that F or R side faces forward. (Chosen by servicing direction).
3. The unit can be installed by either suspending from the ceiling or mounting on the wall.

Cautions:
1. This unit must be installed so that side of E is facing up.
2. The slant of face E must be within ±5° for front and rear, right and left.
3. Before mounting on the wall, installation becomes easy by hanging this unit on screw for temporary fixing. (2 places)

Wall-mounting
Screw for temporary fixing (Cautions 3.)
12-11/16~14
4-7/16
1
○ : screw for fixing. (4 places)

(servicing space) Min 12
The opening for Inspection
A square opening of 25-9/16 inches is needed for service and maintenance.

C: 3D080435A

4.3   Indoor Unit

CTXG09/12QVJUW(S)

C: 3D105568

CTXG18QVJUW(S)

C: 3D105569

CTXS07JVJU, CTXS09/12HVJU

THE MARK (→) SHOWS PIPING DIRECTION

C: 3D062863A

CTXS07LVJU, FTXS09/12LVJU

THE MARK (→) SHOWS PIPING DIRECTION

C: 3D074094A

FTXS15/18LVJU

THE MARK (→)SHOWS PIPING DIRECTION

LEFT ← REAR   41-5/16 (1050mm)   RIGHT →

INCLUDING INSTALLATION PLATE
9-13/16 (250mm)
9-3/4 (248mm)

AIRFLOW (INDOOR)

MIN.1-3/16 (30mm) (SPACE FOR PERFORMANCE)

MIN.1-15/16 (50mm) (SPACE FOR MAINTENANCE)   REQUIRED SPACE   MIN.1-15/16 (50mm) (SPACE FOR MAINTENANCE)

FRONT GRILLE FIXING SCREWS (INSIDE)

NAME PLATE

TERMINAL BLOCK WITH GROUND TERMINAL (INSIDE)

13-3/8 (340mm)

INTELLIGENT EYE SENSOR

BOTTOM ↓

FLAPS   SIGNAL RECEIVER

OPERATION LAMP
TIMER LAMP
INTELLIGENT EYE LAMP
INDOOR UNIT ON/OFF SWITCH
ROOM TEMP. THERMISTOR (INSIDE)
MODEL NAME PLATE

GAS PIPE φ1/2 (φ12.7mm) CuT (THE LENGTH OF PIPE OUTSIDE THE UNIT: ABOUT 15-3/4 (400mm))
LIQUID PIPE φ1/4 (φ6.4mm) CuT (THE LENGTH OF PIPE OUTSIDE THE UNIT: ABOUT 18-1/8 (460mm))

DRAIN HOSE (CONNECTING PART O.D. φ5/8 (φ16mm) THE HOSE LENGTH OF OUTSIDE THE UNIT: ABOUT 18-5/16 (465mm))

SIGNAL TRANSMITTER

2-5/16 (58mm)   11/16 (18mm)

7-3/8 (187mm)

BLADE ANGLES

UP/DOWN (AUTOMATIC)

COOLING, DRY   HEATING   FAN

15° 25° 50° 60°   30° 40° 70° 75°   15° 25° 70° 75°

RIGHT/LEFT (AUTOMATIC)

45° 45°

WIRELESS REMOTE CONTROLLER (ARC452A21)

9/16 (14.5mm)

41-5/16 (1050mm)
37-5/16 (947mm)   1-3/8 (35.5mm)

8-1/4 (210mm) 5/8 (16mm) 13-3/8 (340mm)

1-3/4 (45mm)

WALL HOLE FOR EMBEDDED PIPING φ3-1/8 (φ80mm) HOLE 2-9/16 (65mm)
WALL HOLE φ3-1/8 (φ80mm) HOLE 3-1/2 (89mm)

1-3/4 (45mm)

STANDARD LOCATIONS OF WALL HOLES

C: 3D074024A

FTXS24LVJU

THE MARK (→) SHOWS PIPING DIRECTION

LEFT ← REAR   41-5/16 (1050mm)   RIGHT →

INCLUDING INSTALLATION PLATE
9-13/16 (250mm)
9-3/4 (248mm)

AIRFLOW (INDOOR)

MIN. 1-3/16 (30mm) (SPACE FOR PERFORMANCE)

MIN. 1-15/16 (50mm) (SPACE FOR MAINTENANCE)   REQUIRED SPACE   MIN. 1-15/16 (50mm) (SPACE FOR MAINTENANCE)

FRONT GRILLE FIXING SCREWS (INSIDE)

NAME PLATE

TERMINAL BLOCK WITH GROUND TERMINAL (INSIDE)

13-3/8 (340mm)

INTELLIGENT EYE SENSOR

BOTTOM ↓

FLAPS   SIGNAL RECEIVER

OPERATION LAMP
TIMER LAMP
INTELLIGENT EYE LAMP
INDOOR UNIT ON/OFF SWITCH
ROOM TEMP. THERMISTOR (INSIDE)
MODEL NAME PLATE

GAS PIPE φ5/8 (φ15.9mm) CuT (THE LENGTH OF PIPE OUTSIDE THE UNIT: ABOUT 15-3/4 (400mm))
LIQUID PIPE φ1/4 (φ6.4mm) CuT (THE LENGTH OF PIPE OUTSIDE THE UNIT: ABOUT 18-1/8 (460mm))

DRAIN HOSE (CONNECTING PART O.D. φ5/8 (φ16mm) THE HOSE LENGTH OF OUTSIDE THE UNIT: ABOUT 18-5/16 (465mm))

SIGNAL TRANSMITTER

2-5/16 (58mm)   11/16 (18mm)

7-3/8 (187mm)

BLADE ANGLES

UP/DOWN (AUTOMATIC)

COOLING, DRY   HEATING   FAN

15° 25° 50° 60°   30° 40° 70° 75°   15° 25° 70° 75°

RIGHT/LEFT (AUTOMATIC)

45° 45°

WIRELESS REMOTE CONTROLLER (ARC452A21)

9/16 (14.5mm)

41-5/16 (1050mm)
37-5/16 (947mm)   1-3/8 (35.5mm)

1-3/4 (45mm)   8-1/4 (210mm) 5/8 (16mm) 13-3/8 (340mm)

WALL HOLE FOR EMBEDDED PIPING φ3-1/8 (φ80mm) HOLE 2-9/16 (65mm)
WALL HOLE φ3-1/8 (φ80mm) HOLE 3-1/2 (89mm)

1-3/4 (45mm)

STANDARD LOCATIONS OF WALL HOLES

C: 3D073962A

2

FDXS09/12LVJU

3D074619A

10	PROTECTION NET	
9	AIR FILTER (ACCESSORY)	
8	SUSPENSION BRACKET	
7	POWER SUPPLY CONNECTION	
6	INFRARED RECEIVER UNIT CONNECTION	
5	CONTROL BOX	
4	DRAIN HOSE (ACCESSORY)	I.D. φ31/32(φ25mm) (OUTLET)
3	SOCKET FOR DRAIN	VP20 (O.D. φ1-1/32 (φ26mm)/ I.D. φ25/32 (φ20mm))
2	GAS PIPE CONNECTION	φ3/8 (φ9.5mm) (FLARE CONNECTION)
1	LIQUID PIPE CONNECTION	φ1/4 (φ6.4mm) (FLARE CONNECTION)
NUMBER	NAME	DESCRIPTION

NOTE) 1. IN CASE OF BACK-SUCTION, MOUNT CHAMBER COVER TO BOTTOM SIDE OF THE UNIT. IN CASE OF BOTTOM-SUCTION, MOUNT CHAMBER COVER TO BACK SIDE OF THE UNIT.
2. LOCATION OF UNIT'S NAME PLATE: CONTROL BOX COVER
3. MOUNT THE AIR FILTER AT THE SUCTION SIDE. (SELECT ITS COLORIMETHOD (GRAVITY METHOD) 50% OR MORE. IT CAN NOT BE EQUIPPED WITH AIR FILTER (ACCESSORY) WHEN CONNECTING DUCT TO SUCTION SIDE.
4. PIPE SPECIFICATION

CDXS15/18LVJU

3D075268

10	PROTECTION NET	
9	AIR FILTER (ACCESSORY)	
8	SUSPENSION BRACKET	
7	POWER SUPPLY CONNECTION	
6	INFRARED RECEIVER UNIT CONNECTION	
5	CONTROL BOX	
4	DRAIN HOSE (ACCESSORY)	I.D. φ 31/32 (φ 25mm) (OUTLET)
3	SOCKET FOR DRAIN	VP20 (O.D. φ 1-1/32 (φ 26mm) /I.D. φ 25/32 (φ 20mm))
2	GAS PIPE CONNECTION	φ 1/2 (φ 12.7mm) (FLARE CONNECTION)
1	LIQUID PIPE CONNECTION	φ 1/4 (φ 6.4mm) (FLARE CONNECTION)
NUMBER	NAME	DESCRIPTION

NOTE) 1. IN CASE OF BACK-SUCTION, MOUNT CHAMBER COVER TO BOTTOM SIDE OF THE UNIT. IN CASE OF BOTTOM-SUCTION, MOUNT CHAMBER COVER TO BACK SIDE OF THE UNIT.
2. LOCATION OF UNIT'S NAME PLATE: CONTROL BOX COVER
3. MOUNT THE AIR FILTER AT THE SUCTION SIDE. (SELECT ITS COLORIMETHOD (GRAVITY METHOD) 50% OR MORE. IT CAN NOT BE EQUIPPED WITH AIR FILTER (ACCESSORY) WHEN CONNECTING DUCT TO SUCTION SIDE.

CDXS24LVJU

NOTE) 1. IN CASE OF BACK-SUCTION, MOUNT CHAMBER COVER TO BOTTOM SIDE OF THE UNIT.
IN CASE OF BOTTOM-SUCTION, MOUNT CHAMBER COVER TO BACK SIDE OF THE UNIT.
2. LOCATION OF UNIT'S NAME PLATE: CONTROL BOX COVER
3. MOUNT THE AIR FILTER AT THE SUCTION SIDE.
(SELECT ITS COLORIMETHOD (GRAVITY METHOD))
50% OR MORE.
IT CAN NOT BE EQUIPPED WITH AIR FILTER (ACCESSORY) WHEN CONNECTING DUCT TO SUCTION SIDE.

NUMBER	NAME	DESCRIPTION
10	PROTECTION NET	
9	AIR FILTER (STANDARD ACCESSORY)	
8	SUSPENSION BRACKET	
7	POWER SUPPLY CONNECTION	
6	INFRARED RECEIVER UNIT CONNECTION	
5	CONTROL BOX	
4	DRAIN HOSE (STANDARD ACCESSORY)	I.D. φ31/32 (OUTLET)
3	SOCKET FOR DRAIN	VP20 (O.D. φ1-1/32/I.D. φ25/32)
2	GAS PIPE CONNECTION	φ5/8 (FLARE CONNECTION)
1	LIQUID PIPE CONNECTION	φ1/4 (FLARE CONNECTION)
NUMBER	NAME	DESCRIPTION

3D080591

FDMQ09/12RVJU

Notes) 1. Locations of Manufacturer's Label: Surface of a control box
2. Make sure to mount the air filter inside the air passage on the suction side.
(Select Duct Collection Efficiency)
〈Gravimetric Method〉50 % or more.
3. If the temperature and humidity in the ceiling is likely to exceed 86° F(30 ℃) and RH80%, strengthen heat insulation by applying the additional insulation materials such as glass wool or polyethylene that has thickness of 3/8 (10) or more.
4. Do not put things that should not get wet under the indoor unit. Dews may drop when humidity reaches over 80%, a drain gets stuck or air filters are not clean.
5. Space for Service Works.

Provide service spaces for service work such as check and maintenance of the control box and drain pump by one of the following ways.

1) Inspection port 1 and 2. (17-11/16×17-11/16) (450×450) (Fig.A) and a space of 11-13/16(300) or more under the unit. (Fig.A)
Note) Inspection port 2 is not needed when there is a space for service work under the unit.
2) Inspection port 1 (17-11/16 × 17-11/16) (450×450) on the control box side, and Inspection port 2 under the unit. (View B-1)
3) Inspection port 3 under the unit and control box. (View B-2)

• Provide enough space for maintenance and mount the drain pan and control box.
• Check the drawing of optional accessories when mounting optional accessories such as filter chamber and humidifier.

ITEM	PART NAME	REMARK
13	Drain hose connection(Accessory)	O.D. φ1 (φ26)
12	Drain hose (Accessory)	O.D. φ1-1/4(φ32) (Outlet)
11	Socket (For maintenance)	O.D. φ1 (φ26)
10	Hanger	For M10
9	Air suction flange	
8	Air discharge flange	
7	Outdoor unit wiring connection	
6	Remote control wiring connection	
5	Control box (Inside)	
4	Ground terminal (terminal in Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4(φ32)
2	Gas pipe connection (flare connection)	φ3/8 (φ9.5)
1	Liquid pipe connection (flare connection)	φ1/4 (φ6.4)

3D112918B

2

FDMQ15/18/24RVJU

3D112919A

FVXS09/12NVJU

C: 3D091758

FVXS15/18NVJU

NOTE) 1. THE MARK (→) SHOWS PIPING DIRECTION

C: 3D091774A
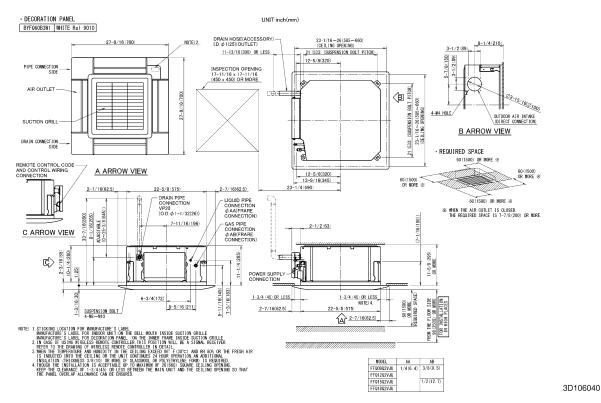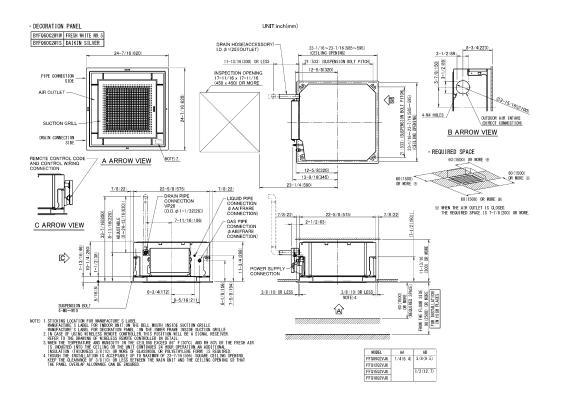
FFQ09/12/15/18Q2VJU with BYFQ60B3W1 (Decoration Panel)

MODEL	AA	AB
FFQ09Q2VJU	1/4 (6.4)	3/8 (9.5)
FFQ12Q2VJU		
FFQ15Q2VJU		1/2 (12.7)
FFQ18Q2VJU		

3D106040

2
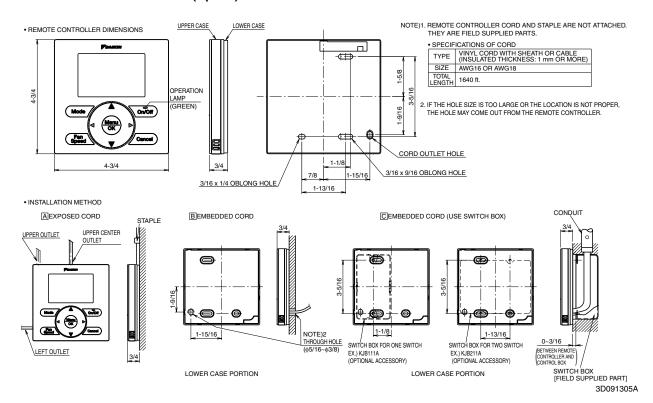
FFQ09/12/15/18Q2VJU with BYFQ60C2W1W(S) (Decoration Panel)

3D106039
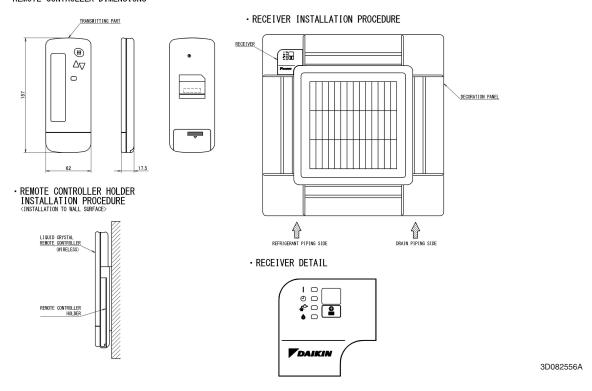
BRC1E73 — Wired Remote Controller (Option) —

3D091305A
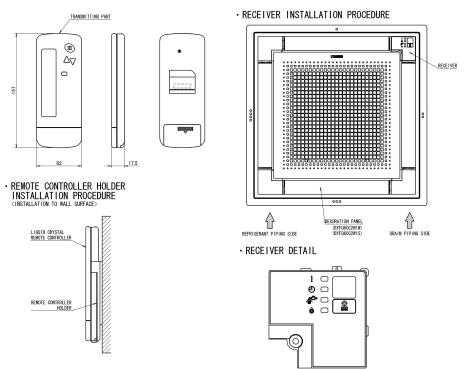
BRC082A41W — Wireless Remote Controller (Option) —

· REMOTE CONTROLLER DIMENSIONS

· RECEIVER INSTALLATION PROCEDURE

TRANSMITTING PART

157

62

17.5

RECEIVER

DECORATION PANEL

REFRIGERANT PIPING SIDE

DRAIN PIPING SIDE

· REMOTE CONTROLLER HOLDER
  INSTALLATION PROCEDURE
  <INSTALLATION TO WALL SURFACE>

LIQUID CRYSTAL
REMOTE CONTROLLER
(WIRELESS)

REMOTE CONTROLLER
HOLDER

· RECEIVER DETAIL

DAIKIN

3D082556A

BRC082A42W(S) — Wireless Remote Controller (Option) —

· REMOTE CONTROLLER DIMENSIONS

· RECEIVER INSTALLATION PROCEDURE

TRANSMITTING PART

157

62

17.5

RECEIVER

DECORATION PANEL
(BYFQ60C2W1W)
(BYFQ60C2W1S)

REFRIGERANT PIPING SIDE

DRAIN PIPING SIDE

· REMOTE CONTROLLER HOLDER
  INSTALLATION PROCEDURE
  <INSTALLATION TO WALL SURFACE>

LIQUID CRYSTAL
REMOTE CONTROLLER

REMOTE CONTROLLER
HOLDER

· RECEIVER DETAIL

3D082024
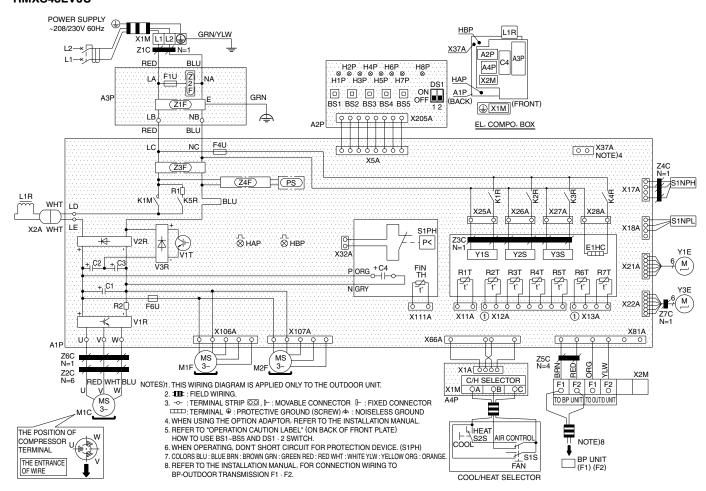
5. Wiring Diagrams

5.1 Outdoor Unit

RMXS48LVJU
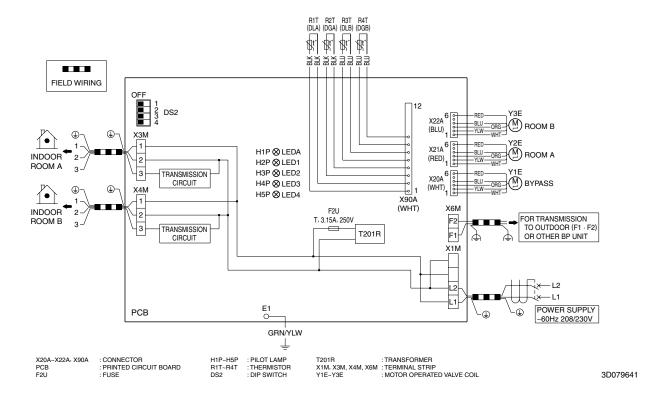
L1-RED	L2-BLU				
A1P	PRINTED CIRCUIT BOARD (MAIN)	K2R	MAGNETIC RELAY (Y2S)	S1PH	PRESSURE SWITCH (HIGH)
A2P	PRINTED CIRCUIT BOARD (SERVICE)	K3R	MAGNETIC RELAY (Y3S)	V1R	POWER MODULE
A3P	PRINTED CIRCUIT BOARD (NOISE FILTER)	K4R	MAGNETIC RELAY (E1HC)	V2R, V3R	DIODE MODULE
A4P	PRINTED CIRCUIT BOARD (C/H SELECTOR)	K5R	MAGNETIC RELAY	V1T	IGBT
BS1~5	PUSH BUTTON SWITCH	L1R	REACTOR	X1M	TERMINAL STRIP (POWER SUPPLY)
	(MODE, SET, RETURN, TEST, RESET)	M1C	MOTOR (COMPRESSOR)	X2M	TERMINAL STRIP (CONTROL)
C1~4	CAPACITOR	M1F	MOTOR (FAN) (UPPER)	X1M	TERMINAL STRIP (C/H SELECTOR) (A4P)
DS1	DIP SWITCH	M2F	MOTOR (FAN) (LOWER)	Y1E	ELECTRONIC EXPANSION VALVE (MAIN)
E1HC	CRANKCASE HEATER	PS	POWER SUPPLY	Y3E	ELECTRONIC EXPANSION VALVE (SUB COOL)
F1U, F4U	FUSE (T 6.3A/250V)	R1	RESISTOR	Y1S	SOLENOID VALVE (4 WAY VALVE)
F6U	FUSE (T 5.0A/250V)	R2	RESISTOR	Y2S	SOLENOID VALVE (HOT GAS)
H1P~8P	PILOT LAMP (SERVICE MONITOR-ORANGE)	R1T	THERMISTOR (AIR)	Y3S	SOLENOID VALVE (U/L CIRCUIT)
	[H2P]PREPARE, TEST-----------FLICKERING	R2T	THERMISTOR (M1C DISCHARGE)	Z1C~7C	NOISE FILTER (FERRITE CORE)
	MALFUNCTION DETECTION--LIGHT UP	R3T	THERMISTOR (SUCTION1)	Z1F~4F	NOISE FILTER
HAP	OPERATION PILOT LAMP	R4T	THERMISTOR (COIL)		C/H SELECTOR
	(SERVICE MONITOR-GREEN) (A1P)	R5T	THERMISTOR (SUCTION2)	S1S	SELECTOR SWITCH (FAN/COOL · HEAT)
HBP	INV. PILOT LAMP	R6T	THERMISTOR (SUBCOOL)	S2S	SELECTOR SWITCH (COOL/HEAT)
	(SERVICE MONITOR-GREEN) (A1P)	R7T	THERMISTOR (LIQUID)		CONNECTOR OF OPTION ADAPTOR
K1M	MAGNETIC CONTACTOR	FINTH	THERMISTOR (FIN)	X37A	CONNECTOR
K1R	MAGNETIC RELAY (Y1S)	S1NPH	PRESSURE SENSOR (HIGH)	NOTE)4	(OPTION ADAPTOR POWER SUPPLY)
		S1NPL	PRESSURE SENSOR (LOW)		

C: 3D080424

NOTES)1. THIS WIRING DIAGRAM IS APPLIED ONLY TO THE OUTDOOR UNIT.
2. ▯▯▯ : FIELD WIRING.
3. ─○─ : TERMINAL STRIP, ◨◨, ▷─ : MOVABLE CONNECTOR ▷─ : FIXED CONNECTOR
   ▭▭▭ : TERMINAL ⊕ : PROTECTIVE GROUND (SCREW) ⏚ : NOISELESS GROUND
4. WHEN USING THE OPTION ADAPTOR, REFER TO THE INSTALLATION MANUAL.
5. REFER TO "OPERATION CAUTION LABEL" (ON BACK OF FRONT PLATE)
   HOW TO USE BS1~BS5 AND DS1 · 2 SWITCH.
6. WHEN OPERATING, DON'T SHORT CIRCUIT FOR PROTECTION DEVICE. (S1PH)
7. COLORS BLU : BLUE BRN : BROWN GRN : GREEN RED : RED WHT : WHITE YLW : YELLOW ORG : ORANGE.
8. REFER TO THE INSTALLATION MANUAL, FOR CONNECTION WIRING TO
   BP-OUTDOOR TRANSMISSION F1 · F2.

5.2 BP Unit

BPMKS048A2U

X20A~X22A, X90A	: CONNECTOR	H1P~H5P	: PILOT LAMP
PCB	: PRINTED CIRCUIT BOARD	R1T~R4T	: THERMISTOR
F2U	: FUSE	DS2	: DIP SWITCH

T201R	: TRANSFORMER	
X1M, X3M, X4M, X6M	: TERMINAL STRIP	
Y1E~Y3E	: MOTOR OPERATED VALVE COIL	3D079641

BPMKS049A3U

X20A~X23A, X90A	: CONNECTOR	H1P~H5P	: PILOT LAMP
PCB	: PRINTED CIRCUIT BOARD	R1T~R6T	: THERMISTOR
F2U	: FUSE	DS2	: DIP SWITCH

T201R	: TRANSFORMER	
X1M, X3M~X6M	: TERMINAL STRIP	
Y1E~Y4E	: MOTOR OPERATED VALVE COIL	3D079640

5.3   Indoor Unit

CTXG09/12/18QVJUW(S)

NOTE When the main power is turned off and then back on again, operation will resume automatically.
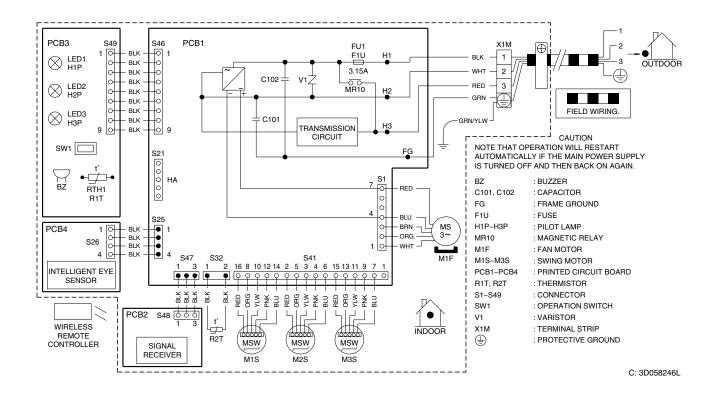
3D103375

CTXS07JVJU, CTXS09/12HVJU
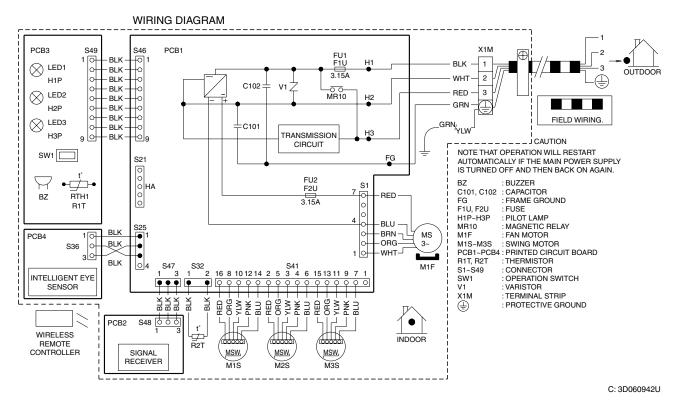
C: 3D038065L

CTXS07LVJU, FTXS09/12LVJU

C: 3D058246L

FTXS15/18/24LVJU

C: 3D060942U

2
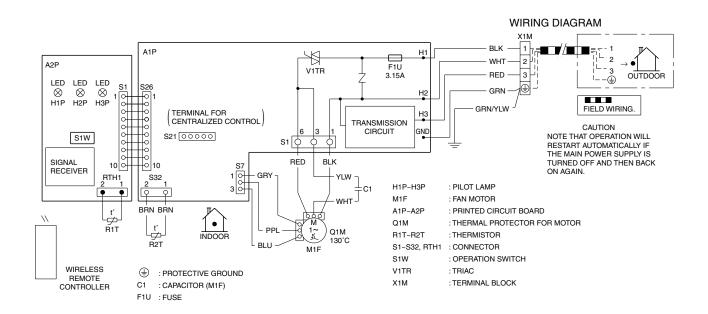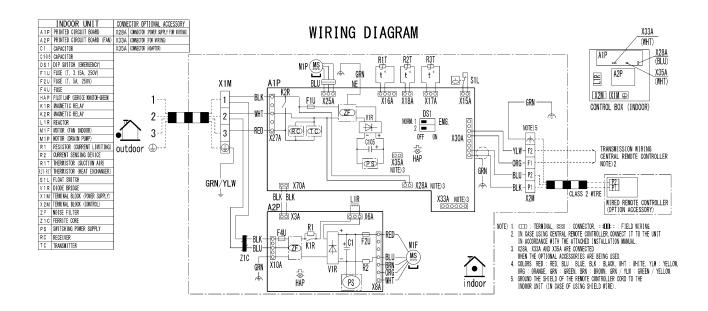
FDXS09/12LVJU, CDXS15/18/24LVJU

C: 3D073998E
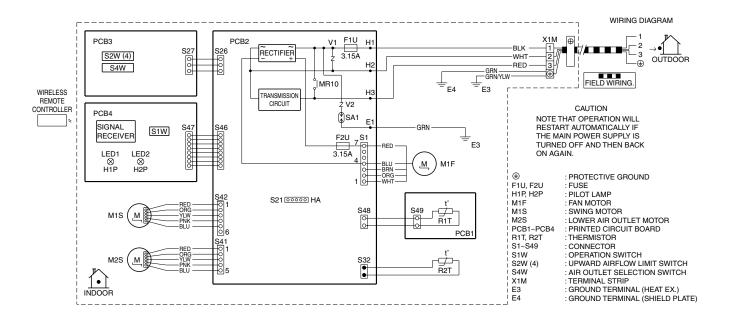
FDMQ09/12/15/18/24RVJU

3D112629A
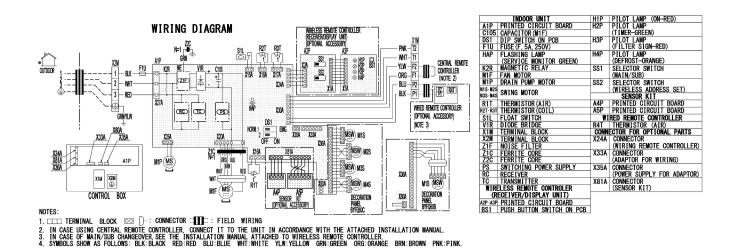
FVXS09/12/15/18NVJU

C: 3D090604A

FFQ09/12/15/18Q2VJU

3D106024
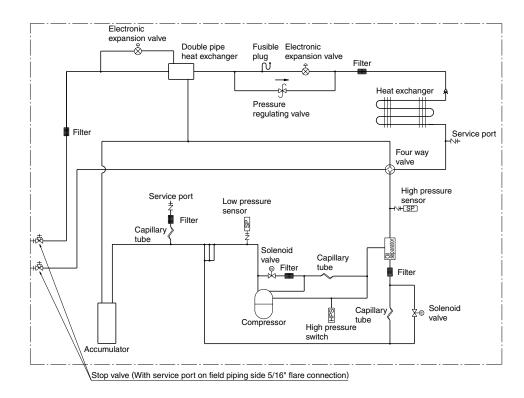
6. Piping Diagrams

6.1   Outdoor Unit

RMXS48LVJU

3D080741
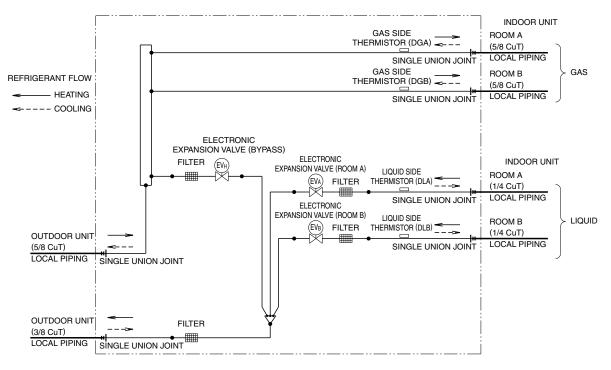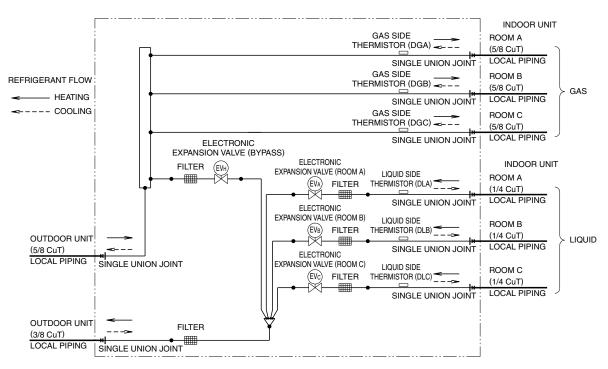
6.2   BP Unit

BPMKS048A2U

3D080438

BPMKS049A3U

3D080437
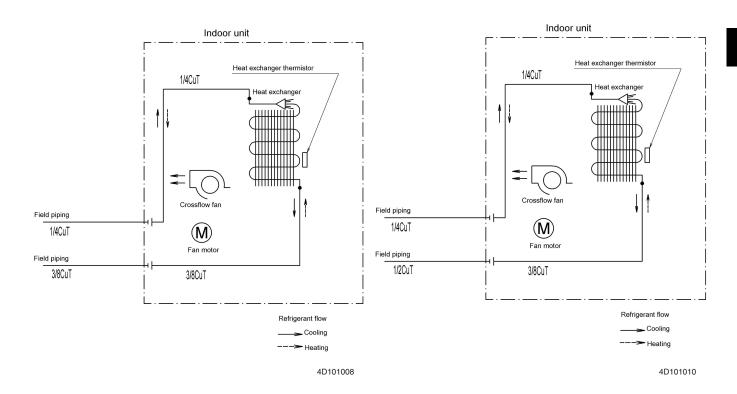
6.3 Indoor Unit

CTXG09/12QVJUW(S)

4D101008

CTXG18QVJUW(S)

4D101010

CTXS07JVJU, CTXS09/12HVJU

4D048251C
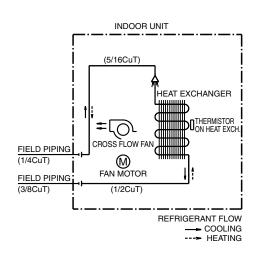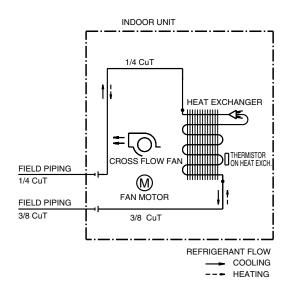
CTXS07LVJU, FTXS09/12LVJU

4D074606
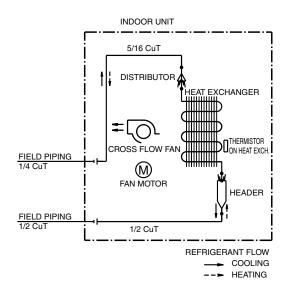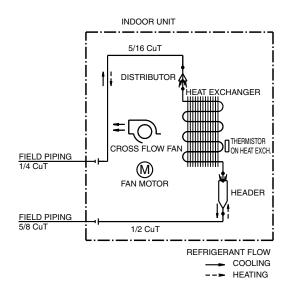
FTXS15/18LVJU

FTXS24LVJU

INDOOR UNIT

5/16 CuT

DISTRIBUTOR

HEAT EXCHANGER

CROSS FLOW FAN

THERMISTOR
ON HEAT EXCH.

FIELD PIPING
1/4 CuT

M

FAN MOTOR

HEADER

FIELD PIPING
1/2 CuT

1/2 CuT

REFRIGERANT FLOW

COOLING
HEATING

4D074609

INDOOR UNIT

5/16 CuT

DISTRIBUTOR

HEAT EXCHANGER

CROSS FLOW FAN

THERMISTOR
ON HEAT EXCH.

FIELD PIPING
1/4 CuT

M

FAN MOTOR

HEADER

FIELD PIPING
5/8 CuT

1/2 CuT

REFRIGERANT FLOW

COOLING
HEATING
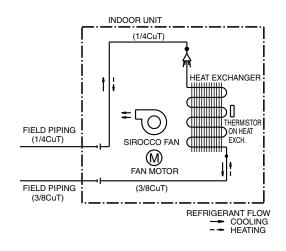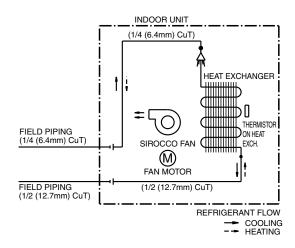
4D074608

FDXS09/12LVJU

CDXS15/18LVJU

INDOOR UNIT

(1/4CuT)

HEAT EXCHANGER

SIROCCO FAN

THERMISTOR
ON HEAT
EXCH.

FIELD PIPING
(1/4CuT)

M

FAN MOTOR

FIELD PIPING
(3/8CuT)

(3/8CuT)

REFRIGERANT FLOW
COOLING
HEATING

4D074621A

INDOOR UNIT

(1/4 (6.4mm) CuT)

HEAT EXCHANGER

SIROCCO FAN

THERMISTOR
ON HEAT
EXCH.

FIELD PIPING
(1/4 (6.4mm) CuT)

M

FAN MOTOR

FIELD PIPING
(1/2 (12.7mm) CuT)

(1/2 (12.7mm) CuT)

REFRIGERANT FLOW
COOLING
HEATING
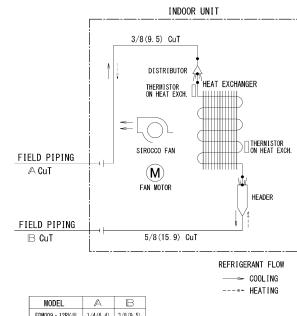
4D075271

CDXS24LVJU

FDMQ09/12/15/18/24RVJU

2

4D080593

MODEL	Ⓐ	Ⓑ
FDMQ09 · 12RVJU	1/4(6.4)	3/8(9.5)
FDMQ15 · 18RVJU	1/4(6.4)	1/2(12.7)
FDMQ24RVJU	1/4(6.4)	5/8(15.9)
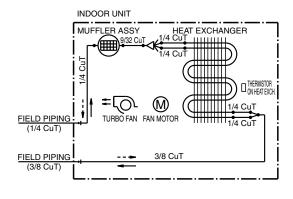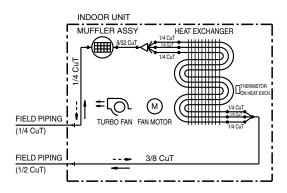
4D112974

FVXS09/12NVJU

FVXS15/18NVJU

4D091794

4D091795A
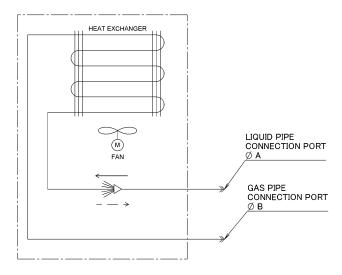
FFQ09/12/15/18Q2VJU

REFRIGERANT FLOW

COOLING ⟶
HEATING ⟶

HEAT EXCHANGER

M
FAN

LIQUID PIPE
CONNECTION PORT
∅ A

GAS PIPE
CONNECTION PORT
∅ B

MODEL	A	B
FFQ09Q2VJU	1/4(6.4)	3/8(9.5)
FFQ12Q2VJU		
FFQ15Q2VJU		1/2(12.7)
FFQ18Q2VJU		

4D106033

7. Capacity Tables

7.1   Wall Mounted Type

Cooling Capacity

COMBINATION (%)	OUTDOOR AIR TEMP.	INDOOR AIR TEMP.: (°F WB)										
		57		61		64		67		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°F DB	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
130%	50	52.18	2.62	56.28	2.66	59.44	2.70	62.42	2.73	67.63	2.78	70.79	2.82
	57	50.57	2.89	54.67	2.93	57.83	2.97	60.81	3.00	66.02	3.06	69.18	3.09
	64	48.97	3.19	53.06	3.24	56.22	3.27	59.20	3.31	64.41	3.36	67.57	3.40
	68	48.06	3.38	52.15	3.42	55.31	3.46	58.29	3.49	63.50	3.55	66.66	3.58
	74	46.68	3.68	50.77	3.73	53.93	3.76	56.91	3.79	62.12	3.85	65.28	3.88
	80	45.32	4.01	49.41	4.05	52.57	4.08	55.55	4.12	60.76	4.17	63.92	4.21
	88	43.48	4.48	47.57	4.52	50.74	4.55	53.71	4.59	58.92	4.64	62.09	4.68
	95	41.87	4.92	45.96	4.97	49.13	5.00	52.10	5.03	57.31	5.09	60.48	5.12
	102	40.26	5.28	44.36	5.28	47.52	5.28	50.50	5.28	55.57	5.28	58.56	5.28
	109	38.65	4.01	42.75	4.01	45.07	4.01	47.12	4.01	50.66	4.01	52.78	4.01
	115	35.16	2.90	37.13	2.90	38.63	2.90	40.03	2.90	42.46	2.90	43.91	2.90
120%	50	51.46	2.58	55.50	2.62	58.62	2.66	61.55	2.69	66.69	2.75	69.81	2.78
	57	49.88	2.85	53.91	2.89	57.03	2.93	59.97	2.96	65.11	3.01	68.22	3.05
	64	48.29	3.15	52.33	3.19	55.45	3.23	58.38	3.26	63.52	3.31	66.64	3.35
	68	47.39	3.33	51.43	3.38	54.55	3.41	57.49	3.44	62.62	3.50	65.74	3.53
	74	46.03	3.63	50.07	3.68	53.19	3.71	56.12	3.74	61.26	3.80	64.38	3.83
	80	44.69	3.95	48.73	3.99	51.85	4.03	54.78	4.06	59.92	4.11	63.04	4.15
	88	42.88	4.41	46.92	4.46	50.04	4.49	52.97	4.52	58.11	4.58	61.23	4.61
	95	41.29	4.85	45.33	4.90	48.45	4.93	51.40	4.96	56.52	5.02	59.64	5.05
	102	39.71	5.28	43.74	5.28	46.86	5.28	49.80	5.28	54.84	5.28	57.82	5.28
	109	38.12	4.01	42.16	4.01	44.47	4.01	46.52	4.01	50.05	4.01	52.17	4.01
	115	34.70	2.90	36.66	2.90	38.16	2.90	39.56	2.90	41.98	2.90	43.43	2.90
110%	50	50.09	2.51	54.02	2.55	57.06	2.58	59.91	2.61	64.91	2.67	67.95	2.70
	57	48.55	2.77	52.48	2.81	55.51	2.84	58.37	2.88	63.37	2.93	66.41	2.96
	64	47.00	3.06	50.93	3.10	53.97	3.14	56.82	3.17	61.83	3.22	64.86	3.25
	68	46.13	3.24	50.06	3.28	53.10	3.31	55.95	3.35	60.95	3.40	63.99	3.43
	74	44.80	3.53	48.73	3.57	51.77	3.60	54.63	3.64	59.63	3.69	62.66	3.72
	80	43.50	3.84	47.43	3.88	50.46	3.91	53.32	3.94	58.32	4.00	61.36	4.03
	88	41.74	4.29	45.66	4.33	48.70	4.36	51.56	4.39	56.56	4.45	59.60	4.48
	95	40.19	4.72	44.12	4.76	47.16	4.79	50.00	4.82	55.02	4.88	58.05	4.91
	102	38.65	5.17	42.58	5.22	45.61	5.25	48.47	5.28	53.44	5.28	56.42	5.28
	109	37.10	4.01	41.03	4.01	43.31	4.01	45.36	4.01	48.88	4.01	51.00	4.01
	115	33.80	2.90	35.76	2.90	37.25	2.90	38.65	2.90	41.07	2.90	42.51	2.90
100%	50	48.07	2.41	51.84	2.45	54.75	2.49	57.49	2.52	62.29	2.57	65.21	2.60
	57	46.59	2.67	50.36	2.71	53.27	2.74	56.01	2.77	60.81	2.82	63.72	2.85
	64	45.10	2.95	48.87	2.99	51.79	3.02	54.53	3.05	59.33	3.10	62.24	3.13
	68	44.27	3.12	48.04	3.16	50.95	3.19	53.69	3.22	58.49	3.27	61.41	3.30
	74	42.99	3.40	46.77	3.44	49.68	3.47	52.42	3.50	57.22	3.55	60.13	3.58
	80	41.74	3.69	45.51	3.74	48.43	3.77	51.17	3.80	55.97	3.85	58.88	3.88
	88	40.05	4.13	43.82	4.17	46.73	4.20	49.48	4.23	54.28	4.28	57.19	4.31
	95	38.57	4.54	42.34	4.58	45.25	4.61	48.00	4.64	52.79	4.69	55.71	4.73
	102	37.09	4.98	40.86	5.02	43.77	5.05	46.51	5.08	51.31	5.14	54.23	5.17
	109	35.60	4.01	39.38	4.01	41.66	4.01	43.69	4.01	47.20	4.01	49.30	4.01
	115	32.55	2.90	34.50	2.90	35.98	2.90	37.37	2.90	39.77	2.90	41.20	2.90
90%	50	43.26	2.03	46.65	2.07	49.28	2.10	51.74	2.12	56.06	2.16	58.69	2.19
	57	41.93	2.25	45.32	2.28	47.94	2.31	50.41	2.33	54.73	2.38	57.35	2.40
	64	40.59	2.48	43.99	2.52	46.61	2.54	49.08	2.57	53.40	2.61	56.02	2.64
	68	39.84	2.63	43.23	2.66	45.86	2.69	48.32	2.71	52.64	2.76	55.27	2.78
	74	38.70	2.86	42.09	2.90	44.71	2.92	47.18	2.95	51.50	2.99	54.12	3.02
	80	37.57	3.11	40.96	3.15	43.58	3.17	46.05	3.20	50.37	3.24	52.99	3.27
	88	36.05	3.48	39.44	3.51	42.06	3.54	44.53	3.56	48.85	3.61	51.47	3.64
	95	34.71	3.83	38.11	3.86	40.73	3.89	43.20	3.91	47.51	3.96	50.14	3.98
	102	33.38	4.20	36.77	4.23	39.39	4.26	41.86	4.28	46.18	4.33	48.80	4.35
	109	32.04	4.01	35.18	4.01	37.45	4.01	39.57	4.01	43.23	4.01	45.42	4.01
	115	28.86	2.90	30.89	2.90	32.44	2.90	33.88	2.90	36.38	2.90	37.88	2.90

COMBINATION (%)	OUTDOOR AIR TEMP.	INDOOR AIR TEMP.: (°F WB)											
		57		61		64		67		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°F DB	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
80%	50	38.45	1.69	41.47	1.71	43.80	1.74	45.99	1.76	49.83	1.79	52.16	1.82
	57	37.27	1.86	40.28	1.89	42.62	1.91	44.81	1.93	48.65	1.97	50.98	1.99
	64	36.08	2.06	39.10	2.09	41.43	2.11	43.62	2.13	47.46	2.17	49.79	2.19
	68	35.41	2.18	38.43	2.21	40.76	2.23	42.96	2.25	46.79	2.29	49.13	2.31
	74	34.40	2.37	37.41	2.40	39.74	2.42	41.94	2.44	45.78	2.48	48.11	2.50
	80	33.39	2.58	36.41	2.61	38.74	2.63	40.93	2.65	44.77	2.69	47.10	2.71
	88	32.04	2.88	35.06	2.91	37.39	2.93	39.58	2.95	43.42	2.99	45.75	3.01
	95	30.85	3.17	33.87	3.20	36.20	3.22	38.40	3.24	42.23	3.28	44.57	3.30
	102	29.67	3.48	32.69	3.51	35.02	3.53	37.21	3.55	41.05	3.59	43.38	3.61
	109	28.48	3.81	31.50	3.84	33.83	3.86	36.02	3.88	39.86	3.91	42.19	3.94
	115	25.73	2.90	27.86	2.90	29.49	2.90	31.01	2.90	33.64	2.90	35.21	2.90
70%	50	33.65	1.38	36.29	1.41	38.33	1.43	40.25	1.44	43.60	1.47	45.64	1.49
	57	32.61	1.53	35.25	1.55	37.29	1.57	39.21	1.59	42.57	1.62	44.61	1.63
	64	31.57	1.69	34.21	1.71	36.25	1.73	38.17	1.75	41.53	1.78	43.57	1.80
	68	30.99	1.79	33.63	1.81	35.67	1.83	37.59	1.85	40.95	1.88	42.98	1.89
	74	30.10	1.95	32.74	1.97	34.78	1.99	36.69	2.01	40.05	2.04	42.09	2.05
	80	29.22	2.12	31.86	2.14	33.90	2.16	35.82	2.18	39.18	2.21	41.22	2.22
	88	28.04	2.37	30.67	2.39	32.71	2.41	34.63	2.43	37.99	2.45	40.03	2.47
	95	27.00	2.60	29.64	2.63	31.68	2.64	33.60	2.66	36.96	2.69	39.00	2.71
	102	25.96	2.86	28.60	2.88	30.64	2.90	32.56	2.91	35.92	2.94	37.96	2.96
	109	24.92	3.13	27.56	3.15	29.60	3.17	31.52	3.18	34.88	3.21	36.92	3.23
	115	23.16	2.90	25.39	2.90	27.10	2.90	28.70	2.90	31.45	2.90	33.10	2.90
60%	50	28.84	1.13	31.10	1.15	32.85	1.16	34.50	1.18	37.38	1.20	39.12	1.22
	57	27.95	1.25	30.21	1.27	31.96	1.28	33.61	1.29	36.49	1.32	38.23	1.33
	64	27.06	1.38	29.32	1.40	31.07	1.41	32.72	1.43	35.60	1.45	37.35	1.46
	68	26.56	1.46	28.82	1.48	30.57	1.49	32.22	1.51	35.10	1.53	36.84	1.55
	74	25.80	1.59	28.06	1.61	29.81	1.62	31.45	1.64	34.33	1.66	36.08	1.68
	80	25.04	1.73	27.31	1.75	29.06	1.76	30.70	1.78	33.58	1.80	35.33	1.81
	88	24.03	1.93	26.29	1.95	28.04	1.96	29.69	1.98	32.57	2.00	34.31	2.02
	95	23.14	2.12	25.40	2.14	27.15	2.16	28.80	2.17	31.68	2.20	33.42	2.21
	102	22.25	2.33	24.51	2.35	26.26	2.36	27.91	2.38	30.79	2.40	32.54	2.42
	109	21.36	2.55	23.63	2.57	25.37	2.58	27.02	2.60	29.90	2.62	31.65	2.64
	115	20.61	2.75	22.87	2.77	24.62	2.78	26.27	2.79	29.15	2.82	30.89	2.83
50%	50	24.03	0.93	25.92	0.94	27.38	0.95	28.75	0.97	31.15	0.99	32.60	1.00
	57	23.29	1.02	25.18	1.04	26.63	1.05	28.01	1.06	30.41	1.08	31.86	1.09
	64	22.55	1.13	24.44	1.15	25.89	1.16	27.26	1.17	29.66	1.19	31.12	1.20
	68	22.13	1.20	24.02	1.21	25.48	1.22	26.85	1.24	29.25	1.26	30.70	1.27
	74	21.50	1.30	23.38	1.32	24.84	1.33	26.21	1.34	28.61	1.36	30.07	1.37
	80	20.87	1.42	22.76	1.43	24.21	1.45	25.58	1.46	27.98	1.48	29.44	1.49
	88	20.03	1.58	21.91	1.60	23.37	1.61	24.74	1.62	27.14	1.64	28.59	1.65
	95	19.28	1.74	21.17	1.76	22.63	1.77	24.00	1.78	26.40	1.80	27.85	1.81
	102	18.54	1.91	20.43	1.93	21.89	1.94	23.26	1.95	25.66	1.97	27.11	1.98
	109	17.80	2.09	19.69	2.11	21.14	2.12	22.52	2.13	24.91	2.15	26.37	2.16
	115	17.18	2.25	19.06	2.27	20.52	2.28	21.89	2.29	24.29	2.31	25.74	2.32

Symbols:

TC : Total capacity (kBtu/h)

PI : Power input (kW)

Notes:

1. ▒ shows rated capacities and power input.

2. This table shows outdoor unit cooling capacity and power input.

3. PI of indoor units is not included in the table.

3D081274

Heating Capacity

COMBINATION (%)	OUTDOOR AIR TEMP. °F WB	INDOOR AIR TEMP.: (°F DB)											
		61		65		68		70		72		76	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
130%	5	31.57	2.91	31.22	3.07	30.95	3.20	30.78	3.28	30.61	3.36	30.25	3.52
	12	36.44	3.06	36.09	3.22	35.82	3.35	35.65	3.43	35.48	3.51	35.12	3.67
	17	39.93	3.17	39.59	3.33	39.32	3.45	39.15	3.54	38.97	3.62	38.62	3.78
	26	46.18	3.36	45.83	3.52	45.56	3.65	45.39	3.73	45.22	3.81	44.86	3.98
	32	50.30	3.49	49.95	3.65	49.69	3.78	49.51	3.86	49.34	3.94	48.99	4.10
	36	53.05	3.57	52.70	3.74	52.43	3.86	52.26	3.94	52.09	4.02	51.73	4.19
	43	57.92	3.73	57.57	3.89	57.30	4.01	57.00	4.09	56.96	4.17	56.60	4.34
	50	62.79	3.88	62.44	4.04	62.17	4.16	62.00	4.24	61.83	4.33	61.47	4.49
	54	65.54	3.96	65.19	4.12	64.92	4.25	64.75	4.33	64.58	4.41	64.22	4.58
	59	69.03	4.07	68.69	4.23	68.42	4.36	68.25	4.44	68.07	4.52	67.72	4.69
120%	5	31.01	2.89	30.67	3.05	30.41	3.17	30.24	3.25	30.07	3.33	29.72	3.50
	12	35.80	3.04	35.46	3.20	35.20	3.32	35.03	3.40	34.86	3.48	34.51	3.65
	17	39.23	3.14	38.89	3.30	38.63	3.43	38.46	3.51	38.29	3.59	37.94	3.75
	26	45.37	3.34	45.03	3.50	44.77	3.62	44.60	3.70	44.43	3.78	44.08	3.95
	32	49.42	3.46	49.08	3.62	48.81	3.75	48.64	3.83	48.47	3.91	48.13	4.07
	36	52.12	3.55	51.78	3.71	51.51	3.83	51.34	3.91	51.17	3.99	50.83	4.16
	43	56.90	3.70	56.56	3.86	56.30	3.98	56.00	4.06	55.96	4.14	55.61	4.31
	50	61.69	3.85	61.35	4.01	61.08	4.13	60.91	4.21	60.74	4.29	60.40	4.46
	54	64.39	3.93	64.05	4.09	63.78	4.22	63.61	4.30	63.44	4.38	63.10	4.54
	59	67.82	4.04	67.48	4.20	67.22	4.33	67.05	4.41	66.88	4.49	66.53	4.65
110%	5	30.46	2.86	30.13	3.02	29.87	3.15	29.70	3.23	29.53	3.31	29.19	3.47
	12	35.16	3.01	34.83	3.17	34.57	3.30	34.40	3.38	34.23	3.46	33.89	3.62
	17	38.53	3.12	38.20	3.28	37.94	3.40	37.77	3.48	37.61	3.56	37.27	3.73
	26	44.56	3.31	44.22	3.47	43.97	3.59	43.80	3.67	43.63	3.75	43.29	3.92
	32	48.54	3.44	48.20	3.60	47.94	3.72	47.78	3.80	47.61	3.88	47.27	4.04
	36	51.19	3.52	50.85	3.68	50.59	3.80	50.43	3.88	50.26	3.96	49.92	4.13
	43	55.89	3.67	55.55	3.83	55.29	3.95	55.00	4.03	54.96	4.11	54.62	4.28
	50	60.59	3.82	60.25	3.98	59.99	4.10	59.83	4.18	59.66	4.26	59.32	4.43
	54	63.24	3.90	62.90	4.06	62.64	4.19	62.48	4.27	62.31	4.35	61.97	4.51
	59	66.61	4.01	66.28	4.17	66.02	4.29	65.85	4.37	65.68	4.45	65.34	4.62
100%	5	29.91	2.83	29.58	2.99	29.32	3.11	29.16	3.19	29.00	3.27	28.66	3.43
	12	34.52	2.98	34.19	3.13	33.94	3.26	33.77	3.34	33.61	3.41	33.27	3.58
	17	37.83	3.08	37.51	3.24	37.25	3.36	37.09	3.44	36.92	3.52	36.59	3.68
	26	43.75	3.27	43.42	3.43	43.17	3.55	43.00	3.63	42.84	3.71	42.50	3.87
	32	47.65	3.39	47.33	3.55	47.07	3.67	46.91	3.75	46.74	3.83	46.41	3.99
	36	50.26	3.48	49.93	3.64	49.67	3.76	49.51	3.84	49.35	3.92	49.01	4.08
	43	54.87	3.62	54.54	3.78	54.29	3.90	54.00	3.98	53.96	4.06	53.63	4.22
	50	59.48	3.77	59.16	3.93	58.90	4.05	58.74	4.13	58.58	4.21	58.24	4.37
	54	62.09	3.85	61.76	4.01	61.51	4.13	61.34	4.21	61.18	4.29	60.84	4.45
	59	65.40	3.96	65.07	4.12	64.82	4.24	64.65	4.32	64.49	4.40	64.16	4.56
90%	5	27.14	2.61	26.84	2.75	26.61	2.87	26.46	2.94	26.31	3.01	26.01	3.16
	12	31.32	2.74	31.03	2.89	30.80	3.00	30.65	3.08	30.50	3.15	30.19	3.30
	17	34.33	2.84	34.03	2.99	33.80	3.10	33.65	3.17	33.51	3.25	33.20	3.39
	26	39.70	3.02	39.40	3.16	39.17	3.27	39.02	3.35	38.87	3.42	38.57	3.57
	32	43.24	3.13	42.94	3.28	42.71	3.39	42.57	3.46	42.42	3.53	42.11	3.68
	36	45.60	3.21	45.31	3.35	45.08	3.46	44.93	3.54	44.78	3.61	44.47	3.76
	43	49.79	3.34	49.49	3.49	49.26	3.60	49.00	3.67	48.97	3.75	48.66	3.89
	50	53.98	3.48	53.68	3.62	53.45	3.74	53.30	3.81	53.15	3.88	52.85	4.03
	54	56.34	3.55	56.04	3.70	55.81	3.81	55.66	3.89	55.51	3.96	55.21	4.11
	59	59.35	3.65	59.05	3.80	58.82	3.91	58.67	3.98	58.52	4.06	58.22	4.20
80%	5	24.37	2.35	24.10	2.48	23.89	2.59	23.76	2.65	23.63	2.72	23.35	2.85
	12	28.13	2.48	27.86	2.61	27.65	2.71	27.52	2.77	27.39	2.84	27.11	2.97
	17	30.83	2.56	30.56	2.69	30.35	2.80	30.22	2.86	30.09	2.93	29.81	3.06
	26	35.65	2.72	35.38	2.85	35.17	2.95	35.04	3.02	34.91	3.08	34.63	3.22
	32	38.83	2.82	38.56	2.95	38.36	3.06	38.22	3.12	38.09	3.19	37.82	3.32
	36	40.95	2.89	40.68	3.02	40.48	3.12	40.34	3.19	40.21	3.26	39.94	3.39
	43	44.71	3.01	44.44	3.15	44.24	3.25	44.00	3.31	43.97	3.38	43.70	3.51
	50	48.47	3.14	48.20	3.27	48.00	3.37	47.86	3.44	47.73	3.50	47.46	3.63
	54	50.59	3.21	50.32	3.34	50.12	3.44	49.98	3.50	49.85	3.57	49.58	3.70
	59	53.29	3.29	53.02	3.42	52.82	3.53	52.68	3.59	52.55	3.66	52.28	3.79

COMBINATION (%)	OUTDOOR AIR TEMP.	INDOOR AIR TEMP.: (°F DB)											
		61		65		68		70		72		76	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°F WB	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
70%	5	21.60	2.08	21.36	2.20	21.18	2.29	21.06	2.35	20.94	2.41	20.70	2.52
	12	24.93	2.19	24.70	2.31	24.51	2.40	24.39	2.46	24.28	2.51	24.03	2.63
	17	27.33	2.27	27.09	2.39	26.91	2.47	26.79	2.53	26.67	2.59	26.43	2.71
	26	31.60	2.41	31.36	2.52	31.18	2.61	31.06	2.67	30.94	2.73	30.70	2.85
	32	34.42	2.50	34.18	2.62	34.00	2.71	33.88	2.76	33.76	2.82	33.52	2.94
	36	36.30	2.56	36.06	2.68	35.88	2.77	35.76	2.82	35.64	2.88	35.40	3.00
	43	39.63	2.67	39.39	2.78	39.21	2.87	39.00	2.93	38.97	2.99	38.73	3.11
	50	42.96	2.78	42.73	2.89	42.54	2.98	42.43	3.04	42.31	3.10	42.06	3.22
	54	44.84	2.84	44.61	2.95	44.42	3.04	44.31	3.10	44.19	3.16	43.94	3.28
	59	47.24	2.92	47.00	3.03	46.82	3.12	46.70	3.18	46.58	3.24	46.34	3.36
60%	5	18.83	1.81	18.63	1.91	18.47	1.98	18.36	2.03	18.26	2.08	18.05	2.19
	12	21.74	1.90	21.53	2.00	21.37	2.08	21.27	2.13	21.16	2.18	20.95	2.28
	17	23.82	1.97	23.62	2.07	23.46	2.15	23.35	2.20	23.25	2.25	23.04	2.35
	26	27.55	2.09	27.34	2.19	27.18	2.27	27.08	2.32	26.98	2.37	26.76	2.47
	32	30.01	2.17	29.80	2.27	29.64	2.35	29.54	2.40	29.43	2.45	29.22	2.55
	36	31.65	2.22	31.44	2.32	31.28	2.40	31.18	2.45	31.07	2.50	30.86	2.60
	43	34.55	2.31	34.35	2.41	34.19	2.49	34.00	2.54	33.98	2.59	33.77	2.70
	50	37.46	2.41	37.25	2.51	37.09	2.59	36.99	2.64	36.88	2.69	36.67	2.79
	54	39.10	2.46	38.89	2.56	38.73	2.64	38.63	2.69	38.52	2.74	38.31	2.84
	59	41.18	2.53	40.98	2.63	40.82	2.71	40.71	2.76	40.61	2.81	40.40	2.91
50%	5	16.06	1.51	15.89	1.60	15.75	1.66	15.66	1.71	15.57	1.75	15.39	1.83
	12	18.54	1.59	18.37	1.68	18.23	1.74	18.14	1.78	18.05	1.83	17.87	1.91
	17	20.32	1.65	20.14	1.73	20.01	1.80	19.92	1.84	19.83	1.88	19.65	1.97
	26	23.50	1.75	23.32	1.83	23.19	1.90	23.10	1.94	23.01	1.98	22.83	2.07
	32	25.60	1.82	25.42	1.90	25.28	1.97	25.20	2.01	25.11	2.05	24.93	2.14
	36	26.99	1.86	26.82	1.95	26.68	2.01	26.59	2.05	26.51	2.10	26.32	2.18
	43	29.47	1.94	29.30	2.02	29.16	2.09	29.00	2.13	28.98	2.17	28.80	2.26
	50	31.95	2.02	31.77	2.10	31.64	2.17	31.55	2.21	31.46	2.25	31.28	2.34
	54	33.35	2.06	33.17	2.15	33.04	2.21	32.95	2.25	32.86	2.30	32.68	2.38
	59	35.13	2.12	34.95	2.20	34.82	2.27	34.73	2.31	34.64	2.35	34.46	2.44

Symbols:

TC : Total capacity (kBtu/h)

PI : Power input (kW)

Notes:

1. ▨ shows rated capacities and power input.
2. This table shows outdoor unit heating capacity and power input.
3. PI of indoor units is not included in the table.

3D081275

7.2   Duct Connected Type

Cooling Capacity

COMBINATION (%)	OUTDOOR AIR TEMP.	INDOOR AIR TEMP.: (°FWB)											
		57		61		64		67		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°FDB	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
130%	50	51.08	2.75	55.09	2.80	58.18	2.83	61.10	2.87	66.20	2.93	69.29	2.96
	57	49.51	3.04	53.51	3.09	56.61	3.12	59.52	3.16	64.62	3.21	67.72	3.25
	64	47.93	3.36	51.94	3.41	55.04	3.44	57.95	3.48	63.05	3.54	66.15	3.57
	68	47.04	3.56	51.05	3.60	54.15	3.64	57.06	3.67	62.16	3.73	65.26	3.77
	74	45.69	3.87	49.70	3.92	52.79	3.96	55.71	3.99	60.81	4.05	63.90	4.09
	80	44.36	4.21	48.37	4.26	51.46	4.29	54.38	4.33	59.48	4.39	62.57	4.42
	88	42.56	4.71	46.57	4.75	49.67	4.79	52.58	4.82	57.68	4.88	60.78	4.92
	95	40.99	5.18	44.99	5.22	48.09	5.26	51.00	5.28	56.04	5.28	59.04	5.28
	102	39.41	5.28	43.42	5.28	46.52	5.28	49.43	5.28	54.53	5.28	57.48	5.28
	109	37.84	4.01	41.84	4.01	44.94	4.01	47.12	4.01	50.47	4.01	52.47	4.01
	115	35.71	2.90	37.57	2.90	38.99	2.90	40.32	2.90	42.61	2.90	43.98	2.90
120%	50	50.08	2.73	54.01	2.77	57.04	2.81	59.90	2.84	64.90	2.90	67.94	2.94
	57	48.54	3.01	52.46	3.06	55.50	3.09	58.36	3.13	63.36	3.18	66.39	3.22
	64	46.99	3.33	50.92	3.37	53.96	3.41	56.81	3.44	61.81	3.50	64.85	3.54
	68	46.12	3.52	50.05	3.57	53.09	3.60	55.94	3.64	60.94	3.70	63.98	3.73
	74	44.80	3.84	48.72	3.88	51.76	3.92	54.62	3.95	59.62	4.01	62.65	4.05
	80	43.49	4.17	47.42	4.22	50.45	4.25	53.31	4.29	58.31	4.35	61.35	4.38
	88	41.73	4.66	45.66	4.71	48.69	4.74	51.55	4.78	56.55	4.84	59.58	4.87
	95	40.18	5.13	44.11	5.17	47.15	5.21	50.00	5.24	54.99	5.28	57.96	5.28
	102	38.64	5.28	42.57	5.28	45.60	5.28	48.46	5.28	53.46	5.28	56.42	5.28
	109	37.10	4.01	41.02	4.01	44.06	4.01	46.38	4.01	49.69	4.01	51.67	4.01
	115	35.22	2.90	37.06	2.90	38.46	2.90	39.78	2.90	42.04	2.90	43.40	2.90
110%	50	49.08	2.70	52.93	2.75	55.90	2.78	58.70	2.81	63.60	2.87	66.58	2.91
	57	47.57	2.98	51.42	3.03	54.39	3.06	57.19	3.10	62.09	3.15	65.07	3.19
	64	46.05	3.30	49.90	3.34	52.88	3.38	55.68	3.41	60.58	3.47	63.55	3.50
	68	45.20	3.49	49.05	3.53	52.02	3.57	54.82	3.60	59.72	3.66	62.70	3.70
	74	43.90	3.80	47.75	3.85	50.72	3.88	53.52	3.91	58.42	3.97	61.40	4.01
	80	42.62	4.13	46.47	4.18	49.44	4.21	52.24	4.25	57.14	4.30	60.12	4.34
	88	40.89	4.62	44.74	4.66	47.72	4.70	50.52	4.73	55.42	4.79	58.39	4.83
	95	39.38	5.08	43.23	5.12	46.20	5.16	49.00	5.19	53.90	5.25	56.87	5.28
	102	37.87	5.28	41.72	5.28	44.69	5.28	47.49	5.28	52.39	5.28	55.35	5.28
	109	36.35	4.01	40.20	4.01	43.18	4.01	45.63	4.01	48.91	4.01	50.87	4.01
	115	34.72	2.90	36.54	2.90	37.93	2.90	39.23	2.90	41.48	2.90	42.82	2.90
100%	50	48.08	2.67	51.85	2.71	54.76	2.75	57.51	2.78	62.31	2.84	65.22	2.87
	57	46.60	2.95	50.37	2.99	53.28	3.03	56.02	3.06	60.82	3.12	63.74	3.15
	64	45.11	3.26	48.88	3.30	51.80	3.34	54.54	3.37	59.34	3.43	62.26	3.46
	68	44.28	3.45	48.05	3.49	50.96	3.53	53.71	3.56	58.51	3.62	61.42	3.65
	74	43.00	3.76	46.78	3.80	49.69	3.84	52.43	3.87	57.23	3.93	60.15	3.96
	80	41.75	4.08	45.52	4.13	48.44	4.16	51.18	4.20	55.98	4.26	58.89	4.29
	88	40.06	4.56	43.83	4.61	46.74	4.64	49.49	4.68	54.29	4.73	57.20	4.77
	95	38.58	5.02	42.35	5.06	45.26	5.10	48.00	5.13	52.80	5.19	55.72	5.22
	102	37.09	5.28	40.87	5.28	43.78	5.28	46.52	5.28	51.32	5.28	54.24	5.28
	109	35.61	4.01	39.38	4.01	42.30	4.01	44.84	4.01	48.09	4.01	50.04	4.01
	115	34.19	2.90	35.99	2.90	37.37	2.90	38.65	2.90	40.88	2.90	42.21	2.90
90%	50	43.26	2.28	46.65	2.32	49.28	2.35	51.74	2.38	56.06	2.43	58.69	2.46
	57	41.93	2.52	45.32	2.56	47.94	2.59	50.41	2.62	54.73	2.67	57.35	2.70
	64	40.59	2.79	43.99	2.83	46.61	2.86	49.08	2.88	53.40	2.93	56.02	2.96
	68	39.84	2.95	43.23	2.99	45.86	3.02	48.32	3.05	52.64	3.10	55.27	3.13
	74	38.70	3.21	42.09	3.25	44.71	3.28	47.18	3.31	51.50	3.36	54.12	3.39
	80	37.57	3.50	40.96	3.53	43.58	3.56	46.05	3.59	50.37	3.64	52.99	3.67
	88	36.05	3.91	39.44	3.94	42.06	3.97	44.53	4.00	48.85	4.05	51.47	4.08
	95	34.71	4.30	38.11	4.33	40.73	4.36	43.20	4.39	47.51	4.44	50.14	4.47
	102	33.38	4.71	36.77	4.75	39.39	4.78	41.86	4.81	46.18	4.86	48.80	4.89
	109	32.04	4.01	35.44	4.01	38.01	4.01	39.94	4.01	43.27	4.01	45.27	4.01
	115	30.06	2.90	31.91	2.90	33.33	2.90	34.65	2.90	36.92	2.90	38.29	2.90

COMBINATION (%)	OUTDOOR AIR TEMP.	INDOOR AIR TEMP.: (°FWB)											
		57		61		64		67		72		75	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°FDB	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
80%	50	38.45	1.90	41.47	1.93	43.80	1.96	45.99	1.98	49.83	2.02	52.16	2.04
	57	37.27	2.10	40.28	2.13	42.62	2.15	44.81	2.18	48.65	2.22	50.98	2.24
	64	36.08	2.32	39.10	2.35	41.43	2.37	43.62	2.40	47.46	2.44	49.79	2.46
	68	35.41	2.45	38.43	2.49	40.76	2.51	42.96	2.53	46.79	2.57	49.13	2.60
	74	34.40	2.67	37.41	2.71	39.74	2.73	41.94	2.75	45.78	2.79	48.11	2.82
	80	33.39	2.91	36.41	2.94	38.74	2.96	40.93	2.99	44.77	3.03	47.10	3.05
	88	32.04	3.25	35.06	3.28	37.39	3.30	39.58	3.33	43.42	3.37	45.75	3.39
	95	30.85	3.57	33.87	3.60	36.20	3.63	38.40	3.65	42.23	3.69	44.57	3.72
	102	29.67	3.92	32.69	3.95	35.02	3.98	37.21	4.00	41.05	4.04	43.38	4.06
	109	28.48	4.01	31.49	4.01	33.65	4.01	35.66	4.01	39.14	4.01	41.22	4.01
	115	26.27	2.90	28.20	2.90	29.67	2.90	31.05	2.90	33.42	2.90	34.85	2.90
70%	50	33.65	1.56	36.29	1.58	38.33	1.60	40.25	1.62	43.60	1.65	45.64	1.68
	57	32.61	1.72	35.25	1.74	37.29	1.76	39.21	1.78	42.57	1.82	44.61	1.84
	64	31.57	1.90	34.21	1.93	36.25	1.95	38.17	1.96	41.53	2.00	43.57	2.02
	68	30.99	2.01	33.63	2.04	35.67	2.06	37.59	2.08	40.95	2.11	42.98	2.13
	74	30.10	2.19	32.74	2.22	34.78	2.24	36.69	2.26	40.05	2.29	42.09	2.31
	80	29.22	2.38	31.86	2.41	33.90	2.43	35.82	2.45	39.18	2.48	41.22	2.50
	88	28.04	2.66	30.67	2.69	32.71	2.71	34.63	2.73	37.99	2.76	40.03	2.78
	95	27.00	2.93	29.64	2.95	31.68	2.97	33.60	2.99	36.96	3.02	39.00	3.05
	102	25.96	3.21	28.60	3.24	30.64	3.26	32.56	3.28	35.92	3.31	37.96	3.33
	109	24.92	3.51	27.56	3.54	29.60	3.56	31.52	3.58	34.88	3.61	36.92	3.63
	115	23.06	2.90	25.08	2.90	26.62	2.90	28.06	2.90	30.55	2.90	32.03	2.90
60%	50	28.84	1.26	31.10	1.28	32.85	1.30	34.50	1.31	37.38	1.34	39.12	1.36
	57	27.95	1.39	30.21	1.41	31.96	1.43	33.61	1.44	36.49	1.47	38.23	1.49
	64	27.06	1.54	29.32	1.56	31.07	1.57	32.72	1.59	35.60	1.62	37.35	1.63
	68	26.56	1.63	28.82	1.65	30.57	1.66	32.22	1.68	35.10	1.71	36.84	1.72
	74	25.80	1.77	28.06	1.79	29.81	1.81	31.45	1.83	34.33	1.85	36.08	1.87
	80	25.04	1.93	27.31	1.95	29.06	1.96	30.70	1.98	33.58	2.01	35.33	2.02
	88	24.03	2.15	26.29	2.17	28.04	2.19	29.69	2.21	32.57	2.23	34.31	2.25
	95	23.14	2.37	25.40	2.39	27.15	2.41	28.80	2.42	31.68	2.45	33.42	2.46
	102	22.25	2.60	24.51	2.62	26.26	2.64	27.91	2.65	30.79	2.68	32.54	2.69
	109	21.36	2.84	23.63	2.86	25.37	2.88	27.02	2.90	29.90	2.92	31.65	2.94
	115	20.37	2.90	22.47	2.90	24.08	2.90	25.57	2.90	28.16	2.90	29.71	2.90
50%	50	24.03	1.00	25.92	1.02	27.38	1.03	28.75	1.04	31.15	1.06	32.60	1.08
	57	23.29	1.10	25.18	1.12	26.63	1.13	28.01	1.15	30.41	1.17	31.86	1.18
	64	22.55	1.22	24.44	1.24	25.89	1.25	27.26	1.26	29.66	1.28	31.12	1.30
	68	22.13	1.29	24.02	1.31	25.48	1.32	26.85	1.33	29.25	1.35	30.70	1.37
	74	21.50	1.41	23.38	1.42	24.84	1.44	26.21	1.45	28.61	1.47	30.07	1.48
	80	20.87	1.53	22.76	1.55	24.21	1.56	25.58	1.57	27.98	1.59	29.44	1.61
	88	20.03	1.71	21.91	1.73	23.37	1.74	24.74	1.75	27.14	1.77	28.59	1.78
	95	19.28	1.88	21.17	1.90	22.63	1.91	24.00	1.92	26.40	1.94	27.85	1.96
	102	18.54	2.06	20.43	2.08	21.89	2.09	23.26	2.10	25.66	2.12	27.11	2.14
	109	17.80	2.26	19.69	2.27	21.14	2.29	22.52	2.30	24.91	2.32	26.37	2.33
	115	17.18	2.43	19.06	2.45	20.52	2.46	21.89	2.47	24.29	2.49	25.74	2.51

Symbols:

TC : Total capacity (kBtu/h)

PI : Power input (kW)

Notes:

1. ▢ shows rated capacities and power input.
2. This table shows outdoor unit cooling capacity and power input.
3. PI of indoor units is not included in the table.

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Heating Capacity

COMBINATION (%)	OUTDOOR AIR TEMP.	INDOOR AIR TEMP.: (°F DB)										
		61		65		68		70		72		76	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°FWB	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
130%	5	30.74	3.80	30.40	4.01	30.14	4.17	29.97	4.28	29.80	4.38	29.46	4.60
	12	35.48	3.99	35.14	4.21	34.88	4.37	34.71	4.47	34.54	4.58	34.20	4.80
	17	38.88	4.14	38.55	4.35	38.29	4.51	38.12	4.62	37.95	4.72	37.60	4.94
	26	44.96	4.39	44.63	4.60	44.37	4.76	44.20	4.87	44.03	4.98	43.68	5.19
	32	48.98	4.55	48.64	4.77	48.38	4.93	48.21	5.04	48.04	5.14	47.70	5.36
	36	51.65	4.67	51.31	4.88	51.05	5.04	50.89	5.15	50.72	5.25	50.37	5.47
	43	56.39	4.86	56.06	5.08	55.80	5.24	55.50	5.34	55.46	5.45	53.82	5.47
	50	61.14	5.06	60.80	5.27	60.54	5.44	59.84	5.47	58.87	5.47	57.04	5.47
	54	63.81	5.17	63.47	5.38	62.60	5.47	61.59	5.47	60.62	5.47	58.79	5.47
	59	67.22	5.31	66.42	5.47	64.75	5.47	63.74	5.47	62.77	5.47	60.93	5.47
120%	5	30.46	3.78	30.13	3.99	29.87	4.16	29.70	4.26	29.53	4.37	29.19	4.58
	12	35.16	3.98	34.83	4.19	34.57	4.35	34.40	4.46	34.23	4.56	33.89	4.78
	17	38.53	4.12	38.20	4.33	37.94	4.49	37.77	4.60	37.61	4.70	37.27	4.92
	26	44.56	4.37	44.22	4.58	43.97	4.75	43.80	4.85	43.63	4.96	43.29	5.17
	32	48.54	4.54	48.20	4.75	47.94	4.91	47.78	5.02	47.61	5.12	47.27	5.34
	36	51.19	4.65	50.85	4.86	50.59	5.02	50.43	5.13	50.26	5.23	49.92	5.45
	43	55.89	4.85	55.55	5.06	55.29	5.22	55.00	5.32	54.96	5.43	53.47	5.47
	50	60.59	5.04	60.25	5.25	59.99	5.42	59.46	5.47	58.50	5.47	56.68	5.47
	54	63.24	5.15	62.90	5.36	62.21	5.47	61.20	5.47	60.24	5.47	58.42	5.47
	59	66.61	5.29	66.01	5.47	64.35	5.47	63.34	5.47	62.38	5.47	60.55	5.47
110%	5	30.18	3.77	29.85	3.98	29.60	4.14	29.43	4.25	29.26	4.35	28.93	4.57
	12	34.84	3.96	34.51	4.17	34.25	4.34	34.09	4.44	33.92	4.55	33.58	4.76
	17	38.18	4.10	37.85	4.31	37.60	4.48	37.43	4.58	37.27	4.69	36.93	4.90
	26	44.15	4.36	43.82	4.57	43.57	4.73	43.40	4.83	43.24	4.94	42.90	5.15
	32	48.09	4.52	47.76	4.73	47.51	4.89	47.34	5.00	47.18	5.10	46.84	5.32
	36	50.72	4.63	50.39	4.84	50.13	5.00	49.97	5.11	49.80	5.21	49.46	5.43
	43	55.38	4.83	55.05	5.04	54.79	5.20	54.50	5.30	54.46	5.41	53.13	5.47
	50	60.04	5.02	59.70	5.23	59.45	5.40	59.08	5.47	58.13	5.47	56.32	5.47
	54	62.66	5.13	62.33	5.34	61.82	5.47	60.81	5.47	59.86	5.47	58.05	5.47
	59	66.01	5.27	65.59	5.47	63.94	5.47	62.94	5.47	61.99	5.47	60.17	5.47
100%	5	29.91	3.75	29.58	3.96	29.32	4.12	29.16	4.22	29.00	4.33	28.66	4.54
	12	34.52	3.94	34.19	4.15	33.94	4.31	33.77	4.42	33.61	4.52	33.27	4.73
	17	37.83	4.08	37.51	4.29	37.25	4.45	37.09	4.56	36.92	4.66	36.59	4.87
	26	43.75	4.33	43.42	4.54	43.17	4.70	43.00	4.81	42.84	4.91	42.50	5.12
	32	47.65	4.50	47.33	4.70	47.07	4.87	46.91	4.97	46.74	5.07	46.41	5.29
	36	50.26	4.61	49.93	4.81	49.67	4.98	49.51	5.08	49.35	5.18	49.01	5.40
	43	54.87	4.80	54.54	5.01	54.29	5.17	54.00	5.27	53.96	5.38	52.85	5.47
	50	59.48	4.99	59.16	5.20	58.90	5.36	58.74	5.47	57.83	5.47	56.03	5.47
	54	62.09	5.10	61.76	5.31	61.51	5.47	60.51	5.47	59.55	5.47	57.75	5.47
	59	65.40	5.24	65.07	5.45	63.62	5.47	62.62	5.47	61.67	5.47	59.86	5.47
90%	5	27.14	3.41	26.84	3.60	26.61	3.75	26.46	3.84	26.31	3.94	26.01	4.13
	12	31.32	3.59	31.03	3.78	30.80	3.93	30.65	4.02	30.50	4.12	30.19	4.31
	17	34.33	3.72	34.03	3.91	33.80	4.05	33.65	4.15	33.51	4.24	33.20	4.44
	26	39.70	3.94	39.40	4.13	39.17	4.28	39.02	4.38	38.87	4.47	38.57	4.67
	32	43.24	4.09	42.94	4.28	42.71	4.43	42.57	4.53	42.42	4.62	42.11	4.82
	36	45.60	4.19	45.31	4.38	45.08	4.53	44.93	4.63	44.78	4.72	44.47	4.92
	43	49.79	4.37	49.49	4.56	49.26	4.71	49.00	4.80	48.97	4.90	48.66	5.09
	50	53.98	4.55	53.68	4.74	53.45	4.89	53.30	4.98	53.15	5.08	52.85	5.27
	54	56.34	4.65	56.04	4.84	55.81	4.99	55.66	5.08	55.51	5.18	55.21	5.37
	59	59.35	4.78	59.05	4.97	58.82	5.11	58.67	5.21	58.52	5.30	58.03	5.47
80%	5	24.37	3.04	24.10	3.21	23.89	3.34	23.76	3.43	23.63	3.51	23.35	3.69
	12	28.13	3.20	27.86	3.37	27.65	3.50	27.52	3.59	27.39	3.67	27.11	3.84
	17	30.83	3.31	30.56	3.48	30.35	3.62	30.22	3.70	30.09	3.78	29.81	3.96
	26	35.65	3.52	35.38	3.69	35.17	3.82	35.04	3.90	34.91	3.99	34.63	4.16
	32	38.83	3.65	38.56	3.82	38.36	3.95	38.22	4.04	38.09	4.12	37.82	4.29
	36	40.95	3.74	40.68	3.91	40.48	4.04	40.34	4.13	40.21	4.21	39.94	4.38
	43	44.71	3.90	44.44	4.07	44.24	4.20	44.00	4.28	43.97	4.37	43.70	4.54
	50	48.47	4.06	48.20	4.23	48.00	4.36	47.86	4.44	47.73	4.53	47.46	4.70
	54	50.59	4.15	50.32	4.32	50.12	4.45	49.98	4.53	49.85	4.62	49.58	4.79
	59	53.29	4.26	53.02	4.43	52.82	4.56	52.68	4.64	52.55	4.73	52.28	4.90

COMBINATION (%)	OUTDOOR AIR TEMP.	INDOOR AIR TEMP.: (°F DB)											
		61		65		68		70		72		76	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°F WB	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
70%	5	21.60	2.65	21.36	2.80	21.18	2.91	21.06	2.99	20.94	3.06	20.70	3.21
	12	24.93	2.79	24.70	2.94	24.51	3.05	24.39	3.13	24.28	3.20	24.03	3.35
	17	27.33	2.89	27.09	3.04	26.91	3.15	26.79	3.22	26.67	3.30	26.43	3.45
	26	31.60	3.07	31.36	3.21	31.18	3.33	31.06	3.40	30.94	3.48	30.70	3.63
	32	34.42	3.18	34.18	3.33	34.00	3.44	33.88	3.52	33.76	3.59	33.52	3.74
	36	36.30	3.26	36.06	3.41	35.88	3.52	35.76	3.60	35.64	3.67	35.40	3.82
	43	39.63	3.40	39.39	3.55	39.21	3.66	39.00	3.73	38.97	3.81	38.73	3.96
	50	42.96	3.53	42.73	3.68	42.54	3.80	42.43	3.87	42.31	3.94	42.06	4.10
	54	44.84	3.61	44.61	3.76	44.42	3.87	44.31	3.95	44.19	4.02	43.94	4.17
	59	47.24	3.71	47.00	3.86	46.82	3.97	46.70	4.05	46.58	4.12	46.34	4.27
60%	5	18.83	2.25	18.63	2.37	18.47	2.47	18.36	2.53	18.26	2.59	18.05	2.72
	12	21.74	2.36	21.53	2.49	21.37	2.59	21.27	2.65	21.16	2.71	20.95	2.84
	17	23.82	2.45	23.62	2.57	23.46	2.67	23.35	2.73	23.25	2.79	23.04	2.92
	26	27.55	2.60	27.34	2.72	27.18	2.82	27.08	2.88	26.98	2.94	26.76	3.07
	32	30.01	2.70	29.80	2.82	29.64	2.92	29.54	2.98	29.43	3.04	29.22	3.17
	36	31.65	2.76	31.44	2.89	31.28	2.98	31.18	3.05	31.07	3.11	30.86	3.24
	43	34.55	2.88	34.35	3.00	34.19	3.10	34.00	3.16	33.98	3.23	33.77	3.35
	50	37.46	2.99	37.25	3.12	37.09	3.22	36.99	3.28	36.88	3.34	36.67	3.47
	54	39.10	3.06	38.89	3.19	38.73	3.28	38.63	3.35	38.52	3.41	38.31	3.54
	59	41.18	3.14	40.98	3.27	40.82	3.37	40.71	3.43	40.61	3.49	40.40	3.62
50%	5	16.06	1.82	15.89	1.92	15.75	2.00	15.66	2.05	15.57	2.10	15.39	2.21
	12	18.54	1.91	18.37	2.02	18.23	2.09	18.14	2.15	18.05	2.20	17.87	2.30
	17	20.32	1.98	20.14	2.08	20.01	2.16	19.92	2.21	19.83	2.26	19.65	2.37
	26	23.50	2.10	23.32	2.21	23.19	2.28	23.10	2.33	23.01	2.39	22.83	2.49
	32	25.60	2.18	25.42	2.29	25.28	2.36	25.20	2.41	25.11	2.47	24.93	2.57
	36	26.99	2.24	26.82	2.34	26.68	2.42	26.59	2.47	26.51	2.52	26.32	2.62
	43	29.47	2.33	29.30	2.43	29.16	2.51	29.00	2.56	28.98	2.61	28.80	2.72
	50	31.95	2.43	31.77	2.53	31.64	2.61	31.55	2.66	31.46	2.71	31.28	2.81
	54	33.35	2.48	33.17	2.58	33.04	2.66	32.95	2.71	32.86	2.76	32.68	2.86
	59	35.13	2.55	34.95	2.65	34.82	2.73	34.73	2.78	34.64	2.83	34.46	2.93

Symbols:

TC : Total capacity (kBtu/h)
PI : Power input (kW)

Notes:

1. ▒ shows rated capacities and power input.
2. This table shows outdoor unit heating capacity and power input.
3. PI of indoor units is not included in the table.

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7.3   Capacity Correction Factor by the Length of Refrigerant Piping

7.3.1   Rate of Change in Capacity by the Main Piping Length
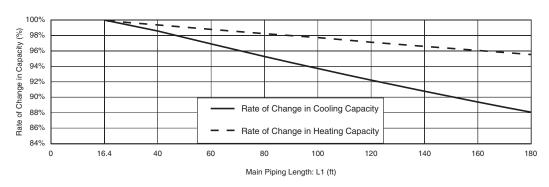
Rate of Change in Cooling Capacity

Main Piping Length (ft)	16.4	20	40	60	80	100	120	140	160	180
Rate of Change in Cooling Capacity	100.0%	99.7%	98.0%	96.4%	94.8%	93.4%	91.9%	90.6%	89.3%	88.1%

Rate of Change in Heating Capacity

Main Piping Length (ft)	16.4	20	40	60	80	100	120	140	160	180
Rate of Change in Heating Capacity	100.0%	99.9%	99.3%	98.8%	98.2%	97.7%	97.2%	96.6%	96.1%	95.6%

2

Main Piping Length Rate of Change in Capacity

Both case the outdoor unit is in inferior or superior to the indoor unit, the rate of change in capacity is the same.

7.3.2   Rate of Change in Capacity by Branch Piping Length

1. Refrigerant Piping Connection Diameter
   liquid: φ 1/4 inch (φ 6.4 mm)
   gas : φ 5/8 inch (φ 15.9 mm)

Branch Piping length (ft)	Rate of Change in Capacity	
	Cooling	Heating
9.8	100.0%	100.0%
20.0	99.4%	99.8%
30.0	98.8%	99.7%
40.0	98.3%	99.5%
49.0	97.9%	99.3%

2. Refrigerant Piping Connection Diameter
   liquid: φ 1/4 inch (φ 6.4 mm)
   gas : φ 1/2 inch (φ12.7 mm)

Branch Piping length (ft)	Rate of Change in Capacity	
	Cooling	Heating
9.8	100.0%	100.0%
20.0	98.6%	99.2%
30.0	97.3%	98.4%
40.0	96.0%	97.7%
49.0	94.8%	97.0%

3. Refrigerant Piping Connection Diameter
   liquid: φ 1/4 inch (φ 6.4 mm)
   gas : φ 3/8 inch (φ 9.5 mm)
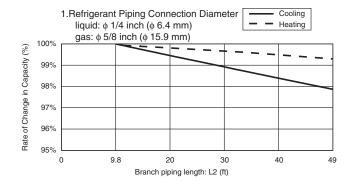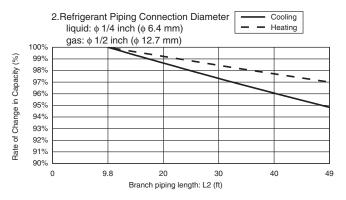
Branch Piping length (ft)	Rate of Change in Capacity	
	Cooling	Heating
9.8	100.0%	100.0%
20.0	96.9%	98.2%
30.0	94.1%	96.5%
40.0	91.5%	94.9%
49.0	89.3%	93.5%
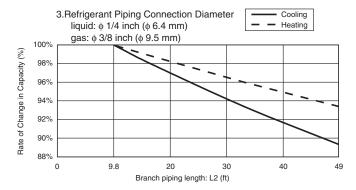
Piping size for field connection

Class (Btu/h)	Liquid	Gas
7,000		φ 3/8 inch (φ 9.5 mm)
9,000		
12,000		
15,000	φ 1/4 inch (φ 6.4 mm)	φ 1/2 inch (φ 12.7 mm)
18,000		
24,000		φ 5/8 inch (φ 15.9 mm)

1.Refrigerant Piping Connection Diameter
liquid: φ 1/4 inch (φ 6.4 mm)
gas: φ 5/8 inch (φ 15.9 mm)

——— Cooling
- - - - Heating

Rate of Change in Capacity (%)

100%
99%
98%
97%
96%
95%

0   9.8   20   30   40   49

Branch piping length: L2 (ft)

2.Refrigerant Piping Connection Diameter
liquid: φ 1/4 inch (φ 6.4 mm)
gas: φ 1/2 inch (φ 12.7 mm)

——— Cooling
- - - - Heating

Rate of Change in Capacity (%)

100%
99%
98%
97%
96%
95%
94%
93%
92%
91%
90%

0   9.8   20   30   40   49

Branch piping length: L2 (ft)

3.Refrigerant Piping Connection Diameter
liquid: φ 1/4 inch (φ 6.4 mm)
gas: φ 3/8 inch (φ 9.5 mm)

——— Cooling
- - - - Heating

Rate of Change in Capacity (%)

100%
98%
96%
94%
92%
90%
88%

0   9.8   20   30   40   49

Branch piping length: L2 (ft)

[Method of calculating cooling/heating capacity]
Total capacity from capacity tables × (Rate of change in capacity by main piping length
× Rate of change in capacity by branch piping length)

Notes: 1. These figures illustrate the rate of change in capacity of a standard indoor unit system at maximum load (with the thermostat set to maximum) under standard conditions.
Moreover, under partial load conditions there is only a minor deviation from the rate of change in capacity shown in the above figures.

2. With this outdoor unit, evaporating pressure constant control when cooling, and condensing pressure constant control when heating is carried out.

3. System layout of piping

Piping length : L1 = 16.4 ft (5 m), L2 = 9.8 ft (3 m)

L1
Outdoor unit   16.4 ft (5 m)

L2
9.8 ft (3 m)
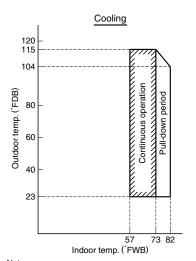
BP unit

Indoor unit

C: 3D080739

8. Operation Limit

RMXS48LVJU
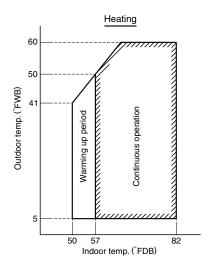
Notes :
The graphs are based on the following conditions.
- Equivalent piping length
  - From outdoor unit to BP unit   16.4ft
  - From BP unit to each indoor units   9.8ft
- Level difference   0ft
- Air flow rate   High

3D080742
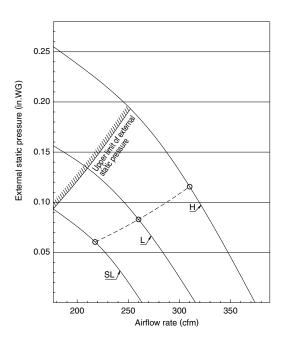
9. Fan Characteristics
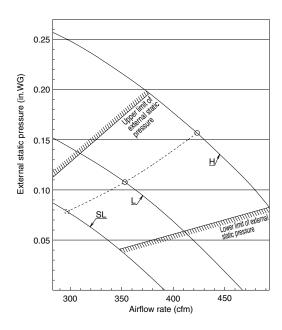
9.1 External Static Pressure

FDXS09/12LVJU
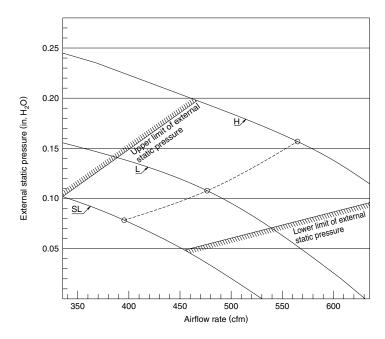
3D074625A

CDXS15/18LVJU

3D075306

CDXS24LVJU

3D080595
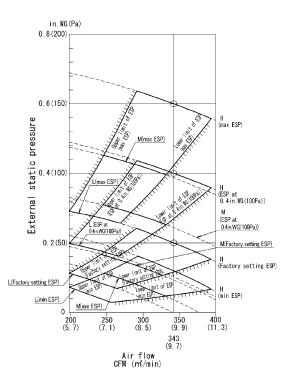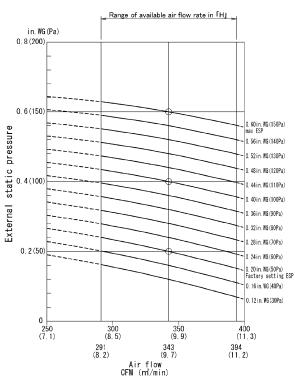
FDMQ09RVJU

Fan characteristics ①

Fan characteristics ②
(For field setting of remote controller)

Notes:
1. Fan characteristics at the time of rear suction and bottom suction are similar to each other.
2. Fan characteristics① shows a representative of fan characteristics at the time of "Maximum ESP", "ESP at 0.4in.WG(100Pa)" "Factory setting ESP" and "Minimum ESP".
3. A remote controller can be used to change airflow rate of "H", "M" and "L".
4. Set the ESP on suction side to 0.4in.WG(100Pa) or less.
5. Fan characteristics② (for field setting of remote controller) shows fan characteristics of airflow "H" which can be changed in the field setting by a remote controller.
6. Select ESP setting in accordance with resistance of the connected duct by using Fan characteristics① and ② (Factory setting ESP is 0.2in.WG(50Pa). See installation manual for ESP setting procedure.)
7. The ESP setting of this unit can be changed into 13 levels.
8. The value of Fan characteristics② mentioned in this drawing shows the ESP of rated airflow.

ESP : external static pressure

3D113100

2

FDMQ12RVJU

Fan characteristics ①

Fan characteristics ②
(For field setting of remote controller)

Notes:
1. Fan characteristics at the time of rear suction and bottom suction are similar to each other.
2. Fan characteristics① shows a representative of fan characteristics at the time of "Maximum ESP","ESP at 0.4in,WG(100Pa)" "Factory setting ESP"and"Minimum ESP".
3. A remote controller can be used to change airflow rate of "H","M" and "L".
4. Set the ESP on suction side to 0.4in.WG(100Pa) or less.
5. Fan characteristics② (for field setting of remote controller) shows fan characteristics of airflow "H" which can be changed in the field setting by a remote controller.
6. Select ESP setting in accordance with resistance of the connected duct by using Fan characteristics① and②
   (Factory setting ESP is 0.2in.WG(50Pa). See installation manual for ESP setting procedure.)
7. The ESP setting of this unit can be changed into 13 levels.
8. The value of Fan characteristics② mentioned in this drawing shows the ESP of rated airflow.

ESP : external static pressure

3D113121

FDMQ15RVJU

Fan characteristics ①

Fan characteristics ②
(For field setting of remote controller)

Range of available air flow rate in 「H」

in.WG(Pa)

External static pressure

0.8(200)

0.6(150)

0.4(100)

0.2(50)

0

H (max ESP)

H (ESP at 0.4in.WG(100Pa))

M (ESP at 0.4in.WG(100Pa))

H (Factory setting ESP)

L (ESP at 0.4in.WG(100Pa))

M(max ESP)

L(max ESP)

M(Factory setting ESP)

L(Factory setting ESP)

Upper limit of ESP (max ESP)

Lower limit of ESP (max ESP)

Upper limit of ESP (ESP at 0.4in.WG(100Pa))

Lower limit of ESP (ESP at 0.4in.WG(100Pa))

Upper limit of ESP (Factory setting)

Lower limit of ESP (Factory setting)

300 (8.5) 350 (9.9) 400 (11.3) 450 (12.7) 500 (14.2) 550 (15.6) 600 (17.0)

516 (14.6)

Air flow
CFM (m³/min)

0.60 in.WG(150Pa) max ESP
0.56 in.WG(140Pa)
0.52 in.WG(130Pa)
0.48 in.WG(120Pa)
0.44 in.WG(110Pa)
0.40 in.WG(100Pa)
0.36 in.WG(90Pa)
0.32 in.WG(80Pa)
0.28 in.WG(70Pa)
0.24 in.WG(60Pa)
0.20 in.WG(50Pa) Factory setting ESP

400 (11.3) 450 (12.7) 500 (14.2) 550 (15.6) 600 (17.0)

438 (12.4) 516 (14.6) 593 (16.8)

Air flow
CFM (m³/min)

Notes:
1. Fan characteristics at the time of rear suction and bottom suction are similar to each other.
2. Fan characteristics ① shows a representative of fan characteristics at the time of "Maximum ESP", "ESP at 0.4in.WG(100Pa)" and "Factory setting ESP".
3. A remote controller can be used to change airflow rate of "H", "M" and "L".
4. Set the ESP on suction side to 0.4in.WG(100Pa) or less.
5. Fan characteristics ② (for field setting of remote controller) shows fan characteristics of airflow "H" which can be changed in the field setting by a remote controller.
6. Select ESP setting in accordance with resistance of the connected duct by using Fan characteristics ① and ② (Factory setting ESP is 0.2in.WG(50Pa). See installation manual for ESP setting procedure.)
7. The ESP setting of this unit can be changed into 11 levels.
8. The value of Fan characteristics ② mentioned in this drawing shows the ESP of rated airflow.

ESP : external static pressure

3D113123

FDMQ18RVJU

2

Fan characteristics ①

Fan characteristics ②
(For field setting of remote controller)

Range of available air flow rate in 「H」

in. WG(Pa)
0.8(200)

0.6(150)

External static pressure

0.4(100)

0.2(50)

0

400 450 500 550 600 650 700 750 800
(11.3)(12.7)(14.2)(15.6)(17.0)(18.4)(19.8)(21.2)(22.7)
675
(19.1)
Air flow
CFM (m³/min)

Upper limit of ESP (max ESP)
M (max ESP)
H (max ESP)
Lower limit of ESP (max ESP)
L(max ESP)
Upper limit of ESP (ESP at 0.4in.WG(100Pa))
Lower limit of ESP (ESP at 0.4in.WG(100Pa))
H (ESP at 0.4in.WG(100Pa))
Upper limit of ESP (Factory setting ESP)
M (ESP at 0.4in.WG(100Pa))
M(Factory setting ESP)
H (Factory setting ESP)
Lower limit of ESP (Factory setting ESP)
L (ESP at 0.4in.WG(100Pa))
L(Factory setting ESP)

in. WG(Pa)
0.8(200)

0.6(150)

External static pressure

0.4(100)

0.2(50)

0

550 600 650 700 750 800
(15.6) (17.0) (18.4) (19.8) (21.2) (22.7)
573   675   776
(16.2)   (19.1)   (22.0)
Air flow
CFM (m³/min)

0.60in.WG(150Pa) max ESP
0.56in.WG(140Pa)
0.52in.WG(130Pa)
0.48in.WG(120Pa)
0.44in.WG(110Pa)
0.40in.WG(100Pa)
0.36in.WG(90Pa)
0.32in.WG(80Pa)
0.28in.WG(70Pa)
0.24in.WG(60Pa)
0.20in.WG(50Pa) Factory setting ESP

Notes:
1. Fan characteristics at the time of rear suction and bottom suction are similar to each other.
2. Fan characteristics① shows a representative of fan characteristics at the time of "Maximum ESP", "ESP at 0.4in.WG(100Pa)" and "Factory setting ESP".
3. A remote controller can be used to change airflow rate of "H", "M" and "L".
4. Set the ESP on suction side to 0.4in.WG(100Pa) or less.
5. Fan characteristics② (for field setting of remote controller) shows fan characteristics of airflow "H" which can be changed in the field setting by a remote controller.
6. Select ESP setting in accordance with resistance of the connected duct by using Fan characteristics① and② (Factory setting ESP is 0.2in.WG(50Pa). See installation manual for ESP setting procedure.)
7. The ESP setting of this unit can be changed into 11 levels.
8. The value of Fan characteristics② mentioned in this drawing shows the ESP of rated airflow.

ESP : external static pressure

3D113126

FDMQ24RVJU

Fan characteristics ①

<u>Fan characteristics ②</u>
(For field setting of remote controller)

in.WG(Pa)

External static pressure

Air flow
CFM (m³/min)

Notes:
1. Fan characteristics at the time of rear suction and bottom suction are similar to each other.
2. Fan characteristics ① shows a representative of fan characteristics at the time of "Maximum ESP", "ESP at 0.4in.WG(100Pa)" and "Factory setting ESP".
3. A remote controller can be used to change airflow rate of "H", "M" and "L".
4. Set the ESP on suction side to 0.4in.WG(100Pa) or less.
5. Fan characteristics ② (for field setting of remote controller) shows fan characteristics of airflow "H" which can be changed in the field setting by a remote controller.
6. Select ESP setting in accordance with resistance of the connected duct by using Fan characteristics ① and ② (Factory setting ESP is 0.2in.WG(50Pa). See installation manual for ESP setting procedure.)
7. The ESP setting of this unit can be changed into 11 levels.
8. The value of Fan characteristics ② mentioned in this drawing shows the ESP of rated airflow.

ESP : external static pressure

3D113128

9.2 Airflow Auto Adjustment

FDMQ09RVJU

in. WG (Pa)

Upper limit
of ESP by
"Air volume automatic
adjustment"

「H」

「M」

「L」

Lower limit
of ESP by
"Air volume
automatic
adjustment"

Upper limit of ESP

Lower limit of ESP

External static pressure

0.8 (200)

0.6 (150)

0.4 (100)

0.2 (50)

0

200 (5.7)　250 (7.1)　300 (8.5)　350 (9.9)　400 (11.3)

Air flow
CFM (m³/min)

Notes :
1. This indoor unit has the "Air volume automatic
   adjustment" function, which automatically adjusts
   the air flow rate so as to be approximately
   in the range of ±10% of the rated value,
   at the time of installation.
2. After duct construction completion, please
   perform field setting "Air volume automatic
   adjustment " by remote controller.
3. About the field setting method of the
   "Air volume automatic adjustment", look at the
   installation manual which is attached to
   an indoor unit.
4. ESP that can adjust by "Air volume automatic
   adjustment" function is 0.12in.WG
   (30Pa) − 0.6in.WG(150Pa) (When air flow is "H").
5. If the unit is used beyond the range of the
   above-mentioned ESP, the air flow rate can not
   be well-adjusted automatically, and the unit will
   operate with the air flow rate different from
   the rated value.
6. This figure shows a fan characteristics
   at the time of "H" "M" and "L".
7. The remote controller can be used to change
   "H" "M" and "L".

ESP : external static pressure.

3D113101

FDMQ12RVJU

in. WG (Pa)

Upper limit
of ESP by
"Air volume
automatic
adjustment"

「H」

「M」

「L」

Lower limit
of ESP by
"Air volume
automatic
adjustment"

Upper limit of ESP

Lower limit of ESP

External static pressure

0.8 (200)

0.6 (150)

0.4 (100)

0.2 (50)

0

200 (5.7)　250 (7.1)　300 (8.5)　350 (9.9)　400 (11.3)　450 (12.7)

Air flow
CFM (m³/min)

Notes :
1. This indoor unit has the "Air volume automatic
   adjustment" function, which automatically adjusts
   the air flow rate so as to be approximately
   in the range of ±10% of the rated value,
   at the time of installation.
2. After duct construction completion, please
   perform field setting "Air volume automatic
   adjustment" by remote controller.
3. About the field setting method of the
   "Air volume automatic adjustment", look at the
   installation manual which is attached to
   an indoor unit.
4. ESP that can adjust by "Air volume automatic
   adjustment" function is 0.12in.WG
   (30Pa) − 0.6in.WG(150Pa) (When air flow is "H").
5. If the unit is used beyond the range of the
   above-mentioned ESP, the air flow rate can not
   be well-adjusted automatically, and the unit will
   operate with the air flow rate different from
   the rated value.
6. This figure shows a fan characteristics
   at the time of "H" "M" and "L".
7. The remote controller can be used to change
   "H" "M" and "L".

ESP : external static pressure.

3D113122

FDMQ15RVJU

in. WG(Pa)

External static pressure

Upper limit of ESP by "Air volume automatic adjustment"

Upper limit of ESP

「H」

「M」

Lower limit of ESP by "Air volume automatic adjustment"

「L」

Lower limit of ESP

0.8(200)

0.6(150)

0.4(100)

0.2(50)

0

300 (8.5) 350 (9.9) 400 (11.3) 450 (12.7) 500 (14.2) 550 (15.6) 600 (17.0)

Air flow
CFM (m³/min)

Notes :
1. This indoor unit has the "Air volume automatic adjustment" function, which automatically adjusts the air flow rate so as to be approximately in the range of ±10% of the rated value, at the time of installation.
2. After duct construction completion, please perform field setting "Air volume automatic adjustment" by remote controller.
3. About the field setting method of the "Air volume automatic adjustment", look at the installation manual which is attached to an indoor unit.
4. ESP that can adjust by "Air volume automatic adjustment" function is 0.2in.WG (50Pa) − 0.6in.WG(150Pa) (When air flow is "H").
5. If the unit is used beyond the range of the above-mentioned ESP, the air flow rate can not be well-adjusted automatically, and the unit will operate with the air flow rate different from the rated value.
6. This figure shows a fan characteristics at the time of "H" "M" and "L".
7. The remote controller can be used to change "H" "M" and "L".

ESP : external static pressure.

3D113124

FDMQ18RVJU

in. WG(Pa)

External static pressure

Upper limit of ESP by airflow auto "Air volume automatic adjustment"

Upper limit of ESP

「H」

「M」

Lower limit of ESP by "Air volume automatic adjustment"

「L」

Lower limit of ESP

0.8(200)

0.6(150)

0.4(100)

0.2(50)

0

400 (11.3) 450 (12.7) 500 (14.2) 550 (15.6) 600 (17.0) 650 (18.4) 700 (19.8) 750 (21.2) 800 (22.7)

Air flow
CFM (m³/min)

Notes :
1. This indoor unit has the "Air volume automatic adjustment" function, which automatically adjusts the air flow rate so as to be approximately in the range of ±10% of the rated value, at the time of installation.
2. After duct construction completion, please perform field setting "Air volume automatic adjustment" by remote controller.
3. About the field setting method of the "Air volume automatic adjustment", look at the installation manual which is attached to an indoor unit.
4. ESP that can adjust by "Air volume automatic adjustment" function is 0.2in.WG (50Pa) − 0.6in.WG(150Pa) (When air flow is "H").
5. If the unit is used beyond the range of the above-mentioned ESP, the air flow rate can not be well-adjusted automatically, and the unit will operate with the air flow rate different from the rated value.
6. This figure shows a fan characteristics at the time of "H" "M" and "L".
7. The remote controller can be used to change "H" "M" and "L".

ESP : external static pressure.

3D113127

FDMQ24RVJU

Air flow
CFM (m³/min)

Notes :
1. This indoor unit has the "Air volume automatic adjustment" function, which automatically adjusts the air flow rate so as to be approximately in the range of ±10% of the rated value, at the time of installation.
2. After duct construction completion, please perform field setting "Air volume automatic adjustment" by remote controller.
3. About the field setting method of the "Air volume automatic adjustment", look at the installation manual which is attached to an indoor unit.
4. ESP that can adjust by "Air volume automatic adjustment" function is 0.2in.WG (50Pa) - 0.6in.WG(150Pa) (When air flow is "H").
5. If the unit is used beyond the range of the above-mentioned ESP, the air flow rate can not be well-adjusted automatically, and the unit will operate with the air flow rate different from the rated value.
6. This figure shows a fan characteristics at the time of "H" "M" and "L".
7. The remote controller can be used to change "H" "M" and "L".

ESP : external static pressure.

3D113129

10. Sound Level

10.1 Measuring Location

Indoor Unit	
Wall Mounted Type	**Duct Connected Type**
3.3 ft (1 m) / 2.6 ft (0.8 m) / MICROPHONE	6.6 ft (2 m) / 3.3 ft (1 m) / DUCT DUCT / 4.9 ft (1.5 m) / MICROPHONE
Floor Standing Type	**Ceiling Mounted Type**
3.3 ft (1 m) / MICROPHONE / 3.3 ft (1 m)	4.9 ft (1.5 m) / MICROPHONE

Outdoor Unit
2.2 ft (0.67 m) / 3.3 ft (1 m)
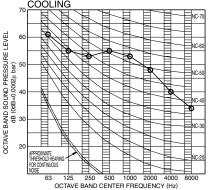
Notes: 1. Operation sound is measured in an anechoic chamber.
2. The data are based on the conditions shown in the table below.
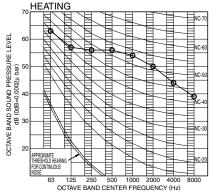
Cooling	Heating	Piping Length
Indoor ; 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB) Outdoor ; 95°FDB (35°CDB) / 75°FWB (24°CWB)	Indoor ; 70°FDB (21°CDB) / 60°FWB (15.6°CWB) Outdoor ; 47°FDB (8.3°CDB) / 43°FWB (6°CWB)	16.4 ft (5 m)

10.2 Outdoor Unit

RMXS48LVJU

COOLING

OCTAVE BAND SOUND PRESSURE LEVEL
dB (0dB=0.0002μ bar)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

OCTAVE BAND CENTER FREQUENCY (Hz)

OVER ALL (dB)	
SCALE	60Hz 208/230V
A	57

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

JIS STANDARD

HEATING

OCTAVE BAND SOUND PRESSURE LEVEL
dB (0dB=0.0002μ bar)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

OCTAVE BAND CENTER FREQUENCY (Hz)

OVER ALL (dB)	
SCALE	60Hz 208/230V
A	58

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

JIS STANDARD

3D080743

10.3 Indoor Unit

CTXG09QVJUW(S)

COOLING

OCTAVE BAND SOUND PRESSURE LEVEL
dB(0dB=0.0002μ bar)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

OCTAVE BAND CENTER FREQUENCY (Hz)

OVER ALL (dB)		
SCALE	60 Hz 208/230 V (H)	60 Hz 208/230 V (L)
A	38	25

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE   208/230 V 60 Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60 Hz 208/230 V (H)

○----○   60 Hz 208/230 V (L)

Cooling

HEATING

OCTAVE BAND SOUND PRESSURE LEVEL
dB(0dB=0.0002μ bar)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

OCTAVE BAND CENTER FREQUENCY (Hz)

OVER ALL (dB)		
SCALE	60 Hz 208/230 V (H)	60 Hz 208/230 V (L)
A	41	28

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE   208/230 V 60 Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60 Hz 208/230 V (H)

○----○   60 Hz 208/230 V (L)

Heating

3D105687

CTXG12QVJUW(S)

COOLING

OCTAVE BAND SOUND PRESSURE LEVEL
dB(0dB=0.0002μ bar)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

OCTAVE BAND CENTER FREQUENCY (Hz)

OVER ALL (dB)		
SCALE	60 Hz 208/230 V (H)	60 Hz 208/230 V (L)
A	45	26

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE   208/230 V 60 Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60 Hz 208/230 V (H)

○----○   60 Hz 208/230 V (L)

Cooling

HEATING

OCTAVE BAND SOUND PRESSURE LEVEL
dB(0dB=0.0002μ bar)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

OCTAVE BAND CENTER FREQUENCY (Hz)

OVER ALL (dB)		
SCALE	60 Hz 208/230 V (H)	60 Hz 208/230 V (L)
A	45	29

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE   208/230 V 60 Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60 Hz 208/230 V (H)

○----○   60 Hz 208/230 V (L)

Heating

3D105688

2

CTXG18QVJUW(S)

COOLING

SCALE	60 Hz 208/230 V (H)	60 Hz 208/230 V (L)
A	46	35

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230 V 60 Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
- ○——○ 60 Hz 208/230 V (H)
- ○----○ 60 Hz 208/230 V (L)

Cooling

HEATING

OVER ALL（dB）

SCALE	60 Hz 208/230 V (H)	60 Hz 208/230 V (L)
A	47	35

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230 V 60 Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
- ○——○ 60 Hz 208/230 V (H)
- ○----○ 60 Hz 208/230 V (L)

Heating

3D105689

CTXS07JVJU, CTXS09HVJU

COOLING

OVER ALL（dB）

SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	44	35

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz

JIS STANDARD

- ○——○ 60Hz 208/230V(H)
- ○----○ 60Hz 208/230V(L)

Cooling

HEATING

OVER ALL（dB）

SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	44	34

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz

JIS STANDARD

- ○——○ 60Hz 208/230V(H)
- ○----○ 60Hz 208/230V(L)

Heating

3D048473C

CTXS12HVJU

COOLING

OVER ALL（dB）

SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	45	36

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz

JIS STANDARD

- ○——○ 60Hz 208/230V(H)
- ○----○ 60Hz 208/230V(L)

Cooling

HEATING

OVER ALL（dB）

SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	45	35

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V 60Hz

JIS STANDARD

- ○——○ 60Hz 208/230V(H)
- ○----○ 60Hz 208/230V(L)

Heating

3D058813A

CTXS07LVJU

COOLING

OVER ALL（dB）

SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	38	25

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V	60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
- ○——○ 60Hz 208/230V(H)
- ○----○ 60Hz 208/230V(L)

Cooling

HEATING

OVER ALL（dB）

SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	38	28

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE	208/230V	60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
- ○——○ 60Hz 208/230V(H)
- ○----○ 60Hz 208/230V(L)

Heating

3D075359

FTXS09LVJU

COOLING

OCTAVE BAND SOUND PRESSURE LEVEL dB(0dB=0.0002μ bar)

OCTAVE BAND CENTER FREQUENCY (Hz)

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	41	25

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V   60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60Hz   208/230V(H)
○――○   60Hz   208/230V(L)
Cooling

HEATING

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	42	28

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V   60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60Hz   208/230V(H)
○――○   60Hz   208/230V(L)
Heating

3D075355

FTXS12LVJU

COOLING

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	45	29

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V   60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60Hz   208/230V(H)
○――○   60Hz   208/230V(L)
Cooling

HEATING

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	45	29

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V   60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○——○   60Hz   208/230V(H)
○――○   60Hz   208/230V(L)
Heating

3D075356

FTXS15LVJU

COOLING

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	45	35

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

JIS STANDARD

○——○   60Hz 208/230V(H)
○――○   60Hz 208/230V(L)
Cooling

HEATING

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	43	33

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

JIS STANDARD

○——○   60Hz 208/230V(H)
○――○   60Hz 208/230V(L)
Heating

3D074864

FTXS18LVJU

COOLING

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	46	36

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

JIS STANDARD

○——○   60Hz 208/230V(H)
○――○   60Hz 208/230V(L)
Cooling

HEATING

OVER ALL（dB）		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	45	35

（ B.G.N IS ALREADY RECTIFIED ）

OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

JIS STANDARD

○——○   60Hz 208/230V(H)
○――○   60Hz 208/230V(L)
Heating

3D074865

FTXS24LVJU

COOLING

OCTAVE BAND SOUND PRESSURE LEVEL dB(0dB=0.0002μ bar)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

OCTAVE BAND CENTER FREQUENCY (Hz)

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	51	37

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208/230V 60Hz

JIS STANDARD

○—○　60Hz 208/230V(H)
○--○　60Hz 208/230V(L)

Cooling

HEATING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	48	37

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208/230V 60Hz

JIS STANDARD

○—○　60Hz 208/230V(H)
○--○　60Hz 208/230V(L)

Heating

3D074866

FDXS09/12LVJU

COOLING

	OVER ALL (dB)	
SCALE	HI	LOW
A	35	31

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208-230V/60Hz

COOLING　RETURN AIR TEMPERATURE: 80˚FDB, 67˚FWB
OUTDOOR TEMPERATURE: 95˚FDB, 75˚FWB

HEATING

	OVER ALL (dB)	
SCALE	HI	LOW
A	35	31

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208-230V/60Hz

HEATING　RETURN AIR TEMPERATURE: 70˚FDB, 60˚FWB
OUTDOOR TEMPERATURE: 47˚FDB, 43˚FWB

3D074623A

CDXS15/18LVJU

COOLING

	AIRFLOW RATE	
SCALE	HI	LOW
A	37	33

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208/230V, 60Hz

STANDARD CONDITION (JIS)

HEATING

	AIRFLOW RATE	
SCALE	HI	LOW
A	37	33

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208/230V, 60Hz

STANDARD CONDITION (JIS)

3D075272

CDXS24LVJU

COOLING

	AIRFLOW RATE	
SCALE	H	L
A	38	34

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208/230V, 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○—○　(H) 208/230V, 60Hz
○--○　(L) 208/230V, 60Hz

Cooling

HEATING

	OVER ALL (dB)	
SCALE	AIRFLOW RATE	
	H	L
A	38	34

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE　208/230V, 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○—○　(H) 208/230V, 60Hz
○--○　(L) 208/230V, 60Hz

Heating

3D080596

FDMQ09RVJU

4D113009A

FDMQ12RVJU

4D113010A

FDMQ15RVJU

4D113011

FDMQ18RVJU

OVER ALL (dB)

SCALE	AIR FLOW RATE
	H
A	35.0

(B.G.N IS ALREADY RECTIFIED)
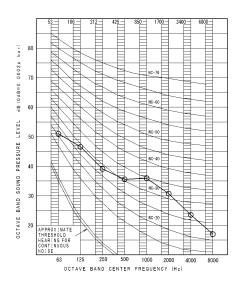
OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

COOLING RETURN AIR TEMPERATURE : 80.0 ° F(26.7 ℃) DB, 67.0 ° F(19.4 ℃) WB
OUTDOOR TEMPERATURE : 95.0 ° F(35.0 ℃) DB, 75.0 ° F(23.9 ℃) WB

HEATING RETURN AIR TEMPERATURE : 70.0 ° F(21.1 ℃) DB, 60.0 ° F(15.6 ℃) WB
OUTDOOR TEMPERATURE : 47.0 ° F(8.3 ℃) DB,   43.0 ° F(6.1 ℃) WB

EXTERNAL STATIC PRESSURE   0.20in.WG(50Pa)

4D113012

FDMQ24RVJU

OVER ALL (dB)

SCALE	AIR FLOW RATE
	H
A	40.0

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE   208/230V 60Hz

COOLING RETURN AIR TEMPERATURE : 80.0 ° F(26.7 ℃) DB, 67.0 ° F(19.4 ℃) WB
OUTDOOR TEMPERATURE : 95.0 ° F(35.0 ℃) DB, 75.0 ° F(23.9 ℃) WB

HEATING RETURN AIR TEMPERATURE : 70.0 ° F(21.1 ℃) DB, 60.0 ° F(15.6 ℃) WB
OUTDOOR TEMPERATURE : 47.0 ° F(8.3 ℃) DB,   43.0 ° F(6.1 ℃) WB

EXTERNAL STATIC PRESSURE   0.20in.WG(50Pa)

4D113013

FVXS09NVJU

COOLING

OCTAVE BAND SOUND PRESSURE LEVEL dB (0dB=0.0002μ bar)

OCTAVE BAND CENTER FREQUENCY (Hz)

APPROXIMATE THRESHOLD HEARING FOR CONTINUOUS NOISE

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	38	26

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Cooling

HEATING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	38	26

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Heating

3D094737

FVXS12NVJU

COOLING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	39	27

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Cooling

HEATING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	39	27

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Heating

3D094766

FVXS15/18NVJU

COOLING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	44	36

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Cooling

HEATING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	45	36

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Heating

3D094777A

FFQ09Q2VJU

COOLING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	38	29

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Cooling

HEATING

	OVER ALL (dB)	
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	38	29

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE

○───○ 60Hz 208/230V (H)

○----○ 60Hz 208/230V (L)

Heating

3D106125A

FFQ12Q2VJU

COOLING

OVER ALL (dB)		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	39	30

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○——○ 60Hz 208/230V (H)
○----○ 60Hz 208/230V (L)

Cooling

HEATING

OVER ALL (dB)		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	39	30

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○——○ 60Hz 208/230V (H)
○----○ 60Hz 208/230V (L)

Heating

3D106126A

FFQ15Q2VJU

COOLING

OVER ALL (dB)		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	40	31

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○——○ 60Hz 208/230V (H)
○----○ 60Hz 208/230V (L)

Cooling

HEATING

OVER ALL (dB)		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	40	31

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○——○ 60Hz 208/230V (H)
○----○ 60Hz 208/230V (L)

Heating

3D106127A

FFQ18Q2VJU

COOLING

OVER ALL (dB)		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	44	32

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○——○ 60Hz 208/230V (H)
○----○ 60Hz 208/230V (L)

Cooling

HEATING

OVER ALL (dB)		
SCALE	60Hz 208/230V (H)	60Hz 208/230V (L)
A	44	32

(B.G.N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE 208/230V 60Hz

JIS STANDARD

STANDARD EXTERNAL STATIC PRESSURE
○——○ 60Hz 208/230V (H)
○----○ 60Hz 208/230V (L)

Heating

3D108254

11. Electric Characteristics

Outdoor Unit	Power Supply						Compressor		OFM	
	Hz	Volts	Min.	Max.	MCA	MOP	MSC	RLA	W	FLA
RMXS48LVJU	60	208	187	229	27.0	30	23.7	22.7	70 + 70	0.3 + 0.3
		230	207	253			21.5	20.5		

Symbols:

MCA : Min. circuit amps (A)
MOP : Max. overcurrent protective device (A)
MSC : Max. current while starting compressor (A)
RLA : Rated load amps (A)
OFM : Outdoor fan motor
W : Fan motor rated output (W)
FLA : Full load amps (A)

The relationship between the starting time and the starting current.

Notes:

1. RLA is based on the following conditions.
   Cooling:
   Indoor temp.: 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB)
   Outdoor temp.: 95°FDB (35°CDB)
   Heating:
   Indoor temp.: 70°FDB (21°CDB)
   Outdoor temp.: 47°FDB (8.3°CDB) / 43°FWB (6°CWB)
2. Voltage range.
   Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
3. Maximum allowable voltage variation between phases is 2%.
4. MCA represents maximum input current.
5. MOP represents capacity which may accept MCA.
6. Select wire size based on the value of MCA.
7. MOP is used to select the fuse, circuit breaker, or the ground fault circuit interrupter (earth leakage circuit breaker).
8. Be sure to install a ground leak detector.
   (This unit uses an inverter, which means that a ground leak detector capable of handling high harmonics must be used in order to prevent malfunctioning of the ground leak detector.)

C: 3D080740

Part 3
Installation Manual

3

1. RMXS48LVJU

figure 1

unit : inch (mm)

figure 2

figure 3

figure 4

[1]

[2]

4 (100) or more

4 (100) or more

4 (100) or more

[3]

4 (100) or more

8 (200) or more

12 (300) or more

unit : inch (mm)

figure 5

[1]

20 (500) or more

40 (1,000) or more

4 (100) or more

[2]

20 (500) or more

40 (1,000) or more

6 (150) or more

6 (150) or more

6 (150) or more

[3]

20 (500) or more

40 (1,000) or more

40 (1,000) or more

8 (200) or more

12 (300) or more

unit : inch (mm)

figure 6

[1]

20 (500) or more

[2]

40 (1,000) or more

[3]

20 (500) or more

40 (1,000) or more

20 (500) or more

[4]

20 (500) or more

40 (1,000) or more

40 (1,000) or more

unit : inch (mm)

figure 7

[1]

L

H

L > H

20 (500) or more

4 (100)

[2]

L

H

L > H

40 (1,000) or more

12 (300) or more

[3]

20 (500) or less

40 (1,000) or more

H

L

A

10 (250) or more

[4]

20 (500) or less

40 (1,000) or more

H

L

A

12 (300) or more

unit : inch (mm)

figure 7

[5]

L

H

L > H

20 (500) or more

4 (100) or more

[6]

L

H

A

60 (1,500) or more

[7]

20 (500) or more

40 (1,000) or more

L

H

A

40 (1,000) or more

[8]

20 (500) or more

40 (1,000) or more

L

H

A

60 (1,500) or more

unit : inch (mm)

figure 8

[1]

[2]

figure 9

[1]

[2]

unit : inch (mm)

figure 10

15/16 (20)

unit : inch (mm)

figure 11

figure 12

unit : inch (mm)

figure 13

figure 14

figure 15

figure 16

figure 17

figure 18

figure 19

figure 20

figure 21

figure 22

figure 23

figure 24

figure 25

figure 26

figure 27

figure 28

figure 29

figure 30

CONTENTS

3

1. SAFETY PRECAUTIONS

- Read these SAFETY PRECAUTIONS carefully to ensure correct installation.
- This manual classifies the precautions into DANGER, WARNING and CAUTION.
  Be sure to follow all the precautions below: they are all important for ensuring safety.

⚠ **DANGER .... Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

⚠ **WARNING ...... Failure to follow any of WARNING is likely to result in such grave consequences as death or serious injury.**

⚠ **CAUTION .... Failure to follow any of CAUTION may in some cases result in grave consequences.**

- The following safety symbol is used throughout this manual:

  🚫   Never attempt.

- After completing installation, test the unit to check for installation errors. Give the user adequate instructions concerning the use and cleaning of the unit according to the Operation Manual.

⚠ DANGER
• Refrigerant gas is heavier than air and replaces oxygen. A massive leak could lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
• If the refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce a toxic gas if it comes in contact with fire such as from a fan heater, stove or cooking device. Exposure to this gas could cause severe injury or death.
• After completing the installation work, check that the refrigerant gas does not leak. Refrigerant gas may produce a toxic gas if it comes in contact with fire such as from a fan heater, stove or cooking device. Exposure to this gas could cause severe injury or death.
• Do not ground units to water pipes, telephone wires or lightning rods because incomplete grounding could cause a severe shock hazard resulting in severe injury or death, and to gas pipes because a gas leak could result in an explosion which could lead to severe injury or death.
• Safely dispose of the packing materials. Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries. Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death by suffocation.
• Do not install unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.
• Do not ground units to telephone wires or lightning rods because lightning strikes could cause a severe shock hazard resulting in severe injury or death, and to gas pipes because a gas leak could result in an explosion which could lead to severe injury or death.

1

⚠ WARNING
• Installation shall be left to the authorized dealer or another trained professional. Improper installation may cause water leakage, electrical shock, fire, or equipment damage.
• Install the air conditioner according to the instructions given in this manual. Incomplete installation may cause water leakage, electrical shock, fire or equipment damage.
• Be sure to use the supplied or exact specified installation parts. Use of other parts may cause the unit to come to fall, water leakage, electrical shock, fire or equipment damage.
• Install the air conditioner on a solid base that is level and can support the weight of the unit. An inadequate base or incomplete installation may cause injury or equipment damage in the event the unit falls off the base or comes loose.
• Electrical work shall be carried out in accordance with the installation manual and the national, state and local electrical wiring codes. Insufficient capacity or incomplete electrical work may cause electrical shock, fire or equipment damage.
• Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance. Follow all appropriate electrical codes.
• For wiring, use a wire or cable long enough to cover the entire distance with no splices if possible. Do not use an extension cord. Do not put other loads on the power supply. Use only a separate dedicated power circuit. (Failure to do so may cause abnormal heat, electric shock, fire or equipment damage.)
• Use the specified types of wires for electrical connections from the BP unit to the indoor and outdoor units. Follow all state and local electrical codes. Firmly clamp the inter-unit wire so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating, fire or equipment damage.
• After connecting all wires be sure to shape the cables so that they do not put undue stress on the electrical covers, panels or terminals. Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, fire or equipment damage.
• When installing or relocating the system, be sure to keep the refrigerant circuit free from all substances other than the specified refrigerant (R410A), such as air. (Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise which may result in rupture, resulting in injury.)
• During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormally high pressure which could lead to equipment damage or and personal injury.
• During installation, attach the refrigerant piping securely before running the compressor. If the refrigerant pipes are not attached and the stop valve is open during installation, air will be sucked in when the compressor is run, causing abnormally high pressure which could lead to equipment damage and personal injury.
• Be sure to install a ground fault circuit interrupter. Failure to install a ground fault circuit interrupter may result in electrically shocks, or fire personal injury.

⚠ CAUTION
• Do not install the air conditioner where gas leakage would be exposed to open flames. If the gas leaks and builds up around the unit, it may catch fire.
• Establish drain piping according to the instructions of this manual. Inadequate piping may cause water damage.
• Tighten the flare nut according to the specified torque. A torque wrench should be used. If the flare nut is tightened too much, the flare nut may crack over time and cause refrigerant leakage.
• Do not touch the heat exchanger fins. Improper handling may result in injury.
• Be very careful about product transportation. Some products use PP bands for packaging. Do not use any PP bands for a means of transportation. It is dangerous.
• Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.
• The temperature of refrigerant circuit will be high, please keep the inter-unit wire away from copper pipes that are not thermally insulated.
• Electrical work must be performed in accordance with the NEC/CEC by authorized personnel only.

2

2. INTRODUCTION

1. This series uses R410A new refrigerant. Be absolutely sure to comply with "**7. PRECAUTIONS ON REFRIGERANT PIPING**", because even greater caution is needed to prevent impurities from entering R410A (mineral oils and water).
2. The design pressure is 478 PSI (3.3 MPa), which means that piping may be thicker than conventionally, so please refer to "**7. PRECAUTIONS ON REFRIGERANT PIPING**".
3. This is a mixed refrigerant, so charge as a liquid when adding refrigerant.
   (If charged as a gas, the composition of the refrigerant may change, preventing normal operation.)
4. The indoor unit must use R410A. See the catalog for indoor unit and BP unit models which can be connected. (Normal operation is not possible when connected to other units.)
5. The power supply of this series is single-phase, 208/230V (60Hz).

2-1 Combination

The indoor units can be installed in the following range.
- **Be sure to connect a dedicated indoor unit. See the catalog for indoor unit models which can be connected.**
- Total capacity/quantity of indoor units

Outdoor unit	Total capacity of indoor units	Quantity of indoor units	
		Max.	Min.
RMXS48LVJU	24000 - 62000 Btu/h	8	2

2-2 Standard operation limit
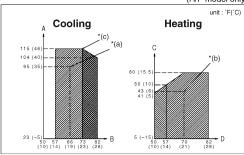
Normal operation
The figures below assume following operating conditions for indoor and outdoor units:
Equivalent pipe length
    From outdoor unit to BP unit...................................... 16.4 ft (5 m)
    From BP unit to indoor unit... 9.8ft (3 m)
    Level difference .... 0 ft (0 m)
                            (H/P model only)

A	Outdoor temperature (°FDB / °CDB)
B	Indoor temperature (°FWB / °CWB)
C	Outdoor temperature (°FWB / °CWB)
D	Indoor temperature (°FDB / °CDB)

Range for continuous operation
Range for pull down operation
Range for warming up operation

2-3 Spec list

For operating conditions marked with a *(a)(b) in the table, see "**2-2 Standard operation limit**".

Model name			RMXS48LVJU	Remarks
Refrigerant type			R410A	
Wall mounted	Cooling performance	(MBh) (kW)	48 14.1	* (a)
	Heating performance	(MBh) (kW)	54 15.8	* (b)
	Energy use during cooling	(kW)	4.64	* (a)
	Energy use during heating	(kW)	3.98	* (b)
Duct	Cooling performance	(MBh) (kW)	48 14.1	* (a)
	Heating performance	(MBh) (kW)	54 15.8	* (b)
	Energy use during cooling	(kW)	5.13	* (a)
	Energy use during heating	(kW)	5.27	* (b)
External dimensions (height × width × depth)		(inch) (mm)	52-15/16 × 35-7/16 × 12-5/8 1345 × 900 × 320	
Mass		(lb.) (kg)	283 129	
Connection piping	Gas line piping	(inch) (mm)	φ 3/4 φ 19.1	
	Liquid line piping	(inch) (mm)	φ 3/8 φ 9.4	

2-4 Electrical properties

For operating conditions marked with a *(c) in the table, see "**2-2 Standard operation limit**".

Model name	H/P	RMXS48LVJU	Remarks
Phase		Single	
Frequency	(Hz)	60Hz	
Voltage	(V)	208/230V	
Voltage tolerance range	(%)	±10	
Rated current for fuses		30	
Maximum outdoor unit operating current	(A)	27	* (c)

3

2-5 Standard supplied accessories

Make sure that the accessories shown below are all present.
(The accessories can be found behind the front panel.)

Name	Regarding use	Installation manual	Binding band
Quantity	1	1	6 pcs.
Shape			

Name	Gas side accessory pipe (1)	Gas side accessory pipe (2)	Gas side accessory pipe (3)
Quantity	1 pc.	1 pc.	1 pc.
Shape			

Name	Insulation tube	
Quantity	1 pc.	1 pc.
Shape	(large)	(small)

(Refer to figure 30)
1. Accessories
2. Screw for front panel
3. Front panel

2-6 Option accessory

- **Refrigerant branching kit**

REFNET joint	KHRP26M22T

* See "**7. PRECAUTIONS ON REFRIGERANT PIPING**" for details on how to connect refrigerant branch kits and how many are needed.

3. BEFORE INSTALLATION

<Transporting the Unit>
As shown in figure 2, bring the unit slowly. (Take care not to let hands or things come in contact with rear fins.)

(Refer to figure 2)
1. Air outlet grille
2. Intake hole
3. Corner
4. Outdoor unit
5. Handle
6. Front
7. Rear
8. Always hold the unit by the corners, as holding it by the side intake holes on the casing may cause them to deform.

Use only accessories and parts which are of the designated specification when installing.

4. SELECTING INSTALLATION SITE

(1) Select an installation site where the following conditions are satisfied and that meets with your customer's approval.
- Places which are well-ventilated.
- Places where the unit does not bother next-door neighbors.
- A locations where small animals will not make nests in the unit.

- Safe places which can withstand the unit's weight and vibration and where the unit can be installed level.
- Locations not exposed to rain.
- A locations where there is enough space to install the unit.
- Places where the indoor and outdoor unit's piping and wiring lengths come within the allowable ranges.
- A location where there is no risk of flammable gas leaking.

(2) If the unit is installed in a location where it might be exposed to strong wind, install as per figure 3.
- 16.4 ft/sec (5 m/sec) or more strong wind blown against the outdoor unit's air outlet causes the outdoor unit to deteriorate in air capacity and suck in the air blown out of its air outlet (short circuit), and the following effects may result.
  - Drop in performance.
  - Increased frost formation in heating mode.
  - Shutting down due to increase in pressure.
- If very strong wind blows continuously on the side of the outdoor unit with the outlet vent, the fan may turn in reverse at high speed and break, so install as per figure 3.

  (Refer to figure 3)
  1. Turn the air outlet side toward the building's wall, fence or windbreak screen.
  2. Air inlet grille
  3. Ensuring there is enough space for installing the unit.
  4. Set the outlet side at a right angle to the direction of the wind.
  5. Strong wind
  6. Blown air

(3) In installing the unit in a place frequently exposed to snow, pay special attention to the following:
- Elevate the foundation as high as possible.
- Attach the snow hood (field supply).
- Remove the rear inlet grille to prevent snow from accumulating on the rear fins.

(4) The outdoor unit may short circuit depending on its environment, so use the louvers (field supply).

(5) The refrigerant gas (R410A) is a safe, non-toxic and non-flammable gas, but if it leaks into the room, the concentration may exceed tolerance levels, especially in small rooms, so steps need to be taken to prevent refrigerant leakage. See the equipment design reference for details.

(6) Inverter-type air conditioners sometimes cause static in other electrical appliances.
When selecting an installation location, make sure the air conditioner and all wiring are sufficiently far away from radios, computers, stereos, and other appliances, as shown in figure 1.
Particularly for locations with weak reception, ensure there is a distance of at least 9.8 ft (3 m) for indoor remote controllers, place power supply wiring and inter-unit wiring in conduits, and ground the conduits. Use shielded wire for inter-unit wiring.

  (Refer to figure 1)
  1. Indoor unit
  2. Branch switch (ground-fault circuit interrupter)
  3. Remote controller
  4. Personal computer or radio
  5. BP unit

(7) Space needed for installation
  <Precautions when installing units in series>
  - The direction for inter-unit piping is either forward or down when installing units in series.
  - If the piping is brought out from the back, the outdoor unit will require at least 10 inch (250 mm) from its right side.

(7)-1 IN CASE OBSTACLES EXIST ONLY IN FRONT OF THE AIR INLET

When nothing is obstructing the top
1. Installation of single unit
  - In case obstacles exist only in front of the air inlet
    (Refer to figure 4-[1])
  - In case obstacles exist in front of the air inlet and on both sides of the unit **(Refer to figure 4-[2])**

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2. In case of installing multiple units (2 units or more) in lateral connection per row
   • In case obstacles exist in front of the air inlet and on both sides of the unit **(Refer to figure 4-[3])**

When something is obstructing the top
1. Installation of single unit
   • In case obstacles exist only in front of the air inlet **(Refer to figure 5-[1])**
   • In case obstacles exist in front of the air inlet and on both sides of the unit **(Refer to figure 5-[2])**
2. In case of installing multiple units (2 units or more) in lateral connection per row
   • In case obstacles exist in front of the air inlet and on both sides of the unit **(Refer to figure 5-[3])**

(7)-2 IN CASE OBSTACLES EXIST IN FRONT OF THE OUTLET SIDE

When nothing is obstructing the top
1. Installation of single unit **(Refer to figure 6-[1])**
2. In case of installing multiple units (2 units or more) in lateral connection per row **(Refer to figure 6-[2])**

When something is obstructing the top
1. Installation of single unit **(Refer to figure 6-[3])**
2. In case of installing multiple units (2 units or more) in lateral connection per row **(Refer to figure 6-[4])**

(7)-3 IN CASE OBSTACLES EXIST IN FRONT OF BOTH THE AIR INLET AND OUTLET SIDES
Pattern 1: Where obstacle in front of the air outlet is higher than the unit.
(There is no height limit for obstructions on the intake side.)

When nothing is obstructing the top
1. Installation of single unit **(Refer to figure 7-[1])**
2. In case of installing multiple units (2 units or more) in lateral connection per row **(Refer to figure 7-[2])**

When something is obstructing the top
1. Installation of single unit **(Refer to figure 7-[3])**
   Relation of dimensions of H, A, and L are shown in the table below.

inch (mm)

	L	A
$L \le H$	$0 < L \le 1/2H$	30 (750)
	$1/2H < L \le H$	40 (1000)
$H < L$	Set the frame to be $L \le H$	

Note
Get the lower part of the frame sealed so that air from the outlet does not bypass.

2. Series installation (up to 2 units) **(Refer to figure 7-[4])**
   Relation of dimensions of H, A, and L are shown in the table below.

inch (mm)

	L	A
$L \le H$	$0 < L \le 1/2H$	40 (1000)
	$1/2H < L \le H$	50 (1250)
$H < L$	Set the frame to be $L \le H$	

Note
1. Get the lower part of the frame sealed so that air from the outlet does not bypass.
2. Only two units at most can be installed in series.

Pattern 2: Where obstacles in front of the air outlet is lower than the unit.
(There is no height limit for obstructions on the intake side.)

When nothing is obstructing the top
1. Installation of single unit **(Refer to figure 7-[5])**
2. In case of installing multiple units (2 units or more) in lateral connection per row **(Refer to figure 7-[6])**
   Relation of dimensions of H, A, and L are shown in the table below.

inch (mm)

L	A
$0 < L \le 1/2H$	10 (250)
$1/2H < L \le H$	12 (300)

When something is obstructing the top
1. Installation of single unit **(Refer to figure 7-[7])**
   Relation of dimensions of H, A, and L are shown in the table below.

inch (mm)

	L	A
$L \le H$	$0 < L \le 1/2H$	4 (100)
	$1/2H < L \le H$	8 (200)
$H < L$	Set the frame to be $L \le H$	

Note
Get the lower part of the frame sealed so that air from the outlet does not bypass.

2. Series installation (up to 2 units) **(Refer to figure 7-[8])**
   Relation of dimensions of H, A, and L are shown in the table below.

inch (mm)

	L	A
$L \le H$	$0 < L \le 1/2H$	10 (250)
	$1/2H < L \le H$	12 (300)
$H < L$	Set the frame to be $L \le H$	

Note
1. Get the lower part of the frame sealed so that air from the outlet does not bypass.
2. Only 2 units at most can be installed in series.

(7)-4 IN CASE OF STACKED INSTALLATION
1. In case obstacles exist in front of the outlet side **(Refer to figure 8-[1])**
   Note
   1. No more than 2 units should be stacked.
   2. About 4 inch (100 mm) is required as the dimension for laying the upper outdoor unit's drain pipe.
   3. Shut off the Z part (the area between the upper outdoor unit and the lower outdoor unit) so that outlet air does not bypass.
2. In case obstacles exist in front of the air inlet **(Refer to figure 8-[2])**
   Note
   1. No more than 2 units should be stacked.
   2. About 4 inch (100 mm) is required as the dimension for laying the upper outdoor unit's drain pipe.
   3. Shut off the Z part (the area between the upper outdoor unit and the lower outdoor unit) so that outlet air does not bypass.

(7)-5 IN CASE OF MULTIPLE-ROW INSTALLATION (FOR ROOF TOP USE, ETC.)
1. In case of installing 1 unit per row **(Refer to figure 9-[1])**
2. In case of installing multiple units (2 units or more) in lateral connection per row **(Refer to figure 9-[2])**
   Relation of dimensions of H, A, and L are shown in the table below.

inch (mm)

	L	A
$L \le H$	$0 < L \le 1/2H$	10 (250)
	$1/2H < L \le H$	12 (300)
$H < L$	Installation impossible.	

3

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5. PRECAUTIONS ON INSTALLATION

- Install making sure the unit is level and the foundation is sturdy enough to prevent vibration noise.
- In accordance with the foundation drawing in figure 10, fix the unit securely by means of the foundation bolts.
(Prepare 4 sets of M12 foundation bolts, nuts and washers each which are available on the market.)
- The foundation bolts should be inserted 15/16 inch (20 mm).

(Refer to figure 10)
1. Diagram of lower surface

<Drain pipe disposal>
- Locations where drainage from the outdoor unit might be a problem.
In such locations, for example, where the drainage might drip onto passersby, lay the drain piping using the separately sold drain plug.
- When laying the drain, at least 4 inch (100 mm) from the bottom of the outdoor unit is needed.
- Make sure the drain works properly.
(Watch out for water leaks if piping is brought out the bottom.)

(Refer to figure 11)
1. Drain plug
2. 4 tabs
3. Drain receiver
4. Insert the drain receiver as far as possible into the drain plug and hook the tabs.
5. Bottom frame drain hole
6. (1) Insert the drain plug through the drain hole in the bottom frame shown in figure 12.
   (2) Turn the drain plug along the guides until it stops (approx. 90°), and then attach the bottom frame.
7. Guide

(Refer to figure 12)
1. Air outlet side
2. Diagram of lower surface
3. Drain hole

[How to remove the transport clasp]
- A yellow transport clasp and washer are attached to the legs of the compressor to protect the unit during transportation, so remove them as shown in figure 13.

(Refer to figure 13)
1. Compressor
2. Securing nut
3. Washer
4. Transport clasp
5. Turn in the direction of the arrow and remove.
6. Sound-proof cover
7. Do not remove with the cover open.
(1) Open the sound-proof cover as shown in figure 13.
Do not pull the sound-proof cover or remove it from the compressor.
(2) Remove the securing nut.
(3) Remove the washer.
(4) Remove the transport clasp as shown in figure 13.
(5) Retighten the securing nut.
(6) Return the sound-proof cover as it was.

6. FIELD WIRING

⚠ CAUTION ─────────────

To the electrician
- Do not operate until refrigerant piping work is completed.
(If operated before complete the piping work, the compressor may be broken down.)
- Be sure to install a ground fault circuit interrupter.
(This unit uses an inverter, so install the ground fault circuit interrupter that be capable of handling high harmonics in order to prevent malfunctioning of the ground fault circuit interrupter itself.)

6-1 Wiring connection example for whole system

- Electrical wiring work should be done by a certified professional.
- Follow the "Electrical wiring diagram face plate" when carrying out any electrical wiring.
Only proceed with wiring work after blocking off all power.
- Make sure the ground resistance is no greater than 4Ω .
- Attach a ground-fault circuit interrupter.
- Ground the indoor and outdoor units.
- Do not connect the ground wire to gas pipes, sewage pipes, lightning rods, or telephone ground wires.
  - **Gas pipes:** can explode or catch fire if there is a gas leak.
  - **Sewage pipes:** no grounding effect is possible if hard plastic piping is used.
  - **Telephone ground wires and lightning rods:** dangerous when struck by lightning due to abnormal rise in electrical potential in the grounding.
- Use copper wire.
- When doing the electrical wiring, always shut off the power source before working, and do not turn on the switch until all work is complete.
- This unit has an inverter, so it must be grounded in order to reduce noise and prevent it affecting other appliances, and also to release any electrical build-up in the unit case due to leaked current.
- Do not install a power-factor improving phase-advancing capacitor under any circumstances.
(Not only will this not improve the power factor, but it might cause a fire.)
- Connect the wire securely using designated wire and fix it with attached clamp without applying external pressure on the terminal parts (terminal for power wiring, terminal for transmission wiring and ground terminal). See "**6-3 How to connect the power supply wiring**".
- Left-over wiring should not be wrapped and stuffed into the unit.
- To prevent the power wiring from being damaged by the knock hole edges, put it in a wiring pipe or plastic tube to protect it.
- Secure the wiring with the included clamp so that it does not come in contact with the piping or stop valve.
(See "**6-3 How to connect the power supply wiring**".)

⚠ CAUTION ─────────────

- Use a power wire pipe for the power supply wiring.
- Outside the unit, make sure the weak electric wiring (i.e. for the remote controller cord, between units, etc.) and the strong electric wiring do not pass near each other, **keeping them at least 2 inch (50 mm) apart**.
Proximity may cause electrical interference, malfunctions, and breakage.
- Be sure to connect the power wiring to the power wiring terminal block and secure it as described in "**6-3 How to connect the power supply wiring**".
- Inter-unit wiring should be secured as described in "**6-4 Inter-unit wiring connection procedure**".
- Secure wiring with binding band (accessory) to avoid contact with piping.
- Make sure the wiring and the front panel do not stick up above the structure, and close the cover firmly.

(Refer to figure 14)
1. **The power source is supplied to each BP unit individually.**
2. Branch switch and over-current interrupter (ground-fault circuit interrupter)
3. Power supply
4. Outdoor unit
5. 16V
6. 208/230V
7. Indoor unit
8. BP unit
9. Ground wire
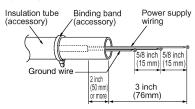
6

6-2 How to lay the power supply wiring and transmission wiring
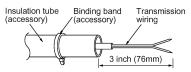
Let the power supply wiring and transmission wiring with a conduit pass through one of the knockout holes on the front or side cover, and let the transmission wiring with a conduit pass through another knockout hole.

• For protection from uninsulated live parts, thread the power supply wiring and the transmission wiring through the included insulation tube and secure it with the included binding band.

\<Power supply wiring\>

Insulation tube (accessory) Binding band (accessory) Power supply wiring

Ground wire

5/8 inch (15 mm) 5/8 inch (15 mm)

2 inch (50 mm) or more

3 inch (76mm)

\<Transmission wiring\>

Insulation tube (accessory) Binding band (accessory) Transmission wiring

3 inch (76mm)
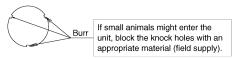
Precautions when knocking out knock holes

• Open the knock holes with a hammer or the like.
• After knocking out the holes, we recommend you remove burrs in the knock holes and paint the edges and areas around the edges using the repair paint to prevent rusting.
• When passing wiring through knock holes, make sure there are no burrs, and protect the wiring with protective tape.

Burr

If small animals might enter the unit, block the knock holes with an appropriate material (field supply).

(Refer to figure 15)
   1. Screw
   2. Unfasten the screw and open the cover.

(Refer to figure 16)
   1. Stop valve attachment plate
   2. Power supply wiring (including ground wire) or transmission wiring.
   3. Backward
   4. Knockout hole
   5. Sideways
   6. Forward
   7. Electrical Component Box
   8. Terminal block (X2M)
   9. Binding band (accessory)
   10. Connecting power supply wiring
   11. Ground wire (yellow/green)
   12. Terminal block (X1M)
   13. Transmission wiring
   14. (To X2M [To BP unit] (F1, F2))
   15. Insulation tube (large) (accessory)
   16. Insulation tube (small) (accessory)
   17. Cut off the insulation tube sticking out of the outdoor unit.

\<Precautions when laying power wiring\>

• Wiring of different thicknesses cannot be connected to the power terminal block.
   (Slack in the power wiring may cause abnormal heat.)
• Use sleeve-insulated round pressure terminals for connections to the power terminal block. When none are available, connect wire of the same diameter to both sides, as shown in the figure.

Insulating sleeve
Round crimp-style terminal
Electric Wire

Connect wires of the same gauge to both side. Do not connect wires of the same gauge to one side. Do not connect wires of different gauges.

Good Wrong Wrong

Follow the instructions below if the wiring gets very hot due to slack in the power wiring.

• For wiring, use the designated power wire and connect firmly, then secure using the included clamping material to prevent outside pressure being exerted on the terminal block.
• Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tightening impossible.
• Over-tightening the terminal screw may break it.

See the table below the tightening torque of the terminal screws.

	Tightening torque	
M5	Power terminal	1.76-2.15 ft·lbf (2.39-2.91 N·m)
M4	Shield ground	0.87-1.06 ft·lbf (1.18-1.44 N·m)
M3	Transmission wiring terminal block	0.58-0.72 ft·lbf (0.8-0.97 N·m)

6-3 How to connect the power supply wiring

⚠ **CAUTION**

Attach a ground-fault circuit interrupter.
• A ground-fault circuit interrupter is required in order to prevent electric shock and fires.

Model name	Frequency	Voltage	Rated current for fuses	Maximum outdoor unit operating current
RMXS48LVJU	60Hz	208/230V	30A	27A

⚠ **CAUTION**

• The wiring should be selected in compliance with local specifications. See the table above.
• Always turn off the power before doing wiring work.
• Grounding should be done in compliance with local laws and regulations.
• Attach a ground-fault circuit interrupter.
   (This unit has an inverter, so an interrupter capable of handling high frequencies is needed to prevent malfunction of the interrupter itself.)
• As shown in figure 16, when connecting the power supply wiring to the power supply terminal block, be sure to clamp securely.
• Once wiring work is completed, check to make sure there are no loose connections among the electrical parts in the control box.

3

7

6-4 Inter-unit wiring connection procedure

- Between indoor units in the same system, pass the wiring between the units as shown in figure 17. (There is no polarity.)

    (Refer to figure 17)
    1. Terminal block (X2M)
    2. Use balance type shield wire (with no polarity).
    3. BP unit
    4. Not used for this model. **Never connect wires, or the entire system will be damaged.**

Precautions regarding the length of wiring between units
Exceeding the following limits may cause transmission malfunctions, so observe them.
Max. wiring length   Max. 656 ft (200 m)
Total wiring length   Max. 984 ft (300 m)

Precautions regarding wiring between units
- **Do not connect 208/230V power wiring to terminals for the inter-unit wiring. Doing so would destroy the entire system.**
- Wiring to the BP unit should be wired to F1 and F2 (To BP unit) on the outdoor unit's terminal block (X2M).

Note
- The above wiring should be wired using AWG 18-16 (0.75 – 1.25 mm^2) shielded (balance type) wiring.
  (See figure 16 for how to ground the shielded parts.)
- All inter-unit wiring is to be procured on site.

⚠ **CAUTION**

(Refer to figure 18)
1. Branch
2. Caution on branches in the wiring among BP units
3. The following branches can not be performed

7. PRECAUTIONS ON REFRIGERANT PIPING

⚠ **CAUTION**

To the pipe-layer
- Do not operate the unit with the transport clasp attached. This can cause abnormal shaking or noise. See "**5. PRECAUTIONS ON INSTALLATION**" and "How to remove the transport clasp".

7-1 Installation tools

Use the right parts to ensure tolerance and to prevent foreign matter for entering.
Gauge manifold, charge hose, etc.
- Make sure to use installation tools that are exclusively used for R410A installations to withstand the pressure and to prevent foreign materials (e.g. mineral oils such as SUNISO and moisture) from mixing into the system.
  (The screw specifications differ for R410A.)
Vacuum pump
- Use extreme caution to prevent pump oil from flowing backwards through the system when the pump is stopped.
- Use a vacuum pump which can evacuate to −14.6 PSI (−100.7 kPa (5Torr, −755mmHg)).

7-2 Selecting piping material

- Use pipes that have no contaminants adhered to their inner surfaces (such as sulfur, iron oxide, dust, cutting chips, oil and moisture). (It is desirable that adhered oil inside the piping is 0.00006 lb. (30 mg) or less per 32.8 ft (10 m).)
- The wall thickness of the refrigerant piping should comply with local laws and regulations. The design pressure for R410A is 478 PSI (3.3 MPa).
- Use the following material for the refrigerant piping.
  Material: Jointless phosphor-deoxidized copper pipe.
- Thickness and size: choose based on the piping size selection method on the "**7-8 Air tight test and vacuum drying**".
- Make sure to use the separately sold refrigerant branch kit when branching the piping.

- Piping work should be done within the maximum length, height difference, and length after branches set out in "**7-8 Air tight test and vacuum drying**".
- Install the refrigerant branch kit while observing the following condition and referring to the installation manual offered as an accessory of the kit.

    (Refer to figure 19)
    1. Install the REFNET joint so it splits horizontally or vertically.
    2. Horizontal surface
    3. A-arrow view
    4. ±30° or less
    5. Level
    6. Vertical is also OK

7-3 Protection against contamination when installing pipes

- Wrap the piping to prevent moisture, dirt, dust, etc. from entering the piping.
- Exercise caution when passing copper piping through the through-holes and when passing them out to the outside.

Place	Installation period	Protection method
Outdoor	More than a month	Pinch the pipe
	Less than a month	Pinch or tape the pipe
Indoor	Regardless of the period	

7-4 Pipe connection

- See "Stop valve operation procedure" in "**7-8 Air tight test and vacuum drying**" regarding handling of the stop valve.
- Only use the flare nuts included with the unit. Using different flare nuts may cause the refrigerant to leak.
- **Be sure to perform a nitrogen blow when brazing.**
  (Brazing without performing nitrogen replacement or releasing nitrogen into the piping will create large quantities of oxidized film on the inside of the pipes, adversely affecting valves and compressors in the refrigerating system and preventing normal operation.)

Note
The nitrogen used when brazing while flowing the nitrogen should be set to 2.9 PSI (0.02 MPa) (2.8 PSI / 0.019 MPa: just enough to feel a breeze on your cheek) with the decompression valve.
- Do not mix any refrigerant other than that specified into the refrigerant system.
- Do not mix air into the refrigerant system.

⚠ **CAUTION**

Do not use a flux when brazing the refrigerant pipe joints.
Use phosphor copper brazing (BCuP-2/B-Cu93P-710/795) which does not require flux.
(Using a chlorine flux may cause the pipes to corrode, and if it contains fluoride it may cause the refrigerant lubricant to deteriorate, adversely affecting the refrigerant piping system.)

(Refer to figure 20)
1. Refrigerant pipe
2. Location to be brazed
3. Regulator
4. Nitrogen
5. Manual valve
6. Taping

7-5 Connecting the refrigerant piping

- The local inter-unit piping is connectable in four directions.

    (Refer to figure 21)
    1. Front panel
    2. Pipe outlet panel
    3. Backward
    4. Sideways
    5. Downward
    6. Pipe outlet panel screw
    7. Forward
    8. Screw for front panel

8

- **When connecting the pipings downward, remove the knock-out by making 4 holes in the middle on the each side of the knockout with a drill.**

    (Refer to figure 22)
    1. Dril
    2. Center area around knockout hole
    3. Knockout hole
    4. Slit

- After knocking out the knock-out, it is recommended to apply repair paint to the edge and the surrounding end surfaces to prevent rusting.

    (Refer to figure 23)
    1. Bottom frame
    2. Inter-unit piping

Note
Cutting out the 2 slits makes it possible to install as shown in figure 23. (Use a metal saw to cut out the slits.)

<Precautions when connecting pipes>
- Please refer to the Table 1 for the dimensions for processing flares.
- When connecting the flare nut, coat the inner surface of the flare with refrigeration oil and initially tighten by hand 3 or 4 turns before tightening firmly.
- Please refer to the Table 1 for the tightening torque. (Too much tightening will end up in splitting of the flare.)

Table 1

Pipe size	Tightening torque	A dimensions for processing flares	Flare shape
φ 3/8 inch (φ 9.5mm)	24.1-29.4 ft·lbf (32.7-39.9N·m)	0.504-0.520 inch (12.8-13.2mm)	R0.016-0.031 inch (R0.4-0.8mm)
φ 5/8 inch (φ 15.9mm)	45.6-55.6 ft·lbf (61.8-75.4N·m)	0.760-0.776 inch (19.3-19.7mm)	90°±2° 45°±2° A
φ 3/4 inch (φ 19.1mm)	71.7-87.5 ft·lbf (97.2-118.6N·m)	0.929-0.944 inch (23.6-24.0mm)	

Refrigeration oil

- If a torque wrench is not available, there is a place where the tightening torque will suddenly increase if a normal wrench is used to tighten the flare nut.
  From that position, further tighten the flare nut the angle shown below.

Pipe size	Further tightening angle	Recommended arm length of tool
φ 3/8 inch (φ 9.5mm)	60°- 90 °	Approx. 7-7/8 inch (200 mm)
φ 5/8 inch (φ15.9mm)	30°- 60°	Approx. 11-13/16 inch (300 mm)
φ 3/4 inch (φ 19.1mm)	20° - 35°	Approx. 17-11/16 inch (450 mm)

- After all the piping has been connected, use nitrogen to perform a gas leak check.

    (Refer to figure 24-[1])
    1. Front connection
    2. Gas side accessory pipe (1)
    3. Gas side accessory pipe (3)
    4. Gas side piping (field supply)
    5. Cut at an appropriate length.
    6. Gas side accessory pipe (2)

(Refer to figure 24-[2])
1. Rear-side connection
2. Gas side accessory pipe (1)
3. Gas side accessory pipe (2)
4. Gas side accessory pipe (3)
5. Gas side piping (field supply)

(Refer to figure 24-[3])
1. Side connection
2. Gas side accessory pipe (2)
3. Cut at an appropriate length.
4. Gas side piping (field supply)
5. Gas side accessory pipe (3)
6. Gas side accessory pipe (1)

(Refer to figure 24-[4])
1. Bottom connection
2. Cut at an appropriate length.
3. Gas side piping (field supply)
4. Gas side accessory pipe (3)
5. Gas side accessory pipe (1)

Precautions for connecting pipes
- Be careful not to let the inter-unit piping come into contact with the compressor terminal cover.
  Adjust the height of the insulation material on liquid pipe when it has the possibility of getting in contact with the terminal. Also make sure that the inter-unit piping does not touch the mounting bolt of the compressor.

    (Refer to figure 26)
    1. Terminal cover
    2. Compressor
    3. Corking, etc.
    4. Insulation material
    5. Bolts
    6. Inter-unit piping

- If installing the outdoor unit higher than the indoor unit, caulk the space around insulation and tubes because condensation on the check valve can seep through to the indoor unit side.

[Preventing foreign objects from entering]
- Plug the pipe through-holes with putty or insulating material (procured locally) to stop up all gaps, as shown in figure 25.
  (Insects or small animals entering the outdoor unit may cause a short in the control box.)

    (Refer to figure 25)
    1. Putty or insulating material
    2. (field supply)

7-6   Heat insulation of piping

- If you think the humidity inside the ceiling might exceed 86°F (30°C) and RH80%, reinforce the insulation on the cooling piping. (At least 0.78 inch (20 mm) thick) (Condensation may form on the surface of the insulation.)
- Be sure to insulate the inter-unit piping (liquid and gas-side) and the refrigerant branch kit. (Not insulating them may cause leaking.)

(The highest temperature that the gas-side piping can reach is around 248°F (120°C), so be sure to use insulating material which is very resistant.)

⚠ **CAUTION** ——————————————————————

For local insulation, be sure to insulate all the way to the pipe connections inside the machine.
Exposed piping may cause leaking or burns on contact.

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7-7 Example of connection

Branch with refnet joint

unit : inch (mm)

Example of connection
(Connection of 7 units heat pump system)

1 : indoor unit
BP ◎ : BP unit
△ : refrigerant branch kit (refnet joint)

Maximum allowable length	Between outdoor and BP units	Total piping length	Pipe length between outdoor and BP units ≤ 180 ft (55m)
			[Example] a+b+c+d+e ≤ 180 ft (55m)
	Between BP and indoor units	Total piping length	Piping length between BP and indoor units: 262ft (80m)
			[Example] f+g+h+i+j+k+ℓ ≤262ft (80m)
	Between BP and indoor unit	1 room length	Piping length between BP and indoor unit ≤ 49 ft (15m)
			[Example] f, g, h, i, j, k, ℓ ≤ 49 ft (15m)
Allowable height	Between outdoor and indoor units	Difference in height	Difference in height between outdoor and indoor units (H1) ≤ 98 ft (30m)
	Between outdoor and BP units	Difference in height	Difference in height between outdoor and BP units (H2) ≤ 98 ft (30m)
	Between BP and BP units	Difference in height	Difference in height between BP and BP units (H3) ≤ 49 ft (15m)
	Between indoor and indoor units	Difference in height	Difference in height between indoor and indoor units (H4) ≤ 49 ft (15m)

Minimum allowable length
*1 Since the sound of refrigerant may be transferred from the outdoor unit to the indoor unit, make the pipe length from the outdoor unit to the first junction 16.4 ft (5 m) or longer.

	Piping length	Pipe length between outdoor unit and first refrigerant branch kit (refnet joint) ≥ 16.4 ft (5m)
		[Example] a ≥ 16.4 ft (5m)

Allowable length after the branch
*2 Branch kit are recommended to set as possible as near the BP units.
c, d, e are recommended to be as possible as short.

	Piping length	Piping length from first refrigerant branch kit (refnet joint) to indoor unit ≤ 131 ft (40m)
		[Example] unit 6: b+c+k ≤ 131 ft (40m)
		[Example] unit 5: b+e+j ≤ 131 ft (40m)
		[Example] unit 3: d+h ≤ 131 ft (40m)

Refrigerant branch kit selection refrigerant branch kits can only be used with R410A

Refrigerant branch kit (refnet joint) name : KHRP26M22T

Pipe size selection

• Piping size (Outer diameter × minimum thickness)

symbol	Gas pipe	Liquid pipe
a	φ 3/4 × 0.039 (φ 19.1 × 1.0)	φ 3/8 × 0.031 (φ 9.5 × 0.8)
b	φ 5/8 × 0.031 (φ 15.9 × 1.0)	φ 3/8 × 0.031 (φ 9.5 × 0.8)
c, d, e	See the table A	

Table A

Total indoor capacity Q	Gas pipe	Liquid pipe
Qc, Qd, Qe ≤ 17000 Btu/h (5.0 kW)	φ 1/2 × 0.031 (φ 12.7 × 0.8)	φ 1/4 × 0.031 (φ 6.4 × 0.8)
Qc, Qd, Qe > 17000 Btu/h (5.0 kW)	φ 5/8 × 0.039 (φ 15.9 × 1.0)	φ 3/8 × 0.031 (φ 9.5 × 0.8)

*Qc, Qd, Qe is total connected indoor capacity
*c, d, e indicates the symbols in the figure

[Example] for refrigerant branch using refnet joint

unit : inch×ft (mm×m)

a: φ3/8 × 32 (φ 9.5 × 10)	g: φ 1/4 × 32 (φ 6.4 × 10)
b: φ3/8 × 32 (φ 9.5 × 10)	h: φ 1/4 × 32 (φ 6.4 × 5)
c: φ1/4 × 32 (φ 6.4 × 10)	i: φ 1/4 × 16 (φ 6.4 × 5)
d: φ3/8 × 32 (φ 9.5 × 10)	j: φ 1/4 × 32 (φ 6.4 × 10)
e: φ3/8 × 32 (φ 9.5 × 10)	k: φ 1/4 × 32 (φ 6.4 × 5)
f: φ1/4 × 32 (φ 6.4 × 10)	ℓ: φ 1/4 × 26 (φ 6.4 × 8)

[Example]
indoor 1: 9000 Btu/h
indoor 2: 12000 Btu/h   Qd = 39000 Btu/h
indoor 3: 18000 Btu/h

=> (Gas pipe) φ5/8 × 0.031 (φ15.9 × 1.0) / (Liquid pipe) φ3/8 × 0.031 (φ9.5 × 0.8)

How to calculate the additional refrigerant to be charged
Additional refrigerant to be charged R (lb. /kg)
R should be rounded off in units of 0.1 lb. (0.1kg).

$$R = \left(\begin{array}{c} \text{Total length (ft / m)} \\ \text{of liquid piping size at} \\ (\phi 3/8 \text{ inch } (\phi 9.5 \text{ mm}) \end{array} \right) \times \begin{array}{c} 0.036 \text{ lb./ft} \\ (0.054 \text{ kg/m}) \end{array} + \left(\begin{array}{c} \text{Total length (ft / m)} \\ \text{of liquid piping size at} \\ \phi 1/4 \text{ inch } (\phi 6.4 \text{ mm}) \end{array} \right) \times \begin{array}{c} 0.015 \text{ lb./ft} \\ (0.022 \text{ kg/m}) \end{array}$$

[Example] for refrigerant branch using refnet joint

R=[(a+b+d+e)× 0.036 /(0.054)] +[(c+f+g+h+i+j+k+ ℓ)× 0.015 /(0.022)]=[128 /(40)]× 0.036 /(0.054) +[234 /(73)]× 0.015 /(0.022)]= 8.1 lb. → 8.1 lb. (3.766 → 3.8kg)

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7-8 Air tight test and vacuum drying

After doing the piping, perform the following inspections.

Air tight test

Be sure to use nitrogen gas. (See the figure ("Stop valve operation procedure") for the location of the service port.)

[Procedure]
Pressurize from the liquid pipes and gas pipes to 478 PSI (3.3 MPa) (and not above 478 PSI (3.3 MPa)). If there is not pressure drop over the next 24 hours, the equipment has passed the test.
If the pressure drops, check for leakage positions. (Confirm that there is no leakage, then release nitrogen.)

Vacuum drying

Use a vacuum pump that can create a vacuum down to at least −14.6 PSI (−100.7 kPa).

[Procedure]
Operate the vacuum pump for **at least 2 hours** from **both the liquid and gas pipes** and decrease the pressure to at least −14.6 PSI (−100.7 kPa).
Leave at below −14.6 PSI (−100.7 kPa) for at least 1 hour and make sure that the vacuum gauge does not rise. (If it does rise, there is either still moisture in the system or a leak.)

Cases where moisture might enter the piping (i.e., if doing work during the rainy season, if the actual work takes long enough that condensation may form on the inside of the pipes, if rain might enter the pipes during work, etc.)
After performing the vacuum drying for 2 hours, pressurize to 7.2 PSI (0.05 MPa) (i.e., vacuum breakdown) with nitrogen gas, then depressurize down to at least −14.6 PSI (−100.7 kPa) for an hour using the vacuum pump (vacuum drying). (If the pressure does not reach at least −14.6 PSI (−100.7 kPa) even after depressurizing for at least 2 hours, repeat the vacuum breakdown - vacuum drying process.) Leave as a vacuum for 1 hour after that, and make sure the vacuum gauge does not rise.

(Refer to figure 27)
1. Nitrogen
2. Decompression valve
3. Vacuum pump
4. Valve (open)
5. Charge hose
6. Stop valve service port
7. Indoor unit
8. Gas line stop valve (close)
9. Liquid line stop valve (close)
10. Indicates local procurement
11. Outdoor unit
12. BP unit

Note
The stop valve must always be turned to "closed".
Otherwise the refrigerant in the outdoor unit will pour out.
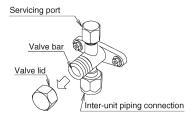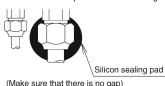
Stop valve operation procedure

Precautions when handling the stop valve

• The names of parts needed to operate the stop valve are shown in the figure below. The unit is shipped from the factory with the stop valve turned to the "closed" position.

Servicing port
Valve bar
Valve lid
Inter-unit piping connection

• Since the side boards may be deformed if only a torque wrench is used when loosening or tightening flare nuts, always lock the stop valve with a wrench and then use a torque wrench.
• In cases where the unit is run in heating mode when the outside temperature is low or in other situations where the operating pressure might drop, seal the gas-side flare nut on the stop valve with silicon sealant or the like to prevent it from freezing.

Silicon sealing pad
(Make sure that there is no gap)
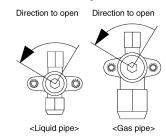
Stop valve operation procedure
Have a hexagonal wrench ready (size: 0.2 inch and 0.3 inch / 4 mm and 6 mm).

Opening the valve

1. Place the hexagonal wrench on the valve bar and turn counter-clockwise.
2. Stop when the valve bar no longer turns. It is now open.
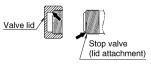
Close the valve

1. Place the hexagonal wrench on the valve bar and turn clockwise.
2. Stop when the valve bar no longer turns. It is now closed.

Direction to open   Direction to open

<Liquid pipe>   <Gas pipe>

Precautions for handling valve lid

• A seal is attached to the point indicated by the arrow. Take care not to damage it.

Valve lid
Stop valve (lid attachment)

• Be sure to tighten the valve lid securely after operating the valves.
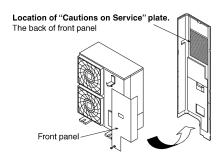
Liquid-side tightening torque	Gas-side tightening torque
10.0-12.2 ft·lbf (13.5-16.5 N·m)	16.6-20.3 ft·lbf (22.5-27.5 N·m)

Precautions for handling servicing port

• Use a push-rod-provided charging hose for operation.
• Be sure to tighten the valve lid securely after operation.
  Tightening torque .... 8.5-10.3 ft·lbf (11.5-14.0 N·m)

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Location of "Cautions on Service" plate.
The back of front panel

Front panel

8. ADDITIONAL REFRIGERANT CHARGE

⚠ **WARNING**

• When leaving the unit with the power on, be sure to switch with another person doing the installation or close the front panel.

8-1 Before adding refrigerant

• Make sure the following work and inspection is complete, in accordance with the installation manual.
 • Piping
 • Wiring
 • Airtightness test, Vacuum drying

8-2 Checking the refrigerant tank

• Check whether the tank has a siphon pipe before charging and place the tank so that the refrigerant is charged in liquid form. (See the figure below.)

Tank with siphon pipe   Other tanks

There is a siphon pipe inside, so the cylinder need not be upside-down to fill with liquid. (Stand the cylinder upright when filling.)

Stand the tank upside down and charge.

8-3 Adding refrigerant

Filling after calculating the amount of refrigerant to add

1. Calculate the amount of refrigerant to add as described in "Calculating the amount of refrigerant to add" in "**7-7 Example of connection (page 10)**".
2. After the vacuum drying is finished, open valve A and charge the calculated amount of refrigerant through the service port for the liquid-side stop valve.
3. Close valve A after charging is complete.
Note: If all the refrigerant to be added cannot be charged using the above procedure, right-hand the procedure below and re-charge the refrigerant.

Status of the stop valve and other valves when adding refrigerant

• See "Stop valve operation procedure" in "**7-8 Air tight test and vacuum drying (page 11)**" for details on how to use the stop valve. **(Refer to figure 28)**

1. R410A Tank (Siphon system)	5. Stop valve service port
2. Measuring instrument	6. Gas line stop valve
3. Valve A	7. Outdoor unit
4. BP unit	8. Liquid line stop valve

State of valve A and the stop valve	Valve A	Liquid line stop valve	Gas line stop valve
Before starting to charge the refrigerant	Close	Close	Close
During charging of the refrigerant	Open	Close	Close

If all the refrigerant could not be added
Add refrigerant using the following procedure. See the **"Cautions on Service" plate** on the back of the front panel for details on the settings for adding refrigerant.
[Procedure]
1. Close the front panel and turn on the power to all outdoor units and indoor units in the refrigeration system.
2. Open the gas and liquid-side stop valve all the way and add the refrigerant. (Open valve A immediately after starting the compressor.)
3. Once the appropriate amount of refrigerant is in, press the confirmation button (BS3) on the outdoor unit PC board (A2P), and stop operation after adding the refrigerant.
4. Close valve A after charging is complete.

Status of the stop valve and other valves when adding refrigerant operation

• See "Stop valve operation procedure" in "**7-8 Air tight test and vacuum drying (page 11)**" for details on how to use the stop valve.
• Connect the service port (for charging refrigerant) inside the unit. When the unit is shipped from the factory, refrigerant is already charged, so be careful when connecting the charge hose.
• After adding the refrigerant, do not forget to close the lid of the service port (for adding refrigerant). The tightening torque of the lid is 8.5-10.3 ft·lbf (11.5-14.0 N·m) **(Refer to figure 29)**

1. Gas line stop valve	2. Liquid line stop valve
3. Stop valve service port	4. BP unit
5. Measuring instrument	6. R410A Tank (Siphon system)
7. Valve A	8. Service port
9. (For adding refrigerant)	10. Outdoor unit

State of valve A and the stop valve	Valve A	Liquid line stop valve	Gas line stop valve
Before starting to charge the refrigerant	Close	Open	Open
During charging of the refrigerant	Open	Open	Open

9. POST-WORK CHECKS

Perform the following checks after work is complete.
(1) Drain pipe connection, removal of transport clasp →
   See "**5. PRECAUTIONS ON INSTALLATION (page 6)**".
(2) Incorrect power supply wiring, loose screws →
   See "**6-3 How to connect the power supply wiring (page 7)**".
(3) Incorrect inter-unit wiring, loose screws →
   See "**6-4 Inter-unit wiring connection procedure (page 8)**".
(4) Incorrect refrigerant piping connections →
   See "**7. PRECAUTIONS ON REFRIGERANT PIPING (page 8)**".
(5) Piping sizes, use of insulation →
   See : "**7-2 Selecting piping material (page 8)**".
     "**7-6 Heat insulation of piping (page 9)**".
(6) Stop valve check →
   Make sure both the liquid-side and gas-side stop valves are open.
(7) Record of Amount of Refrigerant Added →
   Record it on "Recording the additionally charged refrigerant quantity" on the **"Cautions on Service" plate**.
(8) Measuring the insulation of the main power circuit →
   • Use a 500V mega-tester.
   • Do not use the mega-tester for weak currents other than 208/230V. (Inter-unit wiring)

⚠ **CAUTION**

To the pipe-layer
After completing installation, be sure to open the valve.
(Operating the unit with the valve shut will break the compressor.)

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10. TEST RUN

This unit is equipped with a crank case heater to ensure smooth startup. Be sure to turn the power on at least 6 hours before operation in order to have power running to the crank case heater.

⚠ WARNING

When leaving the unit with the power on, be sure to switch with another person doing the installation or close the front panel.

Precautions before turning the power on
- Using insulating sheets, tape electric parts as described in the **"Cautions on Service" plate** on the back of the front panel.
- All indoor units connected to the outdoor unit operate automatically.
  Complete work on the indoor units in order to ensure maximum safety.

10-1 Power On–Check Operation

- Make sure to perform the check operation after installation.
  (If the air conditioner is operated using the indoor remote controller without performing the check operation, the malfunction code "U3" is displayed in the indoor remote controller, and normal operation is disabled.)
- When making settings on the outdoor unit PC board (A2P) after turning the power on, do not touch anything other than the push-button switches and dip switches.
  (See the **"Cautions on Service" plate** for the locations of the push-button switches (BS1-5) and dip switches (D1-1, 2) on the PC board (A2P).)
- During the operation, monitor the outdoor unit operation status and check for any incorrect wiring.

1. Close the outdoor unit's front panel. **Turn the power** on for the outdoor unit and the BP unit.	Caution Be sure to turn the power on at least 6 hours before operation in order to have power running to the crank case heater.

2. • Open the outdoor unit's front panel.
   • Make sure the LED display on the outdoor unit's PC boards (A1P and A2P) are as shown in the following chart.

LED display (Default status before delivery)	A1P	A2P						
	SEVICE MONITOR	MODE	TEST/ HWL	IND	MASTER	SLAVE	L.N.O.P	DEMAND
	HAP	H1P	H2P	H3P	H4P	H5P	H6P	H7P
	☼	●	●	☼	●	●	●	●

LED display: ● OFF ☼ ON ☼ Blinking

⚠ To avoid the risk of electric shock, do not touch anything other than the push-button switches on the PC board (A2P) when making settings.

3. • When the customer requests quiet operation or demand operation, make these settings using the push-button switches (BS1-5) on the outdoor unit's PC board (A2P). • Operate the push-button switches through the opening after protecting it with an insulation cover. (See the **"Cautions on Service" plate** for details.)	⚠ Use caution to avoid electric shock while working, since the outdoor unit is on. • Only set the push-button switches (BS1-5) after making sure the microcomputer OK monitor is lit up. • See the **"Cautions on Service" plate** on the front panel of the outdoor unit for details on how to make the settings. (Do not forget to write the settings down on the **"Cautions on Service" plate**.) • The dip switch (DS1) does not need to be set, so do not touch it. Doing so may cause malfunction.
4. • Check that the liquid and gas-side stop valves are open, and if they are closed, open them.	Caution Do not leave any stop valve closed otherwise the compressor will fail.
5. Press the test run button (BS4) for at least 5 seconds and perform check operation. For details, see "check operation procedure" on the **"Cautions on Service" plate**.	• If you have to leave the outdoor unit during check operation, either switch with another worker or close the front panel. • The system operates for about 30 minutes (60 minutes at maximum) and automatically stops the check operation. • The system can start normal operation about 3 minutes **after the check operation if** the remote controller does not display any error code.
6. Close the outer panel of the outdoor unit after check operation is complete.	

<Precautions During Check Operation>
- **If operation is performed within 12 minutes of BP units and outdoor units being turned on, H2P will light up, and the compressor will not run.**
  Only perform operation after checking that the LED display is as shown in "**10-1 Power On–Check Operation**" 2. table.
- In order to ensure uniform refrigerant distribution, it may take up to around 10 minutes for the compressor to start up after the unit begins running. This is not a malfunction.
- Each indoor unit cannot be checked individually for problems. After this operation is complete, run the unit normally using the remote controller.
- The check run cannot be performed in recovery or other modes.
- If the outlet pipe thermistor (R2T), the intake pipe thermistor (R3T), and the pressure sensors (S1NPH and S1NPL) are removed before operation, the compressor might burn out, so avoid this under all circumstances.

10-2 Temperature control operation checklist

- After check operation is complete, checking the temperature control using normal operation.
  (Heating is not possible if the outdoor temperature is 75°F (24°C) or higher. See the included operation manual.)
  (1) Make sure the indoor and outdoor units are operating normally.
      (If liquid compression by the compressor or other abnormal noises can be heard, stop the unit immediately, heat the crank case for a sufficient amount of time, and try again.)
  (2) Run each indoor unit one at a time and make sure the corresponding outdoor unit is also running.
  (3) Check to see if cold (or hot) air is coming out of the indoor unit.
  (4) Press the fan direction and fan strength buttons on the indoor unit to see if they operate properly.

<Precautions during temperature control checks>
- For around 5 minutes after the compressor stops, the compressor will not run even if the "operate/stop" button on the remote controller is pressed.
- When the system operation is stopped by the remote controller, the outdoor units may continue operating for further 1 minutes at maximum.
- Malfunction code "U3" is displayed if check operation is not performed using the test run button the first time after installation. Perform the check operation in accordance with "**10-1 Power On–Check Operation**".

[Indoor unit displays malfunction sign]
(Check on a remote controller connected to the indoor unit.
For details. see the operation manual which comes with indoor unit.)

Malfunction code	Installation error	Remedial action
E3	The stop valve of an outdoor unit is left closed.	Open the gas-side stop valve and the liquid-side stop valve.
	Refrigerant overcharge.	Recalculate the required amount of refrigerant from the piping length and correct the refrigerant charge level by recovering any excessive refrigerant with a refrigerant recovery machine.
E4	The stop valve of an outdoor unit is left closed.	Open the gas-side stop valve and the liquid-side stop valve.
	Insufficient refrigerant.	Check if the additional refrigerant charge has been finished correctly.
		Recalculate the required amount of refrigerant from the piping length and add an adequate amount of refrigerant.
F3	Refrigerant overcharge.	Recalculate the required amount of refrigerant from the piping length and correct the refrigerant charge level by recovering any excessive refrigerant with a refrigerant recovery machine.
	The stop valve of an outdoor unit is left closed.	Open the gas-side stop valve and the liquid-side stop valve.
	Insufficient refrigerant.	Check if the additional refrigerant charge has been finished correctly.
		Recalculate the required amount of refrigerant from the piping length and add an adequate amount of refrigerant.

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3

U2	Insufficient supply voltage	Check to see if the supply voltage is supplied properly.
U3	If a check operation has not been performed.	Perform a check operation.
U4	No power is supplied to an outdoor unit.	Turn the power on for the outdoor unit.
UA	If no dedicated indoor unit is being used.	Check the indoor unit. If it is not a dedicated unit, replace the indoor unit.
UF	The stop valve of an outdoor unit is left closed.	Open the gas-side stop valve and the liquid-side stop valve.
	If the right indoor unit piping and wiring are not properly connected to the outdoor unit.	Make sure that the right indoor unit piping and wiring are properly connected to the outdoor unit.
UH	If the inter-unit wiring has not be connected or it has shorted.	Make sure the inter-unit wiring is correctly attached to terminals (X2M) F1/F2 (To BP unit) on the outdoor unit circuit board.

- When using a central controller, see the installation manual or service manual which came with the central controller.

⚠ **CAUTION** ────────────────

To the pipe-layer, To the electrician
After the test run, when handing the unit over to the customer, make sure the front panel on the unit and all screws are attached.

11. CAUTION FOR REFRIGERANT LEAKS

(Points to note in connection with refrigerant leaks)

Introduction

The installer and system specialist shall secure safety against leakage according to local regulations or standards. The following standards may be applicable if local regulations are not available.
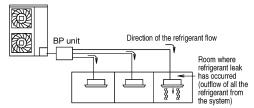
This system uses R410A as refrigerant. R410A itself is an entirely safe non-toxic, non-combustible refrigerant. Nevertheless care must be taken to ensure that air conditioning facilities are installed in a room which is sufficiently large. This assures that the maximum concentration level of refrigerant gas is not exceeded, in the unlikely event of major leak in the system and this in accordance to the local applicable regulations and standards.

Maximum concentration level

The maximum charge of refrigerant and the calculation of the maximum concentration of refrigerant is directly related to the humanly occupied space in to which it could leak.

The unit of measurement of the concentration is $lb./ft^3$ (kg/m^3) (the weight in lb. (kg) of the refrigerant gas in 1 ft^3 (0.028 m^3) volume of the occupied space).

Compliance to the local applicable regulations and standards for the maximum allowable concentration level is required.

Pay a special attention to the place, such as a basement, etc. where refrigerant can stay, since refrigerant is heavier than air.

Procedure for checking maximum concentration

Check the maximum concentration level in accordance with steps 1 to 4 below and take whatever action is necessary to comply.

1. Calculate the amount of refrigerant (lb. / kg) charged to each system separately.

amount of refrigerant in a single unit system (amount of refrigerant with which the system is charged before leaving the factory) + additional charging amount (amount of refrigerant added locally in accordance with the length or diameter of the refrigerant piping) = total amount of refrigerant (lb. / kg) in the system
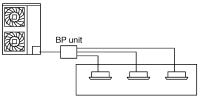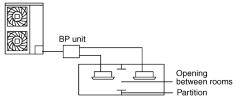
Note
- Where a single refrigerant facility is divided into 2 entirely independent refrigerant systems then use the amount of refrigerant with which each separate system is charged.

2. Calculate the smallest room volume (ft^3/m^3)
Incase like the following, calculate the volume of (A), (B) as a single room or as the smallest room.
  A. Where there are no smaller room divisions

  B. Where there is a room division but there is an opening between the rooms sufficiently large to permit a free flow of air back and forth.

(Where there is an opening without a door or where there are openings above and below the door which are each equivalent in size to 0.15% or more of the floor area.)

3. Calculating the refrigerant density using the results of the calculations in steps 1 and 2 above.

$$\frac{\text{total volume of refrigerant in the refrigerant system}}{\text{size (ft^3 / m^3) of smallest room in which there is an indoor unit installed}} \leq \text{maximum concentration level ($lb./ft^3$ / kg/m^3)}$$

If the result of the above calculation exceeds the maximum concentration level then make similar calculations for the second then third smallest room and so until the result falls short of the maximum concentration.

4. Dealing with the situations where the result exceeds the maximum concentration level.
Where the installation of a facility results in a concentration in excess of the maximum concentration level then it will be necessary to revise the system.
Please consult your Daikin supplier.
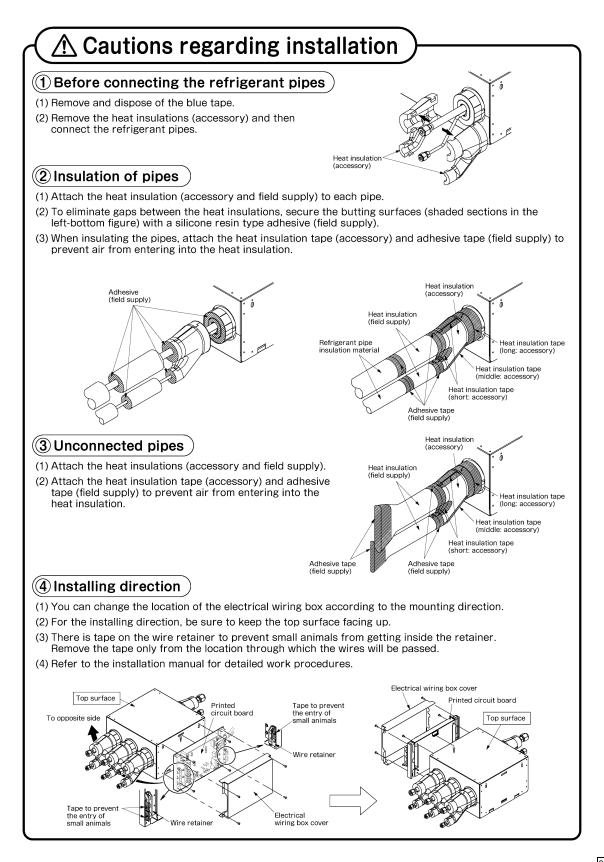
14

3P329623-1

2. BPMKS048A2U, BPMKS049A3U

⚠ Cautions regarding installation

① Before connecting the refrigerant pipes

(1) Remove and dispose of the blue tape.

(2) Remove the heat insulations (accessory) and then connect the refrigerant pipes.

Heat insulation
(accessory)

② Insulation of pipes

(1) Attach the heat insulation (accessory and field supply) to each pipe.

(2) To eliminate gaps between the heat insulations, secure the butting surfaces (shaded sections in the left-bottom figure) with a silicone resin type adhesive (field supply).

(3) When insulating the pipes, attach the heat insulation tape (accessory) and adhesive tape (field supply) to prevent air from entering into the heat insulation.

Adhesive
(field supply)

Heat insulation
(accessory)

Heat insulation
(field supply)

Refrigerant pipe
insulation material

Heat insulation tape
(long: accessory)

Heat insulation tape
(middle: accessory)

Heat insulation tape
(short: accessory)

Adhesive tape
(field supply)

③ Unconnected pipes

(1) Attach the heat insulations (accessory and field supply).

(2) Attach the heat insulation tape (accessory) and adhesive tape (field supply) to prevent air from entering into the heat insulation.

Heat insulation
(accessory)

Heat insulation
(field supply)

Heat insulation tape
(long: accessory)

Heat insulation tape
(middle: accessory)

Heat insulation tape
(short: accessory)

Adhesive tape
(field supply)

Adhesive tape
(field supply)

④ Installing direction

(1) You can change the location of the electrical wiring box according to the mounting direction.

(2) For the installing direction, be sure to keep the top surface facing up.

(3) There is tape on the wire retainer to prevent small animals from getting inside the retainer. Remove the tape only from the location through which the wires will be passed.

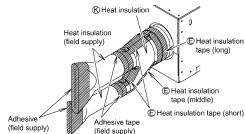(4) Refer to the installation manual for detailed work procedures.

Top surface

To opposite side

Printed
circuit board

Tape to prevent
the entry of
small animals

Wire retainer

Tape to prevent
the entry of
small animals

Wire retainer

Electrical
wiring box cover

Electrical wiring box cover

Printed circuit board

Top surface

3P333176-1

Safety Precautions

• Read these Safety Precautions carefully to ensure correct installation.
• This manual classifies the precautions into DANGER, WARNING and CAUTION.
  Be sure to follow all the precautions below: they are all important for ensuring safety.

⚠ **DANGER**............**Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

⚠ **WARNING**..........**Failure to follow any of WARNING is likely to result in such grave consequences as death or serious injury.**

⚠ **CAUTION**...........**Failure to follow any of CAUTION may in some cases result in grave consequences.**

• The following safety symbol is used throughout this manual:

🚫 Never attempt.

• After completing installation, test the unit to check for installation errors. Give the user adequate instructions concerning the use and cleaning of the unit according to the Operation Manual.

⚠ DANGER
• Refrigerant gas is heavier than air and replaces oxygen. A massive leak could lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
• If the refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce a toxic gas if it comes in contact with fire such as from a fan heater, stove or cooking device. Exposure to this gas could cause severe injury or death.
• After completing the installation work, check that the refrigerant gas does not leak. Refrigerant gas may produce a toxic gas if it comes in contact with fire such as from a fan heater, stove or cooking device. Exposure to this gas could cause severe injury or death.
• Do not ground units to water pipes, telephone wires or lightning rods because incomplete grounding could cause a severe shock hazard resulting in severe injury or death, and to gas pipes because a gas leak could result in an explosion which could lead to severe injury or death.
• Safely dispose of the packing materials. Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries. Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death by suffocation.
• Do not install unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.
• Do not ground units to telephone wires or lightning rods because lightning strikes could cause a severe shock hazard resulting in severe injury or death, and to gas pipes because a gas leak could result in an explosion which could lead to severe injury or death.

⚠ WARNING
• Installation shall be left to the authorized dealer or another trained professional. Improper installation may cause water leakage, electrical shock, fire, or equipment damage.
• Install the air conditioner according to the instructions given in this manual. Incomplete installation may cause water leakage, electrical shock, fire or equipment damage.
• Be sure to use the supplied or exact specified installation parts. Use of other parts may cause the unit to come to fall, water leakage, electrical shock, fire or equipment damage.
• Install the air conditioner on a solid base that is level and can support the weight of the unit. An inadequate base or incomplete installation may cause injury or equipment damage in the event the unit falls off the base or comes loose.
• Electrical work shall be carried out in accordance with the installation manual and the national, state and local electrical wiring codes. Insufficient capacity or incomplete electrical work may cause electrical shock, fire or equipment damage.
• Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance. Follow all appropriate electrical codes.
• For wiring, use a wire or cable long enough to cover the entire distance with no splices if possible. Do not use an extension cord. Do not put other loads on the power supply. Use only a separate dedicated power circuit. (Failure to do so may cause abnormal heat, electric shock, fire or equipment damage.)
• Use the specified types of wires for electrical connections from the BP units to the indoor and outdoor units. Follow all state and local electrical codes. Firmly clamp the inter-unit wire so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating, fire or equipment damage.

1

Safety Precautions

⚠ WARNING
• After connecting all wires be sure to shape the cables so that they do not put undue stress on the electrical covers, panels or terminals. Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, fire or equipment damage.
• When installing or relocating the system, be sure to keep the refrigerant circuit free from all substances other than the specified refrigerant (R410A), such as air. (Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise which may result in rupture, resulting in injury.)
• During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormally high pressure which could lead to equipment damage or and personal injury.
• During installation, attach the refrigerant piping securely before running the compressor. If the refrigerant pipes are not attached and the stop valve is open during installation, air will be sucked in when the compressor is run, causing abnormally high pressure which could lead to equipment damage and personal injury.
• Be sure to install a ground fault circuit interrupter. Failure to install a ground fault circuit interrupter may result in electrically shocks, or fire personal injury.

⚠ CAUTION	
• Do not install the air conditioner where gas leakage would be exposed to open flames. If the gas leaks and builds up around the unit, it may catch fire.	🚫
• Establish drain piping according to the instructions of this manual. Inadequate piping may cause water damage.	
• Tighten the flare nut according to the specified torque. A torque wrench should be used. If the flare nut is tightened too much, the flare nut may crack over time and cause refrigerant leakage.	
• Do not touch the heat exchanger fins. Improper handling may result in injury.	🚫
• Be very careful about product transportation. Some products use PP bands for packaging. Do not use any PP bands for a means of transportation. It is dangerous.	
• Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.	
• The temperature of refrigerant circuit will be high, please keep the inter-unit wire away from copper pipes that are not thermally insulated.	
• Electrical work must be performed in accordance with the NEC/CEC by authorized personnel only.	

2

System Layout

For installation of the indoor and outdoor units, follow the instructions in the Installation manual for each unit.

BP unit model
For 3 rooms : BPMKS049A3U
For 2 rooms : BPMKS048A2U

Choose the BP unit type (2 rooms or 3 rooms) according to the installation pattern.

Indoor unit side piping

BP Unit

Outdoor unit side piping

Ground fault circuit interrupter

Power

Branch switch overcurrent breaker (fuse)

BP Unit

Power

REFNET joint KHRP26M22T (Can be purchased separately.)

OUTDOOR UNIT

BP Unit

Power

INDOOR UNIT

The number of indoor units is as shown in the table below.

Outdoor unit	Total capacity of Indoor units	Quantity of Indoor units	
		Max.	Min.
RMXS48LVJU	24000-62000 Btu/h	8	2

Note that the total capacity of indoor units per BP unit is as shown in the table below.

BP unit	Maximum capacity
BPMKS048A2U	48000 Btu/h
BPMKS049A3U	62000 Btu/h

[Example]
For "FTXS24LVJU", the capacity of this indoor unit is 24000.

Power

A: Ground fault circuit interrupter

B: Branch switch overcurrent breaker (fuse)

Power

———— Power supply line (3 wires) [60Hz 208/230V]
*Outdoor unit and all BP units require their own power supply.

············· Transmission line (2 wires)

– – – – – – Power supply and transmission line (4 wires)

════ Piping

⬤ Brazing connection

▢ Flare connection

3

Accessories

Ⓐ Installation Manual	1pc.	Ⓕ Conduit mounting plate (A)	1pc.
Ⓑ Hanger metal	4pcs.	Ⓖ Conduit mounting plate (B)	1pc.
Ⓒ Screws: M4 (length: 5/16 inch)	16pcs.	Ⓗ Conduit mounting plate (cover)	2pcs.
Ⓓ Reducer assembly	1set	Ⓙ Binding band	6pcs.
Ⓔ Heat insulation tape 8pcs. (short) 4pcs. (middle) 4pcs. (long) Peel off each heat insulation tape from the release paper before use.	Total 16pcs.	Ⓚ Heat insulation (2pcs. is 1set)	BPMKS048A2U (for 2 rooms) : 3sets BPMKS049A3U (for 3 rooms) : 4sets

Items to be prepared in the field
- Intre-unit wires between BP unit and indoor unit (AWG16-14: 4 wires)
- Intre-unit wires for power supply (AWG16-14: 3 wires)
- Transmission wires (AWG18-16: sheathed two-core cables)
- Installation parts (hanging bolts: 4 × M8 or M10; nuts: 8; flat washers: 8)
- Screws for wall-mounting: 6 × M5
- Heat insulation (joint)
  Thermal conductivity: **0.024 - 0.030Btu/fth°F (0.041 - 0.052W/mK) or more**
  Thickness: **1/2 inch (13mm) or more**
  Heat resistance: 212°F (100°C) or higher (only heat pump system)

Precautions for Selecting the Location
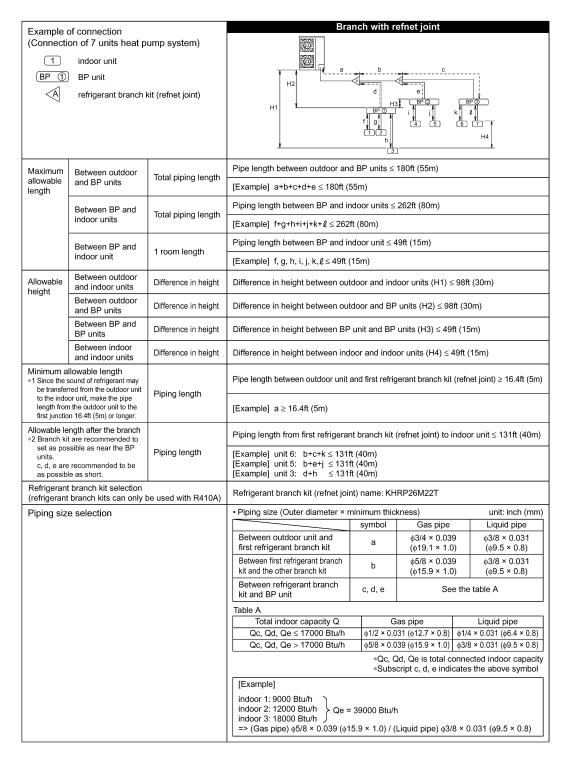
The BP unit is for indoor use.
Install in a location such as above a ceiling or behind a wall in accordance with the following conditions:
- That the unit is fully supported, and is in a location with little or no vibration.
- That the refrigerant pipes for the indoor and outdoor units can be repaired with ease, and that the units are placed well within the distance from each other allowed by the pipe length.
- That there is nothing nearby that produces heat or steam (gas).
- When installing, that there is enough room for servicing the unit.
- Do not install in location that is hot or humid for long periods of time.
  A location where the dry-bulb (DB) temperature around the BP unit reaches 140°F (60°C) or higher.
- A well-ventilated area.
- Do not install near bedrooms. The sound of refrigerant flowing through the piping may sometimes be audible.
  For restrictions on installation, refer to P6-7. "Installation".

4

Installation

			Branch with refnet joint
Example of connection (Connection of 7 units heat pump system)			

Maximum allowable length	Between outdoor and BP units	Total piping length	Pipe length between outdoor and BP units ≤ 180ft (55m)
			[Example] a+b+c+d+e ≤ 180ft (55m)
	Between BP and indoor units	Total piping length	Piping length between BP and indoor units ≤ 262ft (80m)
			[Example] f+g+h+i+j+k+ℓ ≤ 262ft (80m)
	Between BP and indoor unit	1 room length	Piping length between BP and indoor unit ≤ 49ft (15m)
			[Example] f, g, h, i, j, k, ℓ ≤ 49ft (15m)
Allowable height	Between outdoor and indoor units	Difference in height	Difference in height between outdoor and indoor units (H1) ≤ 98ft (30m)
	Between outdoor and BP units	Difference in height	Difference in height between outdoor and BP units (H2) ≤ 98ft (30m)
	Between BP and BP units	Difference in height	Difference in height between BP unit and BP units (H3) ≤ 49ft (15m)
	Between indoor and indoor units	Difference in height	Difference in height between indoor and indoor units (H4) ≤ 49ft (15m)
Minimum allowable length *1 Since the sound of refrigerant may be transferred from the outdoor unit to the indoor unit, make the pipe length from the outdoor unit to the first junction 16.4ft (5m) or longer.		Piping length	Pipe length between outdoor unit and first refrigerant branch kit (refnet joint) ≥ 16.4ft (5m)
			[Example] a ≥ 16.4ft (5m)
Allowable length after the branch *2 Branch kit are recommended to set as possible as near the BP units. c, d, e are recommended to be as possible as short.		Piping length	Piping length from first refrigerant branch kit (refnet joint) to indoor unit ≤ 131ft (40m)
			[Example] unit 6: b+c+k ≤ 131ft (40m) [Example] unit 5: b+e+j ≤ 131ft (40m) [Example] unit 3: d+h ≤ 131ft (40m)
Refrigerant branch kit selection (refrigerant branch kits can only be used with R410A)			Refrigerant branch kit (refnet joint) name: KHRP26M22T
Piping size selection			• Piping size (Outer diameter × minimum thickness) unit: inch (mm)

• Piping size (Outer diameter × minimum thickness)   unit: inch (mm)

	symbol	Gas pipe	Liquid pipe
Between outdoor unit and first refrigerant branch kit	a	φ3/4 × 0.039 (φ19.1 × 1.0)	φ3/8 × 0.031 (φ9.5 × 0.8)
Between first refrigerant branch kit and the other branch kit	b	φ5/8 × 0.039 (φ15.9 × 1.0)	φ3/8 × 0.031 (φ9.5 × 0.8)
Between refrigerant branch kit and BP unit	c, d, e	See the table A	

Table A

Total indoor capacity Q	Gas pipe	Liquid pipe
Qc, Qd, Qe ≤ 17000 Btu/h	φ1/2 × 0.031 (φ12.7 × 0.8)	φ1/4 × 0.031 (φ6.4 × 0.8)
Qc, Qd, Qe > 17000 Btu/h	φ5/8 × 0.039 (φ15.9 × 1.0)	φ3/8 × 0.031 (φ9.5 × 0.8)

∗Qc, Qd, Qe is total connected indoor capacity
∗Subscript c, d, e indicates the above symbol

[Example]

indoor 1: 9000 Btu/h
indoor 2: 12000 Btu/h   } Qe = 39000 Btu/h
indoor 3: 18000 Btu/h
=> (Gas pipe) φ5/8 × 0.039 (φ15.9 × 1.0) / (Liquid pipe) φ3/8 × 0.031 (φ9.5 × 0.8)

5

Installation

- This unit may be installed suspended from the ceiling or mounted on the wall.
- **Be sure to install the unit with the top surface facing upward as shown in the diagram.**
- Be sure to leave a **26 inch (650mm) square** opening for maintenance and inspection as shown in the diagram below, for both ceiling-suspended installation and wall-mounted installation.
- This unit **"does not require drain treatment"**.
- The inclination of top surface must be within ±5 degrees forward or back or to the sides.

3

◆ **For 2 rooms**
(product dimensions and attachment bolt pitch)

Wall-mounted

1 (25)
4-7/16 (113)

Indoor unit side piping
Manufacturer's label
4-Suspension bolt (M8 or M10)
1 (25)
(12 (304))
10 (254)
12-11/16 (322)
Suspension bolt pitch
Suspension bolt pitch

(12 (304))   1-3/4 (45)   Wire retainer
2-1/4 (57)   3-3/4 (95)
2-7/8 (73.5)
7/8 (23)
Room A   Room B

(26-11/16 (678))
Terminal block (for room A)   Terminal block (for room B)
2-φ5/8 (φ15.9) flare connection
7-9/16 (192)   (11-9/16 (294))   7-9/16 (192)
(7-1/16 (180))
2-φ1/4 (φ6.4) flare connection
Terminal block (for power supply)
Terminal block (for room B)
Ground (M4)
6-9/16 (167)   11-9/16 (294)   6-9/16 (167)
(24-11/16 (628))

Wire retainer
Top surface
Electrical wiring box
Terminal block (for transmission)
φ5/8 (φ15.9) flare connection
φ3/8 (φ9.5) flare connection
Wire retainer
2-7/8 (73.5)
7-3/4 (197)   4-1/4 (107)   7/8 (23)

Indoor unit side   Outdoor unit side

26×26 (650×650) inspection port
Provide an inspection port for servicing and maintenance.

(servicing spaces) 12 (300) or more

Installation restrictions
(Installation and servicing spaces)

(servicing spaces) 15-3/8 (390) or more
(servicing spaces) 15-3/8 (390) or more

Minimum bend radius	
Pipe size	Minimum bend radius
φ1/4 (φ6.4)	1-3/16 (30) or more
φ3/8 (φ9.5)	
φ1/2 (φ12.7)	1-9/16 (40) or more
φ5/8 (φ15.9)	1-15/16 (50) or more

unit: inch (mm)

6

◆ **For 3 rooms**
(product dimensions and attachment bolt pitch)

Indoor unit side piping
Manufacturer's label
4-Suspension bolt (M8 or M10)
1 (25)
(12 (304))
10 (254)
Suspension bolt pitch
12-11/16 (322)
Suspension bolt pitch

Wall-mounted
1 (25)
4-7/16 (113)

1-3/4 (45)
Wire retainer
(12 (304))
2-1/4 (57) 3-3/4 (95) 3-3/4 (95) 2-1/4 (57)
2-7/8 (73.5)
7/8 (23)
Room A Room B Room C
Indoor unit side

(26-11/16 (678))
Terminal block (for room A)
Terminal block (for room B)
Terminal block (for room C)
3-φ5/8 (φ15.9) flare connection
7-9/16 (192)
(11-9/16 (294))
7-9/16 (192)
Terminal block (for transmission)
(7-1/16 (180))
3-φ1/4 (φ6.4) flare connection
Terminal block (for power supply)
Ground (M4)
φ5/8 (φ15.9) flare connection
φ3/8 (φ9.5) flare connection
6-9/16 (167)
11-9/16 (294)
6-9/16 (167)
(24-11/16 (628))

Wire retainer
Top surface
Electrical wiring box
Wire retainer
2-7/8 (73.5)
7/8 (23)
7-3/4 (197)
4-1/4 (107)
Outdoor unit side

(servicing spaces) 12 (300) or more
26×26 (650×650) inspection port
Provide an inspection port for servicing and maintenance.

Installation restrictions
(Installation and servicing spaces)

(servicing spaces) 18-1/8 (460) or more
(servicing spaces) 15-3/8 (390) or more

Minimum bend radius

Pipe size	Minimum bend radius
φ1/4 (φ6.4)	1-3/16 (30) or more
φ3/8 (φ9.5)	
φ1/2 (φ12.7)	1-9/16 (40) or more
φ5/8 (φ15.9)	1-15/16 (50) or more

unit: inch (mm)

7

Installation of the Unit

1. Replacing the printed circuit board

- This unit has 2 different installation types:
  (1) ceiling-suspended type and (2) wall-mounted type.
- Choose the proper installation pattern according to the location of installation.
- The installation location for the printed circuit board can be changed.

If the installation location of the printed circuit board needs to be changed because of the installation conditions, perform the following:

To opposite side

Printed circuit board

Indoor unit side pipe

Printed circuit board

As-shipped condition   After-location is changed
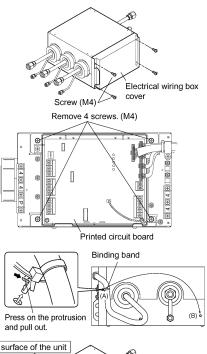
⚠ CAUTION
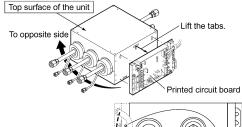
- Before doing any wiring on site, replace the printed circuit board.
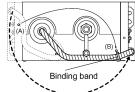
Procedure for changing the installation location of the printed circuit board

1) Remove the screws and pull off the electrical wiring box cover.

Electrical wiring box cover

Screw (M4)

2) Remove 4 screws shown in the figure, remove the printed circuit board.

Remove 4 screws. (M4)

Printed circuit board

3) Remove the binding band (A) which holds the wires.

Binding band

Press on the protrusion and pull out.

(A)

(B)

4) Remove the printed circuit board, and reattach as shown in the figure.

Top surface of the unit

To opposite side

Lift the tabs.

Printed circuit board

5) Reattach the binding band to position (B).

(A)

(B)

Binding band
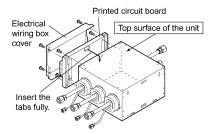
8
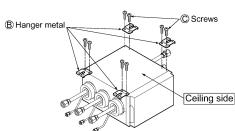
6) Attach the printed circuit board and electrical wiring box cover to the other side and secure with the screws.
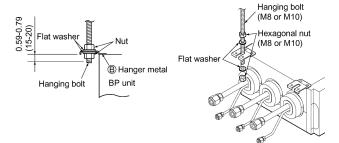
2. Ceiling-suspended type

Procedure:

1) Fix the furnished Ⓑ hanger metal with two Ⓒ screws. (4 locations in total)
2) Using an insert-hole-in-anchor, hang the hanging bolt.
3) Install a hexagon nut and a flat washer (field supply) to the hanging bolt as shown in the figure in the below, and lift the unit to hang on the hanger metal.
4) After checking with a level that the unit is level, tighten the hexagon nut.
   * The tilt of the unit should be within ±5° in front/ back and left/right.
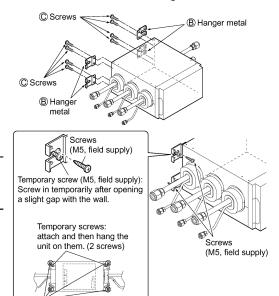
3. Wall-mounted type

Procedure:

1) Fix the furnished Ⓑ hanger metal with two Ⓒ screws. (4 locations in total)
2) Create a gap with the wall and screw in the temporary screws (M5, field supply), and hang the BP unit.
3) After checking with a level that the unit is level, fix the unit with screws (M5, field supply).
   * The tilt of the unit should be within ±5° in front/ back and left/right.

⚠ **CAUTION**

- Be sure to install the unit with the top surface up.
- **Do not install near bedrooms. The sound of refrigerant flowing through the piping may sometimes be audible.**

Connection of Refrigerant Piping

<Make sure to perform heat insulation work for both gas piping and liquid piping. If not insulated, water leakage may occur. For gas piping, use a heat insulation material with a heat-resistant temperature of 212°F (100°C) or more. Condensation may be formed on the surface of the heat insulation material.>
<Before installation, make sure that the refrigerant type is R410A. (Wrong refrigerant types prevent normal operation.)>

3
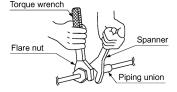
• The refrigerant is filled in the outdoor unit.
• When connecting a pipe to the unit body or removing it, be sure to use a spanner and torque wrench. (See Fig. [1].)
• For the work dimension and the tightening torque of the flare section, see <Table-1>.
• When connecting a flare nut, apply the refrigerant oil used for the compressor of the outdoor unit (or similar product) to the flare section (only the inner surface), and screw the nut three or four times initially by hand. (See Fig. [2].)
• If the connecting piping is bent above the ceiling, it should be bent as loosely as possible.
  If it is bent sharply, the heat insulation material may be compressed at the bent section, causing condensation.
• Be sure to use the flare nuts included with the unit body.

⚠ **CAUTION**

• Do not mix air or other gases than the specified refrigerant into the refrigeration cycle.
• If the refrigerant gas has leaked during the work, provide ventilation.
• Excessive tightening can cause a fracture of the flare nut and leakage of the refrigerant.
• Be sure to perform heat insulation for the field piping including the pipe connection in the unit.
  Exposure of piping can cause condensation or burn injury.
• At the time of flare connection, apply the refrigerant oil used for the compressor of the outdoor unit (or similar product) to the flare section. (See Fig. [2].)
• To prevent dirt, water content, and dust from entering the pipes, provide protection for the pipes using pinches or tape.

<Table-1>

Pipe size	Tightening torque	Work dimension for flare section: A	Flare shape
φ1/4 inch (φ6.4mm)	10.4-12.7ft·lbf (14.2-17.2N·m)	0.343-0.358 inch (8.7-9.1mm)	
φ3/8 inch (φ9.5mm)	24.1-29.4ft·lbf (32.7-39.9N·m)	0.504-0.519 inch (12.8-13.2mm)	R0.016-0.031 inch (R0.4-0.8mm)
φ1/2 inch (φ12.7mm)	36.5-44.5ft·lbf (49.5-60.3N·m)	0.638-0.653 inch (16.2-16.6mm)	90°±2° 45°±2°
φ5/8 inch (φ15.9mm)	45.6-55.6ft·lbf (61.8-75.4N·m)	0.760-0.775 inch (19.3-19.7mm)	

Fig. [1]

Torque wrench
Spanner
Flare nut
Piping union

Fig. [2]

Refrigerant oil used for the compressor of the outdoor unit (or similar product)

• Alphabets (A, B, and C) corresponding to the room to be connected with each indoor unit are inscribed on the main body of the BP unit. (Figure on the right)
  A: Refrigerant pipe connection port for "Room A"
  B: Refrigerant pipe connection port for "Room B"
  C: Refrigerant pipe connection port for "Room C"

⚠ **CAUTION**

• Be sure to put a mark on every refrigerant piping (such as liquid pipe and gas pipe) so that to which room each indoor unit belongs can be known clearly. (Example: A, B, C)

Ⓑ Hanger metal
Room A (Gas pipe)   Room B (Gas pipe)   Room C (Gas pipe)
Room A (Liquid pipe)   Room B (Liquid pipe)   Room C (Liquid pipe)
<Indoor unit side (for 3 rooms)>

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How to use reducer

No.1	No.2	No.3	No.4	No.5	No.6
ϕ5/8 (ϕ15.9)	ϕ3/8 (ϕ9.5)	ϕ5/8 (ϕ15.9)	ϕ3/8 (ϕ9.5)	ϕ5/8 (ϕ15.9)	ϕ5/8 (ϕ15.9)
$\rightarrow \phi$1/2 (ϕ12.7)	$\rightarrow \phi$1/4 (ϕ6.4)	$\rightarrow \phi$1/2 (ϕ12.7)	$\rightarrow \phi$1/4 (ϕ6.4)	$\rightarrow \phi$3/8 (ϕ9.5)	$\rightarrow \phi$3/8 (ϕ9.5)

Gasket (1)   Gasket (2)   Reduce and gasket

Use the reducers supplied with the unit as described below.

1) Connecting a pipe of ϕ1/2 (ϕ12.7) to a gas pipe connection port for ϕ5/8 (ϕ15.9):

No. 1
Be sure to attach the gasket.
Connection port of outdoor unit
No. 3
Inter-unit pipe (ϕ1/2 (ϕ12.7))
Flare nut (for ϕ5/8 (ϕ15.9))

2) Connecting a pipe of ϕ3/8 (ϕ9.5) to a gas pipe connection port for ϕ5/8 (ϕ15.9):

No. 6   No. 5
Be sure to attach the gasket.
Inter-unit pipe (ϕ3/8 (ϕ9.5))
Flare nut (for ϕ3/8 (ϕ9.5))

3) Connecting a pipe of ϕ1/4 (ϕ6.4) to a liquid pipe connection port for ϕ3/8 (ϕ9.5):

No. 2   No. 4
Be sure to attach the gasket.
Inter-unit pipe (ϕ1/4 (ϕ6.4))
Flare nut (for ϕ3/8 (ϕ9.5))

unit: inch (mm)

• When using the reducer packing shown above, be careful not to overtighten the nut. (See <Table-1>.)
• Apply refrigeration oil on the connection port where the flare nut is fitted.

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Connection of Refrigerant Piping

Gas leakage check
• Perform gas leakage check after the completion of piping work.

Check the parts enclosed by ⌐⌐ for leakage.
• Check carefully by applying soapy water.
• Wipe soapy water thoroughly after checking.

• After the leakage check, attach heat insulation materials and wind the tape around the heat insulation materials so that no gap is made between them.
For the inter-unit piping, use the heat insulation materials in conformity with the following specifications.
Thermal conductivity: **0.024-0.030Btu/fth°F**
(0.041-0.052W/mK)
Thickness: 1/2 inch (13mm) or more
Heat resistance: 212°F (100°C) or more
• Secure the local inter-unit piping near the BP unit using clasps (field supply) so that the BP unit does not directly receive the weight of the inter-unit piping.

1. Insulation of pipes

1) Attach the Ⓚ heat insulation and the heat insulation (field supply) to each pipe.
2) To eliminate a gap between the heat insulation, secure the butting surfaces (shaded sections on the right figure) with a silicon resin type adhesive (field supply).
3) When insulating the pipes, attach the Ⓔ heat insulation tape and adhesive tape (field supply) to prevent air from entering into the heat insulation.

2. Unconnected pipes

1) Attach the heat insulation (field supply) and the Ⓚ heat insulation.
2) Attach the Ⓔ heat insulation tape and adhesive tape (field supply) to prevent air from entering into the heat insulation.

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Connecting the Wiring

Connection example of total system wiring

Wiring method for the power line.

• Be sure to prepare a power supply for each BP unit.

⚠ **CAUTION**

• Be sure to connect the power line to L_1 and L_2.

Work procedure

1) Remove the screws and pull off the electrical wiring box cover.

2) Tape is attached to the wire retainer. The purpose of the tape is to prevent small animals from entering the unit. Only remove the tape from places where wiring it to be passed through.

⚠ **CAUTION**

• If the tape is not replaced for places where wiring will not pass through, small animals may enter, causing product malfunction.

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Connecting the Wiring

3) Install the conduit (field supply) and lock nut
(field supply) to ⒡ conduit mounting plate (A)
and ⒢ conduit mounting plate (B).

⒡ Conduit
mounting
plate (A)

Conduit
(field supply)

Lock nut
(field supply)

Lock nut
(field supply)

Conduit
(field supply)

⒢ Conduit
mounting
plate (B)

3

<When connecting indoor units for 2 or 3 rooms>

1) Open the knockout holes with a drill or the like without deforming ⒡ conduit
mounting plate (A) and ⒢ conduit mounting plate (B).
2) After knocking out the holes, remove burrs in the knockout holes.

4) Fix the conduits with ⒞ screws.

⒞ Screws

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5) Follow the instructions on the wiring nameplate to connect the connection wires of indoor/outdoor units to terminal block numbers (1, 2, 3, F$_1$ and F$_2$). Always fix each ground wire separately with a ground screw. (See the figure below.)

Example <For 3 rooms>

Ⓙ Binding band
Secure the wires with Ⓙ binding band to prevent them from coming out if pulled on from the outside.

Ⓙ Binding band
Secure the wires with Ⓙ binding band to prevent them from coming out if pulled on from the outside.

Wire retainer

Room A

Room B

Room C

Transmission wire (To other BP unit: F$_1$, F$_2$)

Transmission wire (To other BP unit: F$_1$, F$_2$ or to outdoor unit: F$_1$, F$_2$)
(Sheathed two-core cables of AWG 18-16)

Wire retainer

Inter-unit wire for indoor units. (AWG 16-14)

Ground

* Fix each wire separately.

When wire length exceed 33ft (10m), use AWG 14 wires.

Power supply wire (AWG 16-14)

⚠ **CAUTION**

Mistakenly connecting the power supply to this terminal block could cause control operating malfunctions.

Safety breaker 15A

Ground fault circuit interrupter

Power supply 60Hz 208/230V

⚠ **WARNING**

• Do not use tapped wires,stranded wires, extensioncords, or starbust connections, as they may cause overheating, electrical shock, or fire.

⚠ **CAUTION**

• Pass all inter-unit wires through wire retainers. In addition, secure the wires with Ⓙ binding band to prevent them from coming out if pulled on from the outside.
• When connecting the inter-unit wires to the terminal block using a single core wire, be sure to perform curling.
Problems with the work may cause heat and fires.

How to ground the shield for transmission wires

• Fold back the grounding section of the shield for the transmission wire and secure it with the copper foil section of the wire retainer.

Wire retainer

Ⓙ Binding band

⭕ **Good**   ✖ **Wrong**

Ⓙ Binding band
Screw
Wire retainer

Shield grounding   Transmission wire

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Connecting the Wiring

6) Return the electrical wiring box cover to its original position, and fix it with the screws.

Screw (M4)

Install the electrical wiring box cover.

7) Fix the ⊕ conduit mounting plate (cover) with the screw.

ⒸScrew (M4)

⊕ Conduit mounting plate (cover)

Operating Test

Follow the "Operating test" as described in the installation manual of the outdoor unit.
If the BP unit does not operate normally during the test run, the error can be checked on the remote controller display for the indoor unit.

Error codes displayed on the remote controller

Malfunction code	Nonconformity during installation	Remedial action
A9	Electric expansion valve connector not connected (BP unit)	Please contact your dealer.
E2	Printed circuit board faulty (BP unit)	
J0	Liquid and gas thermistor faulty (BP unit)	
U4	Transmission error between BP unit and indoor unit	Connect correctly the interconnections between BP unit and indoor unit.
U9	Transmission error between outdoor unit and other BP unit	Connect correctly the interconnections between outdoor and other BP unit.
UJ	Transmission error between outdoor unit and this BP unit connecting with the indoor unit of error code displayed	Connect correctly the interconnections between outdoor and this BP unit connecting with the indoor unit of error code displayed.

The BP Unit

Simple diagnosis can be done using the LEDs on the BP unit's circuit board.
For details, see the label on the inside of the BP unit's electrical wiring box cover.

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3P329626-1

3. CTXG Series

3.1 CTXG09/12/18QVJUW(S)

Contents

Safety Considerations

Read these **Safety Considerations for Installation** carefully before installing an air conditioner or heat pump. After completing the installation, make sure that the unit operates properly during the startup operation.
Instruct the user on how to operate and maintain the unit. Inform users that they should store this installation manual with the operation manual for future reference.
Always use a licensed installer or contractor to install this product. Improper installation can result in water or refrigerant leakage, electric shock, fire, or explosion.
Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

⚠ **DANGER** ···············Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** ············Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ············Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** ···················Indicates situations that may result in equipment or property-damage accidents only.

⚠ **DANGER** ───────────────────────

- Refrigerant gas is heavier than air and replaces oxygen. A massive leak can lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
- Do not ground units to water pipes, gas pipes, telephone wires, or lightning rods as incomplete grounding can cause a severe shock hazard resulting in severe injury or death. Additionally, grounding to gas pipes could cause a gas leak and potential explosion causing severe injury or death.

- If refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce toxic gas if it comes into contact with fire. Exposure to this gas could cause severe injury or death.
- After completing the installation work, check that the refrigerant gas does not leak throughout the system.
- Do not install unit in an area where flammable materials are present due to risk of explosions that can cause serious injury or death.
- Safely dispose all packing and transportation materials in accordance with federal/state/local laws or ordinances. Packing materials such as nails and other metal or wood parts, including plastic packing materials used for transportation may cause injuries or death by suffocation.

⚠ **WARNING** ───────────────────────

- Only qualified personnel must carry out the installation work. Installation must be done in accordance with this installation manual. Improper installation may result in water leakage, electric shock, or fire.
- When installing the unit in a small room, take measures to keep the refrigerant concentration from exceeding allowable safety limits. Excessive refrigerant leaks, in the event of an accident in a closed ambient space, can lead to oxygen deficiency.
- Use only specified accessories and parts for installation work. Failure to use specified parts may result in water leakage, electric shock, fire, or the unit falling.
- Install the air conditioner or heat pump on a foundation strong enough that it can withstand the weight of the unit. A foundation of insufficient strength may result in the unit falling and causing injuries.
- Take into account strong winds, typhoons, or earthquakes when installing. Improper installation may result in the unit falling and causing accidents.

1

3

- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local, state, and national regulations. An insufficient power supply capacity or improper electrical construction may lead to electric shock or fire.
- Make sure that all wiring is secured, that specified wires are used, and that no external forces act on the terminal connections or wires. Improper connections or installation may result in fire.
- When wiring, position the wires so that the electrical wiring box cover can be securely fastened. Improper positioning of the electrical wiring box cover may result in electric shock, fire, or the terminals overheating.
- Before touching electrical parts, turn off the unit.
- The circuit must be protected with safety devices in accordance with local and national codes, i.e. a fuse, a circuit breaker, a disconnect or a GFCI.
- Securely fasten the outdoor unit terminal cover (panel). If the terminal cover/panel is not installed properly, dust or water may enter the outdoor unit causing fire or electric shock.
- When installing or relocating the system, keep the refrigerant circuit free from substances other than the specified refrigerant (R410A) such as air. Any presence of air or other foreign substance in the refrigerant circuit can cause an abnormal pressure rise or rupture, resulting in injury.
- Do not change the setting of the protection devices. If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may occur.

⚠ **CAUTION**

- Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.
- Do not allow children to play on or around the unit to prevent injury.
- The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.
- Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.
- Install drain piping to proper drainage. Improper drain piping may result in water leakage and property damage.
- Insulate piping to prevent condensation.
- Be careful when transporting the product.
- Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.
- Do not use a charging cylinder. Using a charging cylinder may cause the refrigerant to deteriorate.
- Refrigerant R410A in the system must be kept clean, dry, and tight.

    (a) Clean and Dry -- Foreign materials (including mineral oils such as SUNISO oil or moisture) should be prevented from getting into the system.

    (b) Tight -- R410A does not contain any chlorine, does not destroy the ozone layer, and does not reduce the earth's protection again harmful ultraviolet radiation. R410A can contribute to the greenhouse effect if it is released. Therefore take proper measures to check for the tightness of the refrigerant piping installation. Read the chapter *Refrigerant Piping Work* and follow the procedures.

- Since R410A is a blend, the required additional refrigerant must be charged in its liquid state. If the refrigerant is charged in a state of gas, its composition can change and the system will not work properly.
- The indoor unit is for R410A. See the catalog for indoor models that can be connected. Normal operation is not possible when connected to other units.
- Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit far away from fluorescent lamps as much as possible.
- Indoor units are for indoor installation only. Outdoor units can be installed either outdoors or indoors. This unit is for indoor use.
- Do not install the air conditioner or heat pump in the following locations:
    (a) Where a mineral oil mist or oil spray or vapor is produced, for example, in a kitchen.
       Plastic parts may deteriorate and fall off or result in water leakage.
    (b) Where corrosive gas, such as sulfurous acid gas, is produced.
       Corroding copper pipes or soldered parts may result in refrigerant leakage.
    (c) Near machinery emitting electromagnetic waves. Electromagnetic waves may disturb the operation of the control system and cause the unit to malfunction.
    (d) Where flammable gas may leak, where there is carbon fiber, or ignitable dust suspension in the air, or where volatile flammables such as thinner or gasoline are handled. Operating the unit in such conditions can cause a fire.
- Take adequate measures to prevent the outdoor unit from being used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke, or fire. Instruct the user to keep the area around the unit clean.

⚠ **NOTE**

- The indoor unit should be positioned where the unit and inter-unit wires (outdoor to indoor) are at least 3.3ft (1m) away from any televisions or radios. (The unit may cause interference with the picture or sound.) Depending on the radio waves, a distance of 3.3ft (1m) may not be sufficient to eliminate the noise.
- Dismantling the unit, treatment of the refrigerant, oil and additional parts must be done in accordance with the relevant local, state, and national regulations.
- Do not use the following tools that are used with conventional refrigerants: gauge manifold, charge hose, gas leak detector, reverse flow check valve, refrigerant charge base, vacuum gauge, or refrigerant recovery equipment.
- If the conventional refrigerant and refrigerator oil are mixed in R410A, the refrigerant may deteriorate.
- This air conditioner or heat pump is an appliance that should not be accessible to the general public.
- As design pressure is 604 psi, the wall thickness of field-installed pipes should be selected in accordance with the relevant local, state, and national regulations.

2

Accessories

Ⓐ Mounting plate	1	Ⓑ Mounting plate fixing screw M4 × 1" (M4 × 25mm)	5	Ⓒ Titanium apatite deodorizing filter	2
Ⓓ Wireless remote controller	1	Ⓔ Remote controller holder	1	Ⓕ Remote controller holder fixing screw M3 × 13/16" (M3 × 20mm)	2
Ⓖ Dry battery AAA. LR03 (alkaline)	2	Ⓗ Indoor unit fixing screw M4 × 1/2" (M4 × 12mm)	2	Ⓙ Screw cover	2
Ⓚ Insulation tape	1	Ⓛ Operation manual	1	Ⓜ Installation manual	1
Ⓝ Warranty	1				

Choosing an Installation Site

Before choosing the installation site, obtain user approval.

1. Indoor unit

The indoor unit should be positioned in a place where:

1) the restrictions on the installation requirements specified in **"Indoor Unit Installation Diagram"** on page 4 are met,
2) both the air inlet and air outlet are unobstructed,
3) the unit is not exposed to direct sunlight,
4) the unit is away from sources of heat or steam,
5) there is no source of machine oil vapor (this may shorten the indoor unit service life),
6) cool/warm air is circulated throughout the room,
7) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may affect the remote controller range,
8) no laundry equipment is nearby.

2. Wireless remote controller

Turn on all the fluorescent lamps in the room, if any, and find a location where the remote controller signals are properly received by the indoor unit (within 19-11/16ft (6m)).

3

Indoor Unit Installation Diagram

⚠ CAUTION

- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.
- Do not place large objects near the INTELLIGENT EYE sensor. Also keep heating units or humidifiers outside the sensor's detection area.

3

Ⓐ Mounting plate

■ How to attach the indoor unit
Hook the hooks of the bottom frame to the Ⓐ mounting plate. If the hooks are difficult to hook, remove the front grille.

■ How to remove the indoor unit
Push up the lower part of the front grille to release the hooks. If it is difficult to release, remove the front grille.

Ⓐ Mounting plate

Hook

Front grille   Bottom frame

The Ⓐ mounting plate should be installed on a wall which can support the weight of the indoor unit.

Ⓑ Mounting plate fixing screws M4 × 1" (M4 × 25mm)

Upper front panel

Screws M4 × 5/8" (M4 × 16mm)
When dismounting the front grille, refer to **"2. Removing and installing the front grille"** on page 11.

Ⓙ Screw covers

1-3/16" (30mm) or more from ceiling

INTELLIGENT EYE sensor

1-15/16" (50mm) or more from walls (on both sides)

Lower front panel

19-11/16" (500mm) or more

Cut thermal insulation pipe to an appropriate length and wrap it with tape, making sure that no gap is left in the insulation pipe's cut line.

Air filters

Make sure that there are no obstacles within 19-11/16 inch (500mm) under the signal receiver.
Such obstacles, if any, may have an adverse influence on the reception performance of the receiver and the reception distance may be shortened.

Wrap the insulation pipe with the finishing tape from bottom to top.

Ⓒ Titanium apatite deodorizing filter (2)

Filter frame

Titanium apatite deodorizing filter

Claw   Tab

Air filter

Service lid
The service lid is removable.
■ Opening method
1) Remove the service lid screws.
2) Pull out the service lid diagonally down in the direction of the arrow.
3) Pull down.

Ⓓ Wireless remote controller

Before screwing the Ⓔ remote controller holder to the wall, make sure that control signals are properly received by indoor unit.

Ⓔ Remote controller holder

Ⓕ Remote controller holder fixing screws M3 × 13/16" (M3 × 20mm)

4

Indoor Unit Installation

1. Installing the mounting plate

The mounting plate should be installed on a wall which can support the weight of the indoor unit.

1) Temporarily secure the mounting plate to the wall, make sure that the plate is completely level, and mark the drilling points on the wall.

2) Secure the mounting plate to the wall with screws.

Recommended mounting plate retention spots and dimensions

unit: inch (mm)

2. Drilling a wall hole and installing wall embedded pipe

⚠ WARNING

For metal frame or metal board walls, be sure to use a wall embedded pipe and wall hole cover in the feed-through hole to prevent possible heat, electric shock, or fire.

- Be sure to caulk the gaps around the pipes with caulking material to prevent condensation.

  1) Drill a feed-through hole with a ϕ2-9/16 inch (65mm) diameter through the wall at a downward angle toward the outside.

  2) Insert a wall embedded pipe into the hole.

  3) Insert a wall hole cover into wall pipe.

  4) After completing refrigerant piping, wiring, and drain piping, caulk the pipe hole gap with putty.

3. Installing the indoor unit

- The recommended installation method is back piping.
- **When performing bottom piping or left side piping, refer to "3-4. Bottom or left side piping" on page 7.**
- Right side piping cannot be performed.

3-1. Right-back piping

1) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.

2) Wrap the refrigerant pipes and drain hose together with Ⓚ insulation tape.

Bind refrigerant pipe and drain hose together with adhesive vinyl tape.

Right back piping   Left back piping

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3) Pass the drain hose and refrigerant pipes through the wall hole, then position the indoor unit on the Ⓐ mounting plate hooks, using the △ markings at the top of the indoor unit as a guide.

Ⓐ Mounting plate

3

3-2. Left-back piping

1) Replace the drain plug and drain hose.

How to replace the drain plug and drain hose

Replacing onto the left side
1) Remove the fixing screw on the right side and remove the drain hose.
2) Remove the drain plug on the left side and attach it to the right side.
3) Insert the drain hose and tighten with the included fixing screw. Forgetting to tighten this may cause water leakages.

Drain hose attachment position
The drain hose is on the back of the unit.

Left side   Right side
Front side of unit

Attachment on the left side

Fixing screw

Drain hose

Attachment on the right side (factory default)

Fixing screw

Drain hose

2) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.

3) Be sure to connect the drain plug to the drain port in place of without drain hose.

How to set the drain plug

No gap

Do not apply lubricating oil (refrigerant oil) to the drain plug when inserting it. The application of lubrication oil to the drain plug will deteriorate the plug to cause drain leakage from the plug.

Insert a hexagonal wrench (3/16 inch (4mm)).

4) Shape the refrigerant pipes along the pipe path marking on the Ⓐ mounting plate.

5) Pass the drain hose and refrigerant pipes through the wall hole, then position the indoor unit on the Ⓐ mounting plate hooks, using the △ markings at the top of the indoor unit as a guide.

6) Connect the refrigerant pipes.

7) In case of pulling the drain hose through the back of the indoor unit, wrap the refrigerant pipes and drain hose together with Ⓚ insulation tape as shown in the figure.

Drain hose

Ⓐ Mounting plate

Caulk this hole with putty or caulking material.

Bind with adhesive vinyl tape.

Wrap Ⓚ insulation tape around the bent portion of the refrigerant pipe. Overlap at least half the width of the tape with each turn.

8) Press the bottom edge of the indoor unit with both hands until it is firmly caught by the Ⓐ mounting plate hooks.
Secure the indoor unit to the Ⓐ mounting plate with the Ⓗ indoor unit fixing screws M4 × 1/2" (M4 × 12mm).

Ⓐ Mounting plate

Drain hose

Refrigerant pipes

Bottom frame

Ⓗ Indoor unit fixing screw M4 × 1/2" (M4 × 12mm) (2 points)

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Indoor Unit Installation

3-3. Wall embedded piping

Follow the instructions given under left-back piping.

1) Insert the drain hose to this depth so it won't be pulled out of the drain pipe.

Insert the drain hose to this depth so it won't be pulled out of the drain pipe.

Inner wall

Drain hose

1-15/16" (50mm) or more

Vinyl chloride drain pipe (VP-30)

Outer wall

φ1-3/16" (30mm) or more

3-4. Bottom or left side piping

1) Cut off the pipe port cover with a copping saw.
   - **For bottom piping:** On the bottom of the front grille
   - **For left side piping:** On the side cover (front grille side and unit side)

   Apply the blade of the copping saw to the notch, and cut off the pipe port cover along the uneven inner surface.

Side cover (unit side)

Front grille side

The figure shows the case of left-bottom piping.

Side cover (front grille side)

2) After cutting off the pipe port cover, perform filing.
   Remove the burrs along the cut section using a half round needle file.

3) Wrap the refrigerant pipes and drain hose together with Ⓚ insulation tape.
   Then, insert the drain hose and refrigerant pipes into the wall hole after inserting them into the cut out piping hole opened.

Bind refrigerant pipe and drain hose together with adhesive vinyl tape.

Left side piping

Right bottom piping   Left bottom piping

NOTE
- Be careful not to let chips enter the driving section of the arm.
- Be careful not to put pressure on the lower front panel.

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4. Wiring

Refer to the installation manual for the outdoor unit also.

⚠ **WARNING**
- Do not use tapped wires, extension cords, or starburst connections, as they may cause overheating, electric shock, or fire.
- Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
- Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

⚠ **CAUTION**

When connecting the connection wire to the terminal block using a single core wire, be sure to perform curling.
Problems with the installation may cause heat and fires.

Good   **Wrong**

With a multi indoor unit , install as described in the installation manual supplied with the multi outdoor unit.

1) Remove the upper front panel, then remove the service lid. (Refer to the opening method on page 4.)

2) Lift up the unit and place it on the Ⓐ mounting plate hooks.

3) Remove the front grille. (Refer to the removal method on page 11.)

4) Remove the conduit mounting plate and then secure the conduit to the conduit mounting plate with the lock nut, as shown in the illustration.

5) Strip wire ends (3/4 inch (20mm)).

6) Match wire colors with terminal numbers on the indoor and outdoor unit's terminal blocks and firmly secure the wires in the corresponding terminals with the screws.

7) Connect the ground wire to the corresponding terminals.

8) Pull the wires lightly to make sure they are securely connected.

9) In case of connecting to an adapter system, run the remote controller cable and attach the S21. (Refer to **"5. When connecting to an HA system"** on page 13.)

10) Attach the conduit mounting plate.

11) Shape the wires so that the service lid fits securely.

12) Attach the front grille.

13) Attach the service lid and the upper front panel.

Hang indoor unit on the hooks of mounting plate.

Ⓐ Mounting plate

Electrical wiring box

Conduit pipe

Conduit

Conduit mounting plate

Lock nut

Screw

Terminal block
Electrical wiring box

Shape wires so that the service lid will fit securely.

Use the specified wire type.

Firmly fix the wires with the terminal screws.

Outdoor unit

Wire size and length must comply with local codes.

Indoor unit

Firmly fix the wires with the terminal screws.

3

8

Indoor Unit Installation

5. Drain piping

1) Connect the drain hose, as described on the right.

The drain hose should be inclined downward.

No trap is permitted.

Do not put the end of the hose in water.

2) Remove the upper front panel and the air filters. (Refer to removal method on page 11.) Pour some water into the drain pan to check the water flows smoothly.

3) If drain hose extension or embedded drain piping is required, use appropriate parts that match the hose front end.

Figure of hose front end

φ5/8" (φ16mm) φ11/16" (φ18mm)

• When drain hose requires extension, obtain an extension hose with an inner diameter of 5/8 inch (16mm). Be sure to thermally insulate the indoor section of the extension hose.

φ5/8" (φ16mm)

Indoor unit drain hose   Extension drain hose

Drain hose supplied with the indoor unit

Heat insulation tube (field supply)

• When connecting a rigid polyvinyl chloride pipe (nominal diameter 1/2 inch (13mm)) directly to the drain hose attached to the indoor unit as with embedded piping work, use any commercially available drain socket (nominal diameter 1/2 inch (13mm)) as a joint.

φ11/16" (φ18mm)

Drain hose supplied with the indoor unit

Commercially available drain socket (nominal diameter 1/2 inch (13mm))

Commercially available rigid polyvinyl chloride pipe (nominal diameter 1/2 inch (13mm))

Refrigerant Piping Work

⚠ WARNING

• Do not apply mineral oil on flared part.
• Prevent mineral oil from getting into the system as this would reduce the service life of the units.
• Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
• Never install a dryer to this R410A unit in order to guarantee its service life.
• The drying material may dissolve and damage the system.
• Incomplete flaring may result in refrigerant gas leakage.

With a multi indoor unit , install as described in the installation manual supplied with the **multi outdoor unit.**

1. Flaring the pipe end

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward so that the filings do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring has been done correctly.

Cut exactly at right angles.   Remove burrs.

Flaring

Set exactly at the position shown below.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.020 inch (0-0.5mm)	0.039-0.059 inch (1.0-1.5mm)	0.059-0.079 inch (1.5-2.0mm)

Die

Check

The flare's inner surface must be flaw-free.

The pipe end must be evenly flared in a perfect circle.

Make sure that the flare nut is fitted.

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2. Refrigerant piping

⚠ CAUTION

- Use the flare nut fixed to the main unit. (This is to prevent the flare nut from cracking as a result of deterioration over time.)
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- Use a torque wrench when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

- Align the centers of both flares and tighten the flare nuts 3 or 4 turns by hand, then tighten them fully with a spanner and a torque wrench.

3

Apply oil

Do not apply refrigeration oil to the outer surface.

Apply refrigeration oil only to the inner surface of the flare.

Flare nut

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

Tighten

Torque wrench

Spanner

Piping union

Flare nut

	Piping size	Flare nut tightening torque
Gas side	O.D. 3/8 inch (9.5mm)	24-1/8–29-1/2ft • lbf (32.7-39.9N • m)
	O.D. 1/2 inch (12.7mm)	36-1/2–44-1/2ft • lbf (49.5-60.3N • m)
Liquid side	O.D. 1/4 inch (6.4mm)	10-1/2–12-3/4ft • lbf (14.2-17.2N • m)

2-1. Caution on piping handling

- Protect the open end of the pipe against dust and moisture.
- All pipe bends should be as gentle as possible. Use a pipe bender for bending.

Be sure to place a cap.

Wall

Rain

If no flare cap is available, cover the flare mouth with tape to keep dirt and water out.

2-2. Selection of copper and heat insulation materials

When using commercial copper pipes and fittings, observe the following:

- Insulation material: Polyethylene foam
  Heat transfer rate: 0.041 to 0.052W/mK (0.024 to 0.030Btu/fth°F (0.035 to 0.045kcal/mh°C))
  Be sure to use insulation that is designed for use with HVAC Systems.
- ACR Copper only.

Gas pipe

Liquid pipe

Gas pipe insulation

Liquid pipe insulation

Finishing tape

Drain hose

- Be sure to insulate both the gas and liquid piping and observe the insulation dimensions as below.

	Piping size	Minimum bend radius	Piping thickness	Thermal insulation size	Thermal insulation thickness
Gas side	O.D. 3/8 inch (9.5mm)	1-3/16 inch (30mm) or more	0.031 inch (0.8mm) (C1220T-O)	I.D. 15/32-19/32 inch (12-15mm)	13/32 inch (10mm) Min.
	O.D. 1/2 inch (12.7mm)	1-9/16 inch (40mm) or more		I.D. 9/16-5/8 inch (14-16mm)	
Liquid side	O.D. 1/4 inch (6.4mm)	1-3/16 inch (30mm) or more		I.D. 5/16-13/32 inch (8-10mm)	

- Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

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Installation Tips

1. Removing and installing the upper front panel

• Removal method

1) Open the upper front panel.
2) Slide the front panel locks on the back of the front panel upward to release the locks (left and right sides).
3) Remove the panel shafts on both sides from the shaft holes, and dismount the upper front panel.

Back of the upper front panel
Front panel shaft
3-2) Pull
Shaft hole   3-1) Slide

The upper front panel does not open any more than as shown in the figure. Do not force it open any further than that.

Back of the upper front panel
2) Slide

Front panel lock

⚠ CAUTION

Do not attempt to push closed the front panel with the upper and lower front panels overlapping. Internal parts may break. (See **Fig. 5**) If the front panel must be closed by hand for some reason (remote controller not functioning owing to lack of power supply, etc.), follow the instructions affixed to the indoor unit.

Fig. 1

Fig. 2

Fig. 5
Overlapping
(Viewed from side)

Fig. 3
ON/OFF

Fig. 4
"click"   "click"   "click"

• Installation method

1) Slide the front panel locks on the back of the front panel upward to release the locks (left and right sides).
2) Insert the panel shafts on both sides of the upper front panel into the shaft holes.
3) Slide the front panel locks on each side downward to lock them.
4) Close the upper front panel slowly. (See **Fig. 1**)
5) Do not push on the panel to close it. (See **Fig. 2**)
6) Turn on the unit using the remote controller. Wait till the upper and lower front panels are completely open. Then, turn off the unit using the remote controller again. (See **Fig. 3**)
7) Once the both panels close completely, gently push the upper front panel to hook it into position. (See **Fig. 4**)

2. Removing and installing the front grille

⚠ CAUTION

Be sure to wear protection gloves.

• Removal method

1) Remove the upper front panel and air filters.
2) Remove the service lid. (Refer to the opening method on page 4.)
3) Disconnect the wire harnesses from the wire clamp, and remove the wire harnesses from the connectors.
4) Push the lower front panel up until it stops.
5) Dismount the flap (large).
6) Open the 2 screw covers, and remove 4 screws from the front grille. (The screw covers are not factory-mounted.)

Wire clamp
Connectors
Wire harnesses

ⓙ Screw covers
•Opening method
Downward
Use a long flat plate such as a ruler and wrap it in a cloth so as not to damage the product.

4 screws

Flap (large)
Remove by pushing to the right while bending it slightly

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3

7) Wear protection gloves and insert both hands under the front grille as shown in the figure.

8) Remove the front grille from the 3 upper hooks by pushing up the top side of the front grille, pull the front grille toward you by holding both ends of the front grille, and dismount the front grille.
   • If the grille is hard to remove, insert a long flat plate* through the gap in the side cover as shown in the figure, and turn the plate inwards to disengage the hooks (3 hooks each on the right and left sides) so that you can remove the grille easily.
   * Such as a ruler wrapped in a cloth

• Installation method

1) Install the front grille and firmly engage the upper hooks (3 locations), right and left sides hooks (each 3 locations).

2) Install 4 screws of the front grille, and close the 2 screw covers.

3) Mount the flap (large).

4) Lower the lower front panel to the original position.

5) Attach the wire harnesses to the 2 connectors and secure the wire harnesses with the wire clamp.

6) Install the air filters and then mount the upper front panel.

Upper hooks

8-1) Push up.

8-2) Pull toward you.

Side hooks

3. How to set the different addresses

When 2 indoor units are installed in one room, the 2 wireless remote controllers can be set for different addresses. Change the address setting of one of the two units. When cutting the jumper be careful not to damage any of the surrounding parts.

1) Remove the upper front panel and front grille. (Refer to the removal method on page 11.)

2) Cut the address jumper (JA) on the printed circuit board.

3) Cut the address jumper (J4) in the remote controller.
   • Be careful not to cut jumper (J8).

Indoor unit
INTELLIGENT EYE sensor

ADDRESS : JA
EXIST : 1
CUT : 2
JA

Bottom of electrical wiring box

Remote controller

Jumper
(J8)   (J4)

ADDRESS	
EXIST	1
CUT	2

4. When connecting a wireless LAN connecting adapter

• Connection method

1) Remove the upper front panel.
   (Refer to the removal method on page 11.)

2) Open the cover, grab the connecting cord with your fingers and pull it out.

2-1) Open the cover

2-2) Grab the connecting cord

2-3) Pull out the connecting cord

3) Remove the binding band and pull the insulation tube off the connecting cord.

Binding band   Insulation tube

3-1) Cut and remove the binding band

3-2) Pull off the insulation tube

Connector (white)

4) Connect the wireless LAN connecting adapter.
   (For details on connection procedures, refer to the installation manual for the wireless LAN connecting adapter.)

5) Place the adapter case into the indoor unit and close the cover.

6) Install the upper front panel.
   (Refer to the installation method on page 11.)

Adapter case

⚠ CAUTION
Close the cover before operating the unit.

Cover

Close

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Installation Tips

5. When connecting to an HA system (wired remote controller, central remote controller etc.)

• **Removal methods for metal plate electrical wiring box covers**

1) Remove the upper front panel and front grille. (Refer to the removal method on page 11.)
2) Remove the electrical wiring box. (1 screw)
3) Remove the 4 tabs and dismount the metal plate electrical wiring box cover (A).
4) Pull down the hook on the metal plate electrical wiring box cover (B), and remove a single tab.
5) Remove the 2 tabs on the top part and dismount the metal plate electrical wiring box cover (B).

Metal plate electrical wiring box cover (A)

Metal plate electrical wiring box cover (B)

Screw

From back side
Single tab

Pull down

• **Attachment methods of connection cord**

1) Remove the factory-mounted connector from S21.
2) Tie the harnesses in a bundle as shown in the figure so that the removed connector does not interfere with the printed circuit board.

Factory-mounted connector

3) Attach the connection cord to the S21 connector and pull the harness out through the notched part in the figure.

HA connector (S21)

Screw

• **Attachment methods for metal plate electrical wiring box covers**

1) Hook the top part of the metal plate electrical wiring box cover (B) on the 2 tabs.
2) Press in the hook on the bottom to catch a single tab, and mount the metal plate electrical wiring box cover (B).
3) Insert the connector into the hole, and hook and mount the metal plate electrical wiring box cover (A) onto the 4 tabs.
4) Install the electrical wiring box. (1 screw)
5) Install the upper front panel and front grille. (Refer to the installation method on page 11.)

Metal plate electrical wiring box cover (B)

Metal plate electrical wiring box cover (A)

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Trial Operation and Testing

1. Trial operation and testing

- Trial operation should be carried out in either COOL or HEAT operation.

1-1. Measure the supply voltage and make sure that it is within the specified range.

1-2. In COOL operation, select the lowest programmable temperature; in HEAT operation, select the highest programmable temperature.

1-3. Carry out the trial operation following the instructions in the operation manual to ensure that all functions and parts, such as the movement of the louvers, are working properly.
- To protect the air conditioner, restart operation is disabled for 3 minutes after the system has been turned off.

1-4. After trial operation is complete, set the temperature to a normal level (78°F to 82°F (26°C to 28°C) in COOL operation, 68°F to 75°F (20°C to 24°C) in HEAT operation).

- When operating the air conditioner in COOL operation in winter, or HEAT operation in summer, set it to the trial operation mode using the following method.

  1) Press ⏻ to turn on the system.

  2) Press both of [Temp] and [Mode] at the same time.

  3) Press [Temp], select "⌐⌐", and press [Mode] for confirmation.

  - Trial operation will stop automatically after about 30 minutes.
    To stop the operation, press ⏻ .

  - Some of the functions cannot be used in the trial operation mode.

- The air conditioner draws a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

2. Test items

Test items	Symptom	Check
Indoor and outdoor units are installed securely.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
System is properly grounded.	Electrical leakage	
Only specified wires are used for all wiring, and all wires are connected correctly.	No operation or burn damage	
Indoor or outdoor unit's air inlet or air outlet are unobstructed.	Incomplete cooling/heating function	
Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote controller commands.	No operation	
☀ will be displayed when the MODE button is pressed.*	No heating	
Pipes and wires are connected to the corresponding terminal blocks/connection ports for the connected unit.	No cooling/heating	

* Check that the jumper (J8) has not been cut. If it has been cut, contact the service shop.

Jumper (J8)

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4. CTXS, FTXS, FDXS, CDXS Series

4.1 Safety Considerations

- Read these Safety Precautions carefully to ensure correct installation.
- This manual classifies the precautions into DANGER, WARNING and CAUTION. Be sure to follow all the precautions below: they are all important for ensuring safety.

⚠ **DANGER** ....Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** ....Failure to follow any of WARNING is likely to result in such grave consequences as death or serious injury.

⚠ **CAUTION** ....Failure to follow any of CAUTION may in some cases result in grave consequences.

- The following safety symbols are used throughout this manual:

🛈 Be sure to observe this instruction.	⏚ Be sure to establish a ground connection.	🚫 Never attempt.

- After completing installation, test the unit to check for installation errors. Give the user adequate instructions concerning the use and cleaning of the unit according to the Operation Manual.

⚠ DANGER
• Refrigerant gas is heavier than air and replaces oxygen. A massive leak could lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
• If the refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce a toxic gas if it comes in contact with fire such as from a fan heater, stove or cooking device. Exposure to this gas could cause severe injury or death.
• After completing the installation work, check that the refrigerant gas does not leak. Refrigerant gas may produce a toxic gas if it comes in contact with fire such as from a fan heater, stove or cooking device. Exposure to this gas could cause severe injury or death.
• Do not ground units to water pipes, telephone wires or lightning rods because incomplete grounding could cause a severe shock hazard resulting in severe injury or death, and to gas pipes because a gas leak could result in an explosion which could lead to severe injury or death.
• Safely dispose of the packing materials. Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries. Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death by suffocation.
• Do not install unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.
• Do not ground units to telephone wires or lightning rods because lightning strikes could cause a severe shock hazard resulting in severe injury or death, and to gas pipes because a gas leak could result in an explosion which could lead to severe injury or death.

⚠ WARNING
• Installation shall be left to the authorized dealer or another trained professional. Improper installation may cause water leakage, electrical shock, fire, or equipment damage.
• Install the air conditioner according to the instructions given in this manual. Incomplete installation may cause water leakage, electrical shock, fire or equipment damage.
• Be sure to use the supplied or exact specified installation parts. Use of other parts may cause the unit to come to fall, water leakage, electrical shock, fire or equipment damage.
• Install the air conditioner on a solid base that is level and can support the weight of the unit. An inadequate base or incomplete installation may cause injury or equipment damage in the event the unit falls off the base or comes loose.
• Electrical work shall be carried out in accordance with the installation manual and the national, state and local electrical wiring codes. Insufficient capacity or incomplete electrical work may cause electrical shock, fire or equipment damage.
• Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance. Follow all appropriate electrical codes.
• For wiring, use a wire or cable long enough to cover the entire distance with no splices if possible. Do not use an extension cord. Do not put other loads on the power supply. Use an only a separate dedicated power circuit. (Failure to do so may cause abnormal heat, electric shock, fire or equipment damage.)
• Use the specified types of wires for electrical connections between the indoor and outdoor units. Follow all state and local electrical codes. Firmly clamp the inter-unit wire so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating, fire or equipment damage.
• After connecting all wires be sure to shape the cables so that they do not put undue stress on the electrical covers, panels or terminals. Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, fire or equipment damage.
• When installing or relocating the system, be sure to keep the refrigerant circuit free from all substances other than the specified refrigerant (R410A), such as air. (Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise which may result in rupture, resulting in injury.)

⚠ **WARNING**
• During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormally high pressure which could lead to equipment damage or and personal injury.
• During installation, attach the refrigerant piping securely before running the compressor. If the refrigerant pipes are not attached and the stop valve is open during pump-down, air will be sucked in when the compressor is run, causing abnormally high pressure which could lead to equipment damage and personal injury.
• Be sure to install a ground fault circuit interrupter breaker. Failure to install a ground fault circuit interrupter breaker may result in electrically shocks, or fire personal injury.

3

⚠ **CAUTION**	
• Do not install the air conditioner where gas leakage would be exposed to open flames. If the gas leaks and builds up around the unit, it may catch fire.	🚫
• Establish drain piping according to the instructions of this manual. Inadequate piping may cause water damage.	
• Tighten the flare nut according to the specified torque. A torque wrench should be used. If the flare nut is tightened too much, the flare nut may crack over time and cause refrigerant leakage.	
• Do not touch the heat exchanger fins. Improper handling may result in injury.	🚫
• Be very careful about product transportation. Some products use PP bands for packaging. Do not use any PP bands for a means of transportation. It is dangerous.	
• Electrical work must be performed in accordance with the NEC/CEC by authorized personnel only.	

4.2   CTXS07JVJU, CTXS09/12HVJU

Accessories

Ⓐ Mounting plate	1	Ⓔ Remote controller holder	1	Ⓚ Operation manual	1
Ⓑ Mounting plate fixing screws 3/16" × 1"L (M4 × 25mm)	10	Ⓕ Fixing screws for remote controller holder 1/8" × 13/16"L (M3 × 20mm)	2	Ⓛ Installation manual	1
Ⓒ Air-purifying filter with deodorizing function	2	Ⓖ Dry batteries AAA. LR03 (alkaline)	2		
Ⓓ Wireless remote controller	1	Ⓗ Indoor unit fixing screws 3/16" × 1/2"L (M4 × 12mm)	2		

Choosing a Site

• Before choosing the installation site, obtain user approval.

1. Indoor unit.
•   The indoor unit should be sited in a place where:
1) The restrictions on installation specified in the indoor unit installation drawings are met.
2) Both air intake and exhaust have clear paths met.
3) The unit is not in the path of direct sunlight.
4) The unit is away from the source of heat or steam.
5) There is no source of machine oil vapor (this may shorten indoor unit life).
6) Cool air is circulated throughout the room.
7) The unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may shorten the remote controller range.
8) The unit is at least 3.5 ft (1m) away from any television or radio set (unit may cause interference with the picture or sound).

2. Wireless remote controller.
1) Turn on all the fluorescent lamps in the room, if any, and find the site where remote controller signals are properly received by the indoor unit (within 23 ft (7m)).

Indoor Unit Installation Drawings

Ⓐ Mounting plate

Ⓑ 3/16" × 1"L
(M4 × 25mm)

The mounting plate should be installed on a wall can support the weight of the indoor unit.

1-3/16" (30mm) or more from ceiling

Front panel

1-15/16" (50mm) or more from walls (on both sides)

Caulk pipe hole gap with putty.

Cut thermal insulation pipe to an appropriate length and wrap it with tape, making sure that no gap is left in the insulation pipe's cut line.

Wrap the insulation pipe with the finishing tape from bottom to top.

Intelligent-eye sensor

Air filters

Ⓒ Air-purifying filter with deodorizing function

Tabs (upper 3 locations)

Tabs (lower 2 locations)

Insert the upper side of the Ⓒ Air-purifying filter with deodorizing function into the tabs (upper 3 locations), push the lower side of the filters up a little and into the tabs (lower 2 locations).

Service lid
■ **Opening service lid**
Service lid is opening/closing type.
■ **Opening method**
1) Remove the service lid screws.
2) Lift the service lid upward.

Ⓓ Wireless remote controller

Before screwing the remote controller holder to the wall, make sure that control signals are properly received by indoor unit.

Ⓔ Remote controller holder

Ⓕ 1/8" × 13/16"L
(M3 × 20mm)

3

Intelligent-eye Sensor

⚠ **CAUTION**

1) Do not hit or forcefully push the intelligent-eye sensor. This can lead to damage and malfunction.
2) Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area.

Installation Tips

1. Removing packaging material.
- **Removal method**
  Grasp the packaging material which is in the center of the front panel, with one hand, and lightly pull the front panel up and toward you.

Lightly lift.

Packaging material

Lift the panel slightly and pull out.

2. Removing and installing front panel.
- **Removal method**
  Hook fingers on the panel protrusions on the left and right of the main body, and open until the panel stops. Slide the front panel sideways to disengage the rotating shaft. Then pull the front panel toward you to remove it.

- **Installation method**
  Align the tabs of the front panel with the grooves, and push all the way in. Then close slowly. Push the center of the lower surface of the panel firmly to engage the tabs.

Push the rotating shaft of the front panel into the groove.

3. Removing and installing front grille.
- **Removal method**
  1) Remove front panel to remove the air filter.
  2) Remove the front grille. (2 screws)
  3) In front of the ○○○ mark of the front grille, there are 3 upper hooks. Lightly pull the front grille toward you with one hand, and push down on the hooks with the fingers of your other hand.

Upper hook

○○○ mark area (3 locations)

Lightly pull the front grille toward you with one hand, and push down on the hooks with the fingers of your other hand. (3 locations)

Push down.

Upper hook

Upper hook

<When there is no work space because the unit is close to ceiling>

1) Push up.

⚠ CAUTION

Be sure to wear protection gloves.

2) Pull toward you.

Place both hands under the center of the front grille, and while pushing up, pull it toward you.

- **Installation method**
  1) Install the front grille and firmly engage the upper hooks. (3 locations)
  2) Install 2screws of the front grill.
  3) Install the air filter and then mount the front panel.

4. How to set the different addresses.
When two indoor units are installed in one room, the two wireless remote controllers can be set for different addresses.
1) In the same way as when connecting to an HA system, remove the metal plate electrical wiring cover.
2) Cut the address jumper (JA).
3) Cut the address jumper (J4).

JA	Address
EXIST	1
CUT	2

J4

J4	Address
EXIST	1
CUT	2

Indoor Unit Installation (1)

1. Installing the mounting plate.
- The mounting plate should be installed on a wall which can support the weight of the indoor unit.
1) Temporarily secure the mounting plate to the wall, make sure that the plate is completely level, and mark the boring points on the wall.
2) Secure the mounting plate to the wall with screws.

Recommended mounting-plate retention spots and Dimensions

ⓑ Place a leveler on raised tab.

Leveling mounting plate

ⓐ Dangle a weighted thread and align thread with vertical arrow.

4-15/16 (125)

(Bolt size : 3/8 (M10))

(Bolt size : 3/8 (M10))

3-15/16 (100)

2-3/16 (55)

Recommended mounting - plate retention spots (6 spots in all)

11-7/16 (290)

Use tape measure as shown. Position the end of tape measure at ▽.

φ3-1/8 (φ80)

φ3-1/8 (φ80)

3-9/16 (90)

2-1/16 (52)

2-1/16 (52)

2-3/8 (60)

2-15/16 (75)

12-1/8 (308.5)

1-3/4 (44.5)

31-1/4 (795)

3-15/16 (100)

3-7/8 (98)

Drain hose position

Through-the-wall hole φ3-1/8 (φ80)

Gas pipe end
Liquid pipe end

unit : inch (mm)

* The removed pipe port cover can be kept in the mounting plate pocket.

Removed pipe port cover

Ⓐ Mounting plate

Indoor Unit Installation (2)

2. **Boring a wall hole and installing wall embedded pipe.**
- For walls containing metal frame or metal board, be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.
- Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.
1) Bore a feed-through hole of 3-1/8 inch (80mm) in the wall so it has a down slope toward the outside.
2) Insert a wall pipe into the hole.
3) Insert a wall cover into wall pipe.
4) After completing refrigerant piping, wiring, and drain piping, caulk pipe hole gap with putty.

3. **Installing indoor unit.**
3-1. Right-side, right-back, or right-bottom piping.
1) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.
2) Wrap the refrigerant pipes and drain hose together with insulation tape.

3) Pass the drain hose and refrigerant pipes through the wall hole, then set the indoor unit on the mounting plate hooks by using the △ markings at the top of the indoor unit as a guide.

4) Open the front panel, then open the service lid. Refer to Installation Tips.
5) Pass the interconnecting wires from the outdoor unit through the feed-through wall hole and then through the back of the indoor unit. Pull them through the front side.
Bend the ends of tie wires upward in advance for easier work. (If the interconnecting wire ends are to be stripped first, bundle wire ends with adhesive tape.)
6) Press the indoor unit's bottom panel with both hands to set it on the mounting plate hooks. Make sure the wires do not catch on the edge of the indoor unit.

3-2. Left-side, left-back, or left-bottom piping.
1) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.

2) Be sure to connect the drain hose to the drain port in place of a drain plug.

3) Shape the refrigerant pipe along the pipe path marking on the mounting plate.
4) Pass drain hose and refrigerant pipes through the wall hole, then set the indoor unit on mounting plate hooks, using the △ markings at the top of indoor unit as a guide.
5) Pull in the interconnecting wires.
6) Connect the inter-unit piping.
7) Wrap the refrigerant pipes and drain hose together with insulation tape as right figure, in case of setting the drain hose through the back of the indoor unit.
8) While exercising care so that the interconnecting wires do not catch indoor unit, press the bottom edge of indoor unit with both hands until it is firmly caught by the mounting plate hooks. Secure indoor unit to the mounting plate with the screws (3/16" × 1/2"L (M4 × 12mm)).

Inside ←→ Outside
Wall embedded pipe (Field supply)
Caulking
Wall hole cover (Field supply)
ϕ3-1/8" (ϕ80mm)
Wall embedded pipe (Field supply)

Right-side piping
Remove pipe port cover here for right-side piping.
Right-back piping
Right-bottom piping
Remove pipe port cover here for right-bottom piping.
Bind coolant pipe and drain hose together with insulating tape.

Ⓐ Mounting plate

Hang indoor unit's hook here.
Ⓐ Mounting plate
When stripping the ends of interconnecting wires in advance, bind right ends of wires with insulating tape.
Interconnecting wires
Wire guide

Remove pipe port cover here for left-side piping.
Left-side piping
Left-back piping
Remove pipe port cover here for left-bottom piping.
Left-bottom piping

How to set drain plug
No gap
Do not apply lubricating oil (refrigerant oil) when inserting. Application of causes deterioration and drain leakage of the plug.
Insert a hexagon wrench (3/16 inch (4mm))

Drain hose
Caulk this hole with putty or caulking material.
Ⓐ Mounting plate
Bind with plastic tape.
Wrap insulating tape around the bent portion of refrigerant pipe. Overlap at least half the width of the tape with each turn.

Interconnecting wire
Drain hose
Ⓐ Mounting plate
Refrigerant pipes
Bottom frame
Ⓑ 3/16" × 1/2"L (M4 × 12mm) (2 point)

3

Indoor Unit Installation (3)

3-3. Wall embedded piping.
• Insert the drain hose to this depth so it won't be pulled out of the drain pipe.

4. Wiring.

With a Multi indoor unit , install as described in the installation manual supplied with the Multi outdoor unit.

1) Strip wire ends. (9/16 inch (15mm))
2) Match wire colors with terminal numbers on indoor and outdoor unit's terminal blocks and firmly screw wires to the corresponding terminals.
3) Connect the ground wires to the corresponding terminals.
4) Pull wires to make sure that they are securely latched up.
5) In case of connecting to an adapter system.
   Run the remote controller cable and attach the S21 connector as the illustration above.
6) Shape the wires so that the service lid fits securely, then close service lid.

⚠ WARNING

1) Do not use spliced wires, stranded wires, extension cords, or starburst connections, as they may cause overheating, electrical shock, or fire. Follow all Local, and State electrical codes.
2) Do not use locally purchased electrical parts inside the product. (Do not overload the circuit by adding drain pump or other electrical equipment to unit terminals.) Doing so may cause electric shock or fire.
3) When carrying out wiring connection, take care not to pull at the conduit.
4) Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

5. When connecting to an HA system.
1) Remove the front grille. (2 screws)
2) Remove the electrical wiring box. (1 screw)
3) Remove the metal plate electrical wiring cover. (4 tabs)
4) Attach the connection cord to the S21 connector and pull the harness out through the notched part in the figure.
5) Replace the electrical wiring cover as it was, and pull the harness around, as shown in the figure.

6. Drain piping.
1) Connect the drain hose, as described right.

2) Remove the air filters and pour some water into the drain pan to check the water flows smoothly.

3) If the drain hose requires an extension, procure one locally.
   Be sure to thermally insulate the indoor section of the extension hose.

4) When connecting a rigid polyvinyl chloride pipe (nominal diameter 1/2 inch (13mm)) directly to the drain hose attached to the indoor unit as with embedded piping work, use any commercially available drain socket (nominal diameter 1/2 inch (13mm)) as a joint.

Refrigerant Piping Work

1. Flaring the pipe end.

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring is properly made.

(Cut exactly at right angles.)   Remove burrs

Check
Flare's inner surface must be flaw-free.
The pipe end must be evenly flared in a perfect circle.
Make sure that the flare nut is fitted.

Flaring

Set exactly at the position shown below.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.020 inch (0-0.5mm)	0.039-0.059 inch (1.0-1.5mm)	0.059-0.079 inch (1.5-2.0mm)

⚠ WARNING

1) Do not use mineral oil on flared part.
2) Prevent mineral oil from getting into the system as this would reduce the unit life.
3) Never use piping which has been used for previous installations. Only use parts which are provided with the unit.
4) Do never install a refrigerant drier to this unit.
5) The drying material may dissolve and damage the system.
6) Incomplete or improper flaring may cause refrigerant gas leakage.

2. Refrigerant piping.

⚠ CAUTION

1) Use the flare nut fixed to the main unit to prevent deterioration and cracking from age.
2) To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
3) Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

Align the centers of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.

[Apply oil]

Do not apply refrigeration oil to the outer surface.
Apply refrigeration oil to the inner surface of the flare.
Flare nut
Do not apply refrigeration oil to the flare nut avoid tightening with over torque.

[Tighten]

Torque wrench
Spanner
Piping union
Flare nut

Flare nut tightening torque	
Gas side	Liquid side
3/8 inch (9.5mm)	1/4 inch (6.4mm)
24.1 - 29.4ft • lbf (32.7 - 39.9N • m)	10.4 - 12.7ft • lbf (14.2 - 17.2N • m)

2-1. Caution on piping handling

1) Protect the open end of the pipe against dust and moisture.
2) All pipe bends should be as gentle as possible.
   Use a pipe bender for bending.

Rain
Be sure to place a cap.
If no flare cap is available, cover the flare mouth with tape to keep dirt or water out.
Wall

2-2. Selection of copper and heat insulation materials

• When using commercial copper pipes and fittings, observe the following:

1) Insulation material: Polyethylene foam
   Heat transfer rate: 0.041 to 0.052 W/mK (0.024 to 0.030 Btu/fth˚F (0.035 to 0.045kcal/mh˚C))
   Refrigerant gas pipe's surface temperature reaches 230˚F (110˚C) max.
   Choose heat insulation materials that will withstand this temperature.

2) Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Inter-unit wiring
Liquid pipe
Gas pipe
Gas pipe insulation
Liquid pipe insulation
Finishing tape
Drain hose

Gas side	Liquid side	Gas pipe thermal insulation	Liquid pipe thermal insulation
O.D. 3/8 inch (9.5mm)	O.D. 1/4 inch (6.4mm)	I.D. 0.427 - 0.590 inch (12 - 15mm)	I.D. 0.315 - 0.393 inch (8- 10mm)
Minimum bend radius		Thickness 0.393 inch (8mm) Min.	
1-3/16 inch (30mm) or more			
Thickness 0.031 inch (0.8mm) (C1220T-O)			

3) Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

3

Run Test and Final Check

1. Trial operation and testing.

1-1 Measure the supply voltage and make sure that it falls in the specified range.
1-2 Trial operation should be carried out in either cooling or heating mode.

- In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
  1) Trial operation may be disabled in either mode depending on the room temperature.
     Use the remote controller for trial operation as described below.
  2) After trial operation is complete, set the temperature to a normal level (78°F to 82°F (26°C to 28°C) in cooling mode, 68°F to 75°F (20°C to 24°C) in heating mode).
  3) For protection, the unit disables restart operation for 3 minutes after it is turned off.

1-3 Carry out the test operation in accordance with the Operation Manual to ensure that all functions and parts, are working properly.
  - The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
  - If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

Trial operation from remote controller.
1) Press the MODE button and select the trial operation mode. 2) Press ON/OFF button to turn on the system. 3) Simultaneously press MODE button and both of the TEMP buttons. 4) Press MODE button twice. ("┑" will appear on the display to indicate that Trial Operation mode is selected.) 5) Trial run mode terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press ON/OFF button.

2. Test items.

Test items	Symptom	Check
Indoor and outdoor units are installed properly on solid bases.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Drain line is properly installed.	Water leakage	
System is properly grounded.	Electrical leakage	
The specified wires are used for interconnecting wire connections.	Inoperative or burn damage	
Indoor or outdoor unit's air intake or exhaust has clear path of air. Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote controller commands.	Inoperative	

C: 3P232730-3B

4.3　CTXS07LVJU, FTXS09/12LVJU

Accessories

Indoor unit Ⓐ – Ⓛ.

Ⓐ Mounting plate	1	Ⓔ Remote controller holder	1	Ⓙ Tube	1
Ⓑ Mounting plate fixing screw 3/16" × 1" (M4 × 25mm)	5	Ⓕ Fixing screw for remote controller holder 1/8" × 13/16" (M3 × 20mm)	2	Ⓚ Operation manual	1
Ⓒ Titanium apatite deodorizing filter	2	Ⓖ Dry battery AAA. LR03 (alkaline)	2	Ⓛ Installation manual	1
Ⓓ Wireless remote controller	1	Ⓗ Indoor unit fixing screw 3/16" × 1/2" (M4 × 12mm)	2		

Choosing an Installation Site

• Before choosing the installation site, obtain user approval.

1. Indoor unit

• The indoor unit should be sited in a place where:
1) the restrictions on installation specified in the indoor unit installation drawings are met,
2) both air inlet and air outlet have clear paths met,
3) the unit is not in the path of direct sunlight,
4) the unit is away from the source of heat or steam,
5) there is no source of machine oil vapour (this may shorten indoor unit life),
6) cool (warm) air is circulated throughout the room,
7) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may shorten the remote controller range,
8) the unit is at least 3.5ft (1m) away from any television or radio set (unit may cause interference with the picture or sound),
9) install at the recommended height 6ft (1.8m),
10) no laundry equipment is located in the space.

2. Wireless remote controller

1) Turn on all the fluorescent lamps in the room, if any, and find the site where remote control signals are properly received by the indoor unit (within 23ft/7m).

2

Indoor Unit Installation Drawings

Ⓐ Mounting plate

Ⓑ Mounting plate fixing screw
3/16" × 1" (M4 × 25mm)

The mounting plate should be installed on a wall which can support the weight of the indoor unit.

■ **How to attach the indoor unit**
Hook the claws of the bottom frame to the mounting plate. If the claws are difficult to hook, remove the front grille.

■ **How to remove the indoor unit**
Push up the marked area (at the lower part of the front grille) to release the claws. If it is difficult to release, remove the front grille.

Ⓐ Mounting plate
Clip
Bottom frame
Front grille
Mark (rear side)

1-3/16" (30mm) or more from ceiling

Front panel

1-15/16" (50mm) or more from walls (on both sides)

Air filters

3/16" × 5/8" (M4 × 16mm)

INTELLIGENT EYE sensor

Caulk pipe hole gap with putty.

Cut thermal insulation pipe to an appropriate length and wrap it with tape, making sure that no gap is left in the insulation pipe's cut line.

Wrap the thermal insulation pipe with the finishing tape from bottom to top.

Ⓒ Titanium apatite deodorizing filter (2 pcs)

Titanium apatite deodorizing filter

Filter frame

Tab   Air filter

Service lid
■**Opening service lid**
Service lid is opening/closing type.
■**Opening method**
1) Remove the service lid screw.
2) Pull out the service lid diagonally down in the direction of the arrow.
3) Pull down.

Ⓓ Wireless remote controller

Before screwing the remote controller holder to the wall, make sure that control signals are properly received by indoor unit.

Ⓕ Fixing screw for remote controller holder
1/8" × 13/16" (M3 × 20mm)

Ⓔ Remote controller holder

INTELLIGENT EYE sensor

⚠ **CAUTION**
• Do not hit or forcefully push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.
• Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area.

3

Preparation before Installation

1. Removing and installing front panel

• Removal method

Hook fingers on the tabs on the left and right of the main body, and open until the panel stops. Slide the front panel sideways to disengage the rotating shaft. Then pull the front panel toward you to remove it.

• Installation method

Align the tabs of the front panel with the grooves, and push all the way in. Then close slowly. Push the center of the lower surface of the panel firmly to engage the tabs.

2. Removing and installing front grille

• Removal method

1) Remove front panel to remove the air filter.
2) Remove 2 screws from the front grille.
3) In front of the ○○○ mark of the front grille, there are 3 upper hooks. Lightly pull the front grille toward you with one hand, and push down on the hooks with the fingers of your other hand.

Push the rotating shaft of the front panel into the groove.

Upper hook

○○○ mark area (3 locations)

Upper hook

Push down.

When there is no work space because the unit is close to ceiling

⚠ **CAUTION**

• Be sure to wear protection gloves.

Place both hands under the center of the front grille, and while pushing up, pull it toward you.

• Installation method

1) Install the front grille and firmly engage the upper hooks (3 locations).
2) Install 2 screws of the front grille.
3) Install the air filter and then mount the front panel.

1) Push up.

2) Pull toward you.

4

3. How to set the different addresses

When 2 indoor units are installed in one room, the 2 wireless remote controllers can be set for different addresses.

1) Remove the metal plate electrical wiring cover.
   (Refer to the **When connecting to an HA system**.)
2) Cut the address jumper (JA) on the printed circuit board.
3) Cut the address jumper (J4) in the remote controller.

J4	ADDRESS
EXIST	1
CUT	2

4. When connecting to an HA system (wired remote controller, central remote controller etc.)

1) Remove the metal plate electrical wiring cover.
   (Refer to the **Removal/attachment methods of metal plate electrical wiring covers**.)
2) Attach the connection cord to the S21 connector and pull the harness out through the notched part in the figure.
3) Replace the electrical wiring cover as it was, and pull the harness around, as shown in the figure.

HA connector (S21)

HA connector (S21)

Lay the HA cord as shown in the figure.

• **Removal methods of metal plate electrical wiring cover**
   1) Remove the front grille.
   2) Remove the electrical wiring box. (1 screw)
   3) Raise the 2 upper parts of the metal plate electrical wiring cover, pull the parts frontward, and remove the 3 tabs.
   4) Slide the metal plate electrical wiring cover upward and remove the 2 tabs on the lower side.

3) Raise the 2 upper parts of the metal plate electrical wiring cover, pull the parts frontward, and remove the 3 tabs.

Pull
Pull
Slide
Pull
Tab

4) Slide the metal plate electrical wiring cover upward and remove the 2 tabs on the lower side.

Slide
Slide
Tab

5

Preparation before Installation

• **Attachment methods of metal plate electrical wiring cover**
Attach the metal plate electrical wiring cover as shown below.
1) Lean the metal plate electrical wiring cover as shown in the figure and attach tab (1) on the lower side to the electrical wiring box.
2) Attach tab (2) on the lower side of the metal plate electrical wiring cover.

3) Push in the upper part of the metal plate electrical wiring cover and attach the 3 tabs.

⚠ **CAUTION**

• Make sure that the shaded part (▮) will not go inside the electrical wiring box.

Refrigerant Piping Work

With a multi indoor unit , install as described in the installation manual supplied with the Multi outdoor unit.

1. Flaring the pipe end

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring is properly made.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.020 inch (0-0.5mm)	0.039-0.059 inch (1.0-1.5mm)	0.059-0.079 inch (1.5-2.0mm)

⚠ **WARNING**

• Do not use mineral oil on flared part.
• Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
• Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
• Never install a drier to this R410A unit in order to guarantee its lifetime.
• The drying material may dissolve and damage the system.
• Incomplete flaring may cause refrigerant gas leakage.

6

2. Refrigerant piping

⚠ CAUTION

- Use the flare nut fixed to the main unit to prevent it from cracking and deteriorating from age.
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

Align the centers of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.

[Apply oil]

Do not apply refrigeration oil to the outer surface.

Apply refrigeration oil to the inner surface of the flare.

Flare nut

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

[Tighten]

Torque wrench

Spanner

Piping union

Flare nut

Flare nut tightening torque	
Gas side	Liquid side
3/8 inch (9.5mm)	1/4 inch (6.4mm)
24.1-29.4ft • lbf (32.7-39.9N • m)	10.4-12.7ft • lbf (14.2-17.2N • m)

2-1. Caution on piping handling

1) Protect the open end of the pipe against dust and moisture.
2) All pipe bends should be as gentle as possible. Use a pipe bender for bending.

Wall

Be sure to place a cap.

Rain

If no flare cap is available, cover the flare mouth with tape to keep dirt or water out.

2-2. Selection of copper and heat insulation materials

- When using commercial copper pipes and fittings, observe the following:
1) Insulation material: Polyethylene foam
   Heat transfer rate: 0.041 to 0.052W/mK (0.024 to 0.030Btu/fth°F (0.035 to 0.045kcal/mh°C))
   Be sure to use insulation that is designed for use with HVAC Systems.

Inter-unit wire

Gas pipe

Liquid pipe

Gas pipe insulation

Liquid pipe insulation

Finishing tape

Drain hose

2) Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Gas side	Liquid side	Gas pipe thermal insulation	Liquid pipe thermal insulation
O.D. 3/8 inch (9.5mm)	O.D. 1/4 inch (6.4mm)	I.D. 15/32-19/32 inch (12-15mm)	I.D. 5/16-13/32 inch (8-10mm)
Minimum bend radius		Thickness 13/32 inch (10mm) Min.	
1-3/16 inch (30mm) or more			
Thickness 0.031 inch (0.8mm) (C1220T-O)			

3) Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

7

Indoor Unit Installation

1. Installing the mounting plate

- The mounting plate should be installed on a wall which can support the weight of the indoor unit.
  1) Temporarily secure the mounting plate to the wall, make sure that the plate is completely level, and mark the boring points on the wall.
  2) Secure the mounting plate to the wall with screws.

Recommended mounting plate retention spots and dimensions

Place a leveler on raised tab.

17-11/16 (450)
4-1/16 (103)

Recommended mounting plate retention spots. (5 spots in all)

(Bolt size: 3/8(M10))
15-3/4 (400)

7-7/8 (200)

2-1/4 (56.5)
5-13/16 (147.5)

1-7/16 (36)
1-13/16 (45.5)

4-1/2 (115)

(Bolt size: 3/8(M10))

1-13/16
45.5

Use tape measure as shown.
Position the end of a tape measure at ▽.

11-5/8 (295)

φ2-9/16 (φ65)

φ2-9/16 (φ65)

2-3/8 (60.5)

1-3/4 (44.5)

1-3/4 (44.5)

Through the wall hole φ2-9/16 (φ65mm)

2-3/8 (60)
5-7/8 (149)

Gas pipe end

Liquid pipe end

2-5/16 (59.5)

6-15/16 (175.5)

Drain hose position

1-15/16 (50)

10-15/16 (278.5)

Keep here the piece cut out from the unit for piping.

31-1/2 (800)

unit: inch (mm)

* The removed pipe port cover can be kept in the mounting plate pocket.

Removed pipe port cover

Ⓐ Mounting plate

2. Boring a wall hole and installing wall embedded pipe

- For walls containing metal frame or metal board, be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.
- Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.
  1) Bore a feed-through hole of 2-9/16 inch (65mm) in the wall so it has a down slope toward the outside.
  2) Insert a wall pipe into the hole.
  3) Insert a wall cover into wall pipe.
  4) After completing refrigerant piping, wiring, and drain piping, caulk pipe hole gap with putty.

Inside ◄─► Outside

Wall embedded pipe (field supply)

Caulking

Wall hole cover (field supply)

φ2-9/16" (φ65mm)

Wall embedded pipe (field supply)

8

3. Laying piping, hoses, and wiring

3-1. Right-side, right-back, or right-bottom piping

1) Attach the drain hose to the underside of the refrigerant pipes with an adhesive vinyl tape.
2) Wrap the refrigerant pipes and drain hose together with insulation tape.

Right-side piping

Remove pipe port cover here for right-side piping.

Right-back piping

Right-bottom piping

Bind refrigerant pipe and drain hose together with insulating tape.

Remove pipe port cover here for right-bottom piping.

3) Pass the drain hose and refrigerant pipes through the wall hole, then set the indoor unit on the mounting plate hooks by using the △ markings at the top of the indoor unit as a guide.

Ⓐ Mounting plate

3-2. Left-side, left-back, or left-bottom piping

1) Replace the drain plug and drain hose.
2) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.

Remove pipe port cover here for left-side piping.

Left-side piping

Left-back piping

Remove pipe port cover here for left-bottom piping.

Left-bottom piping

3) Be sure to connect the drain hose to the drain port in place of a drain plug.

How to set drain plug.

No gap.

Do not apply lubricating oil (refrigeration oil) when inserting. Application of causes deterioration and drain leakage of the plug.

Insert a hexagonal wrench 3/16" (4mm).

4) Shape the refrigerant pipes along the pipe path marking on the mounting plate.
5) Pass drain hose and refrigerant pipes through the wall hole, then set the indoor unit on mounting plate hooks, using the △ markings at the top of indoor unit as a guide.
6) Pull in the inter-unit wire.
7) Connect the inter-unit pipes.

Drain hose

Caulk this hole with putty or caulking material.

Ⓐ Mounting plate

Bind with vinyl tape.

Wrap insulating tape around the bent portion of refrigerant pipes. Overlap at least half the width of the tape with each turn.

8) Wrap the refrigerant pipes and drain hose together with insulation tape as right figure, in case of setting the drain hose through the back of the indoor unit.
9) While exercising care so that the inter-unit wire do not catch indoor unit, press the bottom edge of indoor unit with both hands until it is firmly caught by the mounting plate hooks. Secure indoor unit to the mounting plate with indoor unit fixing screws 3/16 × 1/2 inch (M4 × 12mm).

Inter-unit wire

Ⓐ Mounting plate

Drain hose

Refrigerant pipes

Bottom frame

Ⓗ Indoor unit fixing screw 3/16" × 1/2" (M4 × 12mm) (2 locations)

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Indoor Unit Installation

3-3. Wall embedded piping

- Insert the drain hose to this depth so it won't be pulled out of the drain pipe.

Insert the drain hose to this depth so it won't be pulled out of drain pipe.

Inner wall

1-15/16" (50mm) or more

Drain hose

Vinyl chloride drain pipe (VP-30)

Outer wall

3

4. Wiring

With a multi indoor unit , **install as described in the installation manual supplied with the Multi outdoor unit.**

1) As shown in the illustration on the right-hand side, insert the wires including the ground wire into the conduit and secure them with lock nut onto the conduit mounting plate.
2) Insert the wires including the ground wire into ⒥ tube.
   - Cut ⒥ tube when ⒥ tube is too long.
3) Strip wire ends (9/16 inch (15mm)).
4) Match wire colors with terminal numbers on indoor and outdoor unit's terminal blocks and firmly screw wires to the corresponding terminals.
5) Connect the ground wires to the corresponding terminals.
6) Pull the wires and check that the wires are securely fixed to the terminal block.
7) In case of connecting to an adapter system, run the remote controller cable and attach the S21. (Refer to P5 when connecting to an HA system.)
8) Shape the wires so that the service lid fits securely, then close service lid.

Terminal block
Electrical component box
Wire retainer
Shape wires so that the service lid will fit securely.
Use the specified wire type.

Back

⒥ Tube

Lock nut

Conduit mounting plate

Conduit

Outdoor unit

Use AWG16 if the connection wire length is less than 32.8ft (10m), or AWG14 if it is 32.8ft (10m) or more.

Use AWG 14 wires.

Indoor unit

⚠ **WARNING**

- Do not use tapped wires, stranded wires, extension cords, or starburst connections, as they may cause overheating, electrical shock, or fire.
- Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
- When carrying out wiring connection, take care not to pull at the conduit.
- Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

10

5. Drain piping

1) Connect the drain hose, as described right.

The drain hose should be inclined downward.

No trap is permitted.

Do not put the end of the hose in water.

2) Remove the air filters and pour some water into the drain pan to check the water flows smoothly.

3) When drain hose requires extension, obtain an extension hose commercially available.
Be sure to thermally insulate the indoor section of the extension hose.

Indoor unit drain hose

φ5/8" (φ16mm)

Extension drain hose

Heat insulation tube (field supply)

4) When connecting a rigid polyvinyl chloride pipe (nominal diameter 1/2 inch (13mm)) directly to the drain hose attached to the indoor unit as with embedded piping work, use any commercially available drain socket (nominal diameter 1/2 inch (13mm)) as a joint.

φ5/8" (φ16mm)

Drain hose supplied with the indoor unit

Commercially available drain socket (nominal diameter 1/2 inch (13mm))

Commercially available rigid polyvinyl chloride pipe (nominal diameter 1/2 inch (13mm))

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Trial Operation and Testing

1. Trial operation and testing

1-1 Measure the supply voltage and make sure that it falls in the specified range.

1-2 Trial operation should be carried out in either cooling or heating mode.

- In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
  1) Trial operation may be disabled in either mode depending on the room temperature.
     Use the remote controller for trial operation as described below.
  2) After trial operation is complete, set the temperature to a normal level (78°F to 82°F (26°C to 28°C) in cooling mode, 68°F to 75°F (20°C to 24°C) in heating mode).
  3) For protection, the system disables restart operation for 3 minutes after it is turned off.

1-3 Carry out the test operation in accordance with the operation manual to ensure that all functions and parts, such as fin movement, are working properly.
- The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

Trial operation from remote controller
1) Press "ON/OFF" button to turn on the system. 2) Press "TEMP" button (2 locations) and "MODE" button at the same time. 3) Press "MODE" button twice.   (" ⫶⫶ " will appear on the display to indicate that trial operation mode is selected.) 4) Trial operation terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press "ON/OFF" button.

2. Test items

Test items	Symptom (diagnostic display on RC)	Check
Indoor and outdoor units are installed properly on solid bases.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
System is properly grounded.	Electrical leakage	
The specified wires are used for inter-unit wiring.	Inoperative or burn damage	
Indoor or outdoor unit's air inlet or air outlet has clear path of air. Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote control commands.	Inoperative	
The heat pump or cooling only mode is selectable with the DIP switch of the remote controller.	Remote controller malfunction-ing	

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3P297301-1F

4.4   FTXS15/18/24LVJU

Accessories

Indoor unit   Ⓐ – Ⓜ,

Ⓐ Mounting plate	1	Ⓔ Remote controller holder	1	Ⓙ Tube	1
Ⓑ Mounting plate fixing screw 3/16" × 1" (M4 × 25mm)	9	Ⓕ Fixing screw for remote controller holder 1/8" × 13/16" (M3 × 20mm)	2	Ⓚ Operation manual	1
Ⓒ Titanium apatite deodorizing filter	2	Ⓖ Dry battery AAA. LR03 (alkaline)	2	Ⓛ Installation manual	1
Ⓓ Wireless remote controller	1	Ⓗ Indoor unit fixing screw 3/16" × 1/2" (M4 × 12mm)	2	Ⓜ Screw cover	3

Choosing an Installation Site

• Before choosing the installation site, obtain user approval.

1. Indoor unit

• The indoor unit should be sited in a place where:
   1) the restrictions on installation specified in the indoor unit installation drawings are met,
   2) both air inlet and air outlet have clear paths met,
   3) the unit is not in the path of direct sunlight,
   4) the unit is away from the source of heat or steam,
   5) there is no source of machine oil vapour (this may shorten indoor unit life),
   6) cool (warm) air is circulated throughout the room,
   7) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may shorten the remote controller range,
   8) the unit is at least 3.5ft (1m) away from any television or radio set (unit may cause interference with the picture or sound),
   9) install at the recommended height 6ft (1.8m),
  10) no laundry equipment is located in the space.

2. Wireless remote controller

   1) Turn on all the fluorescent lamps in the room, if any, and find the site where remote control signals are properly received by the indoor unit (within 23ft/7m).

2

Indoor Unit Installation Drawings

■ **How to attach the indoor unit**
Hook the claws of the bottom frame to the mounting plate.
If the claws are difficult to hook, remove the front grille.

■ **How to remove the indoor unit**
Push up the marked area (at the lower part of the front grille) to release the claws. If it is difficult to release, remove the front grille.

Ⓐ Mounting plate

Clip

Bottom frame

Front grille

Mark (rear side)

3

Ⓐ Mounting plate

Ⓑ Mounting plate fixing screw
3/16" × 1" (M4 × 25mm)

The mounting plate should be installed on a wall which can support the weight of the indoor unit.

1-3/16" (30mm) or more from ceiling

Front panel

1-15/16" (50mm) or more from walls (on both sides)

Air filters

Caulk pipe hole gap with putty.

Cut thermal insulation pipe to an appropriate length and wrap it with tape, making sure that no gap is left in the insulation pipe's cut line.

INTELLIGENT EYE sensor

Ⓜ Screw cover (3 pcs)

3/16" × 5/8" (M4 × 16mm)

Wrap the thermal insulation pipe with the finishing tape from bottom to top.

Service lid

■ **Opening service lid**
Service lid is opening/closing type.

■ **Opening method**
1) Remove the service lid screw.
2) Pull out the service lid diagonally down in the direction of the arrow.
3) Pull down.

Ⓒ Titanium apatite deodorizing filter (2 pcs)

Filter frame

Titanium apatite deodorizing filter

Tab

Air filter

Ⓓ Wireless remote controller

Before screwing the remote controller holder to the wall, make sure that control signals are properly received by indoor unit.

Ⓔ Remote controller holder

Ⓕ Fixing screw for remote controller holder
1/8" × 13/16" (M3 × 20mm)

INTELLIGENT EYE sensor

⚠ **CAUTION**

• Do not hit or forcefully push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.
• Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area.

3

Preparation before Installation

1. Removing and installing front panel

• **Removal method**
Hook fingers on the tabs on the left and right of the main body, and open
until the panel stops. Slide the front panel sideways to disengage the
rotating shaft. Then pull the front panel toward you to remove it.

• **Installation method**
Align the tabs of the front panel with the grooves, and push all the way in.
Then close slowly. Push the center of the lower surface of the panel firmly
to engage the tabs.

Push the
rotating shaft
of the front
panel into the
groove.

Upper hook   OOO mark area
(3 locations)

2. Removing and installing front grille

• **Removal method**
1) Remove front panel to remove the air filter.
2) Remove 6 screws from the front grille.
3) In front of the OOO mark of the front grille, there are 3 upper hooks.
   Lightly pull the front grille toward you with one hand, and push down on
   the hooks with the fingers of your other hand.

Push
down.   Upper hook

When there is no work space because the unit is close to ceiling

⚠ **CAUTION**
• Be sure to wear protection gloves.

Place both hands under the center of the front grille, and while pushing up, pull it toward you.

1) Push up.

• **Installation method**
1) Install the front grille and firmly engage the upper hooks (3 locations).
2) Install 6 screws of the front grille.
3) Install the air filter and then mount the front panel.

2) Pull toward you.

4

3. How to set the different addresses

When 2 indoor units are installed in one room, the 2 wireless remote controllers can be set for different addresses.
1) Remove the metal plate electrical wiring cover.
   (Refer to the **When connecting to an HA system**.)
2) Cut the address jumper (JA) on the printed circuit board.
3) Cut the address jumper (JA) in the remote controller.

JA	ADDRESS
EXIST	1
CUT	2

Jumper

ADDRESS:JA	
EXIST	1
CUT	2

4. When connecting to an HA system (wired remote controller, central remote controller etc.)

1) Remove the front grille. (6 screws)
2) Remove the electrical wiring box. (1 screw)
3) Remove the metal plate electrical wiring cover. (4 tabs)
4) Attach the connection cord to the S21 connector and pull the harness out through the notched part in the figure.
5) Replace the electrical wiring cover as it was, and pull the harness around, as shown in the figure.

Screw

3) Remove the metal plate electrical wiring cover.

Pull   Pull   Tab

Tab   Slide

Slide

Main body

Metal plate electrical cover

4) Attach the connection cord to the S21 connector and pull the harness out through the notched part in the figure.

HA connector (S21)

HA connector (S21)

Lay the HA cord as shown in the figure.

5) Replace the electrical wiring cover as it was, and pull the harness around, as shown in the figure.

Refrigerant Piping Work

With a multi indoor unit , **install as described in the installation manual supplied with the Multi outdoor unit.**

1. Flaring the pipe end

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring is properly made.

(Cut exactly at right angles.)   Remove burrs.

Check

Flare's inner surface must be flaw-free.

The pipe end must be evenly flared in a perfect circle.

Make sure that the flare nut is fitted.

Flaring

Set exactly at the position shown below.

	Flare tool for R410A	Conventional flare tool		
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)	
A	0-0.020 inch (0-0.5mm)	0.039-0.059 inch (1.0-1.5mm)	0.059-0.079 inch (1.5-2.0mm)	

Die   A

⚠ WARNING

• Do not use mineral oil on flared part.
• Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
• Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
• Never install a drier to this R410A unit in order to guarantee its lifetime.
• The drying material may dissolve and damage the system.
• Incomplete flaring may cause refrigerant gas leakage.

5

Refrigerant Piping Work

2. Refrigerant piping

⚠ CAUTION

- Use the flare nut fixed to the main unit to prevent it from cracking and deteriorating from age.
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

Align the centers of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.

[Apply oil]

Do not apply refrigeration oil to the outer surface.

Apply refrigeration oil to the inner surface of the flare.

Flare nut

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

[Tighten]

Torque wrench

Spanner

Piping union

Flare nut

Flare nut tightening torque		
Gas side		Liquid side
15,18 class	24 class	
1/2 inch (12.7mm)	5/8 inch (15.9mm)	1/4 inch (6.4mm)
36.5-44.5ft • lbf (49.5-60.3N • m)	45.6-55.6ft • lbf (61.8-75.4N • m)	10.4-12.7ft • lbf (14.2-17.2N • m)

2-1. Caution on piping handling

1) Protect the open end of the pipe against dust and moisture.
2) All pipe bends should be as gentle as possible. Use a pipe bender for bending.

Rain

Be sure to place a cap.

If no flare cap is available, cover the flare mouth with tape to keep dirt or water out.

Wall

2-2. Selection of copper and heat insulation materials

- When using commercial copper pipes and fittings, observe the following:
1) Insulation material: Polyethylene foam
   Heat transfer rate: 0.041 to 0.052W/mK (0.024 to 0.030Btu/fth°F (0.035 to 0.045kcal/mh°C))
   Be sure to use insulation that is designed for use with HVAC Systems.

Inter-unit wire

Gas pipe

Liquid pipe

Gas pipe insulation

Liquid pipe insulation

Finishing tape

Drain hose

2) Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Gas side		Liquid side	Gas pipe thermal insulation		Liquid pipe thermal insulation
15,18 class	24 class		15,18 class	24 class	
O.D. 1/2 inch (12.7mm)	O.D. 5/8 inch (15.9mm)	O.D. 1/4 inch (6.4mm)	I.D. 9/16-5/8 inch (14-16mm)	I.D. 5/8-25/32 inch (16-20mm)	I.D. 5/16-13/32 inch (8-10mm)
Minimum bend radius			Thickness 13/32 inch (10mm) Min.		
1-9/16 inch (40mm) or more		1-3/16 inch (30mm) or more			
Thickness 0.031 inch (0.8mm) (C1220T-O)					

3) Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

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Indoor Unit Installation

1. Installing the mounting plate

- The mounting plate should be installed on a wall which can support the weight of the indoor unit.
  1) Temporarily secure the mounting plate to the wall, make sure that the plate is completely level, and mark the boring points on the wall.
  2) Secure the mounting plate to the wall with screws.

Recommended mounting plate retention spots and dimensions

2. Boring a wall hole and installing wall embedded pipe

- For walls containing metal frame or metal board, be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.
- Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.
  1) Bore a feed-through hole of 3-1/8 inch (80mm) in the wall so it has a down slope toward the outside.
  2) Insert a wall pipe into the hole.
  3) Insert a wall cover into wall pipe.
  4) After completing refrigerant piping, wiring, and drain piping, caulk pipe hole gap with putty.

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Indoor Unit Installation

3. Laying piping, hoses, and wiring

3-1. Right-side, right-back, or right-bottom piping

1) Attach the drain hose to the underside of the refrigerant pipes with an adhesive vinyl tape.
2) Wrap the refrigerant pipes and drain hose together with insulation tape.

Right-side piping

Remove pipe port cover here for right-side piping.

Right-bottom piping

Right-back piping

Remove pipe port cover here for right-bottom piping.

Bind refrigerant pipe and drain hose together with insulating tape.

3) Pass the drain hose and refrigerant pipes through the wall hole, then set the indoor unit on the mounting plate hooks by using the △ markings at the top of the indoor unit as a guide.

Ⓐ Mounting plate

3-2. Left-side, left-back, or left-bottom piping

1) Replace the drain plug and drain hose.
2) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.

Remove pipe port cover here for left-side piping.

Left-side piping

Left-back piping

Remove pipe port cover here for left-bottom piping.

Left-bottom piping

3) Be sure to connect the drain hose to the drain port in place of a drain plug.

How to set drain plug.

No gap.

Do not apply lubricating oil (refrigeration oil) when inserting. Application of causes deterioration and drain leakage of the plug.

Insert a hexagonal wrench 3/16" (4mm).

4) Shape the refrigerant pipes along the pipe path marking on the mounting plate.
5) Pass drain hose and refrigerant pipes through the wall hole, then set the indoor unit on mounting plate hooks, using the △ markings at the top of indoor unit as a guide.
6) Pull in the inter-unit wire.
7) Connect the inter-unit pipes.

Drain hose

Caulk this hole with putty or caulking material.

Bind with vinyl tape.

Ⓐ Mounting plate

Wrap insulating tape around the bent portion of refrigerant pipes. Overlap at least half the width of the tape with each turn.

8) Wrap the refrigerant pipes and drain hose together with insulation tape as right figure, in case of setting the drain hose through the back of the indoor unit.
9) While exercising care so that the inter-unit wire do not catch indoor unit, press the bottom edge of indoor unit with both hands until it is firmly caught by the mounting plate hooks. Secure indoor unit to the mounting plate with indoor unit fixing screws 3/16 × 1/2 inch (M4 × 12mm).

Inter-unit wire

Drain hose

Ⓐ Mounting plate

Refrigerant pipes

Bottom frame

Ⓗ Indoor unit fixing screw 3/16" × 1/2" (M4 × 12mm) (2 locations)

8

3-3. Wall embedded piping

• Insert the drain hose to this depth so it won't be pulled out of the drain pipe.

Insert the drain hose to this depth so it won't be pulled out of drain pipe.

Inner wall

1-15/16" (50mm) or more

Drain hose

Vinyl chloride drain pipe (VP-30)

Outer wall

3

4. Wiring

With a multi indoor unit **, install as described in the installation manual supplied with the Multi outdoor unit.**

1) As shown in the illustration on the right-hand side, insert the wires including the ground wire into the conduit and secure them with lock nut onto the conduit mounting plate.
2) Insert the wires including the ground wire into Ⓙ tube.
3) Strip wire ends (9/16 inch (15mm)).
4) Match wire colors with terminal numbers on indoor and outdoor unit's terminal blocks and firmly screw wires to the corresponding terminals.
5) Connect the ground wires to the corresponding terminals.
6) Pull the wires and check that the wires are securely fixed to the terminal block.
7) In case of connecting to an adapter system, run the remote controller cable and attach the S21. (Refer to P5 when connecting to an HA system.)
8) Shape the wires so that the service lid fits securely, then close service lid.

Terminal block
Electrical component box
Wire retainer
Shape wires so that the service lid will fit securely.
Use the specified wire type.

Back

Ⓙ Tube

Lock nut

Conduit mounting plate

Conduit

Outdoor unit

Use AWG16 if the connection wire length is less than 32.8ft (10m), or AWG14 if it is 32.8ft (10m) or more.

Use AWG 14 wires.

Indoor unit

⚠ **WARNING**
• Do not use tapped wires, stranded wires, extension cords, or starburst connections, as they may cause overheating, electrical shock, or fire.
• Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
• When carrying out wiring connection, take care not to pull at the conduit.
• Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

9

Indoor Unit Installation

5. Drain piping

1) Connect the drain hose, as described right.

The drain hose should be inclined downward.

No trap is permitted.

Do not put the end of the hose in water.

2) Remove the air filters and pour some water into the drain pan to check the water flows smoothly.

3) When drain hose requires extension, obtain an extension hose commercially available.
Be sure to thermally insulate the indoor section of the extension hose.

$\phi 5/8''$ ($\phi 16$mm)

Indoor unit drain hose

Extension drain hose

Heat insulation tube (field supply)

4) When connecting a rigid polyvinyl chloride pipe (nominal diameter 1/2 inch (13mm)) directly to the drain hose attached to the indoor unit as with embedded piping work, use any commercially available drain socket (nominal diameter 1/2 inch (13mm)) as a joint.

$\phi 5/8''$ ($\phi 16$mm)

Drain hose supplied with the indoor unit

Commercially available drain socket (nominal diameter 1/2 inch (13mm))

Commercially available rigid polyvinyl chloride pipe (nominal diameter 1/2 inch (13mm))

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Trial Operation and Testing

1. Trial operation and testing

1-1   Measure the supply voltage and make sure that it falls in the specified range.

1-2   Trial operation should be carried out in either cooling or heating mode.

- In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
  1) Trial operation may be disabled in either mode depending on the room temperature.
     Use the remote controller for trial operation as described below.
  2) After trial operation is complete, set the temperature to a normal level (78°F to 82°F (26°C to 28°C) in cooling mode, 68°F to 75°F (20°C to 24°C) in heating mode).
  3) For protection, the system disables restart operation for 3 minutes after it is turned off.

1-3   Carry out the test operation in accordance with the operation manual to ensure that all functions and parts, such as fin movement, are working properly.
- The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

Trial operation from remote controller

1) Press "ON/OFF" button to turn on the system.
2) Press "TEMP" button (2 locations) and "MODE" button at the same time.
3) Press "MODE" button twice.
   (" ͡ " will appear on the display to indicate that trial operation mode is selected.)
4) Trial operation terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press "ON/OFF" button.

2. Test items

Test items	Symptom (diagnostic display on RC)	Check
Indoor and outdoor units are installed properly on solid bases.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
System is properly grounded.	Electrical leakage	
The specified wires are used for inter-unit wiring.	Inoperative or burn damage	
Indoor or outdoor unit's air inlet or air outlet has clear path of air. Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote control commands.	Inoperative	
The heat pump or cooling only mode is selectable with the DIP switch of the remote controller.	Remote controller malfunctioning	

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4.5   FDXS09/12LVJU, CDXS15/18/24LVJU

Accessories

Clamp metal	Insulation for fitting	Sealing pad			Drain hose	Washer for hanger bracket	Sealing material	Clamp	Washer fixing plate	Screws for duct flanges
1 pc.	1 each	Large and small 1 each	3 pcs. (only for CDXS)	1 pc.	1 pc.	8 pcs.	2 pcs.	6 pcs.	1 set	1 set
	for gas pipe / for liquid pipe	Large / Small	2 large / 1 small / Stored in outlet vent	Hanger (right) insulation				One is spare	4 pcs.	24 pcs.

Conduit mounting plate	Screws for conduit mounting plate	Insulation tube	Air filter	Wireless remote controller	Remote controller holder	Dry battery AAA. LR03 (alkaline)	Receiver kit		
1 pc.	2 pcs.	1 pc.	1 pc.	1 pc.	1 pc.	1 set	1 pc.	1 pc.	2 pcs.
						2 pcs.	Mounting frame	Decorative cover	Screws M4 × 25

[Other]	• Operation manual • Installation manual

2

Choosing an Installation Site

• Before choosing the installation site, obtain user approval.

1. Indoor unit

⚠ CAUTION

• When moving the unit during or after unpacking, make sure to lift it by holding its lifting lugs. Do not exert any pressure on other parts, especially the refrigerant piping, drain piping and flange parts.
Wear protective gear (such as gloves) when installing the unit.
• If you think the humidity inside the ceiling might exceed 86°F (30°C) and RH80%, reinforce the insulation on the unit body. Use glass wool or polyethylene foam as insulation so that the thickness is more than 0.4in (10mm) and fits inside the ceiling opening.

• Optimum air distribution is ensured.
• The air passage is not blocked.
• Condensate can drain properly.
• The ceiling is strong enough to bear the weight of the indoor unit.
• A false ceiling does not seem to be at an incline.
• Sufficient clearance for maintenance and servicing is ensured.
• Piping between the indoor and outdoor units is within the allowable limits.
(Refer to the installation manual for the outdoor unit.)
• The indoor unit, outdoor unit, power supply wiring and transmission wiring is at least 3.3ft (1m) away from televisions and radios. This prevents image interference and noise in electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if a 3.3ft (1m) allowance is maintained.)

■ **Use suspension bolts to install the unit. Check whether or not the ceiling is strong enough to support the weight of the unit. If there is a risk that the ceiling is not strong enough, reinforce the ceiling before installing the unit.**
(Installation pitch is marked on the carton box for installation. Refer to it to check for points requiring reinforcing.) Select the *H dimension such that a downward slope of at least 1/100 is ensured as indicated in "**Drain Piping Work**".
• The installation pitch is listed on the packing material, and should be checked when deciding whether to reinforce the location or not.

■ **Select the signal receiver mounting location according to the following conditions:**
• Install the signal receiver, which has a built-in temperature sensor, near the intake vent where there is convection of air and it can get an accurate reading of the room's temperature. If the intake vent is in another room or the unit cannot be installed near the intake vent for any other reason, install it 5ft (1.5m) above the floor on a wall where there is convection.
• In order to get an accurate reading of the room's temperature, install the signal receiver in a location where it is not exposed directly to cold or hot air from the air discharge grille or to direct sunlight.
• Since the receiver has a built-in light receptor to receive signals from the wireless remote controller, do not mount it in a location where the signal may be blocked by a curtain, etc.

⚠ CAUTION

If the signal receiver is not installed in a location where there is convection of air, it may be unable to get an accurate reading of the room's temperature.

3

Choosing an Installation Site

2. Wireless remote controller

- Turn on all the fluorescent lamps in the room, if any, and find the site where remote controller signals are properly received by the indoor unit (within 13ft (4m)).

3. Outdoor unit

- For outdoor unit installation, see the installation manual supplied with the outdoor unit.

Preparations before Installation

■ **Relation of the unit to the suspension bolt positions.**
- Install the inspection opening on the control box side where maintenance and inspection of the control box are easy. Install the inspection opening also in the lower part of the unit.

■ **Make sure the range of the unit's external static pressure is not exceeded.**
(See the technical documentation for the range of the external static pressure setting.)

■ **Open the installation hole. (Pre-set ceilings)**
- Once the installation hole is opened in the ceiling where the unit is to be installed, pass refrigerant piping, drain piping, transmission wiring, and remote controller wiring (unneeded if using a wireless remote controller) to the unit's piping and wiring holes. See "**Refrigerant Piping Work**", "**Drain Piping Work**", and "**Wiring**".
- After opening the ceiling hole, make sure ceiling is level if needed. It might be necessary to reinforce the ceiling frame to prevent shaking. Consult an architect or carpenter for details.

■ **Install the suspension bolts.**
(Use W3/8 to M10 suspension bolts.)
- Use a hole-in-anchor, sunken insert, sunken anchor for existing ceilings, and a sunken insert, sunken anchor or other part to be procured in the field to reinforce the ceiling to bearing the weight of the unit. (Refer to Fig.)

	FDXS09/12	CDXS15/18	CDXS24
A	27-9/16 (700)	35-7/16 (900)	43-5/16 (1000)
B	29-1/8 (740)	37 (940)	44-7/8 (1140)

Note: All the above parts are field supplied.

■ **Mount chamber cover and air filter (accessory).**
For bottom intake, replace the chamber cover and the protection net in the procedure listed in Fig.
(1) Remove the protection net. (6 locations)
    Remove the chamber cover. (7 locations)
(2) Reattach the removed chamber cover in the orientation shown in Fig. (7 locations)
    Reattach the removed protection net in the orientation shown in Fig. (6 locations)
    Refer to Fig. for the direction of the protection net.

4

3

(3) Attach sealing pad as shown in the right figure. (Stored in outlet vent) (only for CDXS)
(In order to take in the air inside the ceiling, and when not taking in air from outdoor air, it is not necessary to stick.)
  • Attach the sealing pad (accessory) to the plate metal sections which are not covered by anti-sweat material.
  • Make sure there are no gaps between the different pieces of sealing pad.

(3)

Sealing pad (Small)
(accessory)

Air inlet

Air outlet

Sealing pad (Large)
(accessory)

Anti-sweat material
included with the product

For rear intake type

Sealing pad (Small)
(accessory)

Air inlet

Air outlet

Sealing pad
(Large)
(accessory)

Anti-sweat material
included with the product

For bottom intake type

(4) Attach the hanger (right) insulation to the right hanger. (Stored in outlet vent)
(See the below figure for the sticking base line.)

Hanger bracket (right)

Hanger (right) insulation
(accessory)

Slit

Sticking base line

Ⓑ

Ⓑ Arrow view

(5) Attach the air filter (accessory) in the manner shown in the diagram.

In case of bottom side

In case of back side

Main unit

Push

Filter

Push

Attach the filter to the main unit while pushing down on the bends. *

* FDXS09/12, CDXS15/18 : 2 bends
  CDXS24 : 3 bends

■ **When two indoor units are installed in one room, one of the two wireless remote controllers can be easily set for another addresses.**

(PCB in the indoor unit)
• Cut the jumper JA on PCB.

JA
ADDRESS
JB
JC

ADDRESS: JA	
EXIST	1
CUT	2

(Wireless remote controller)
• Cut the jumper J4.

J4

J4	ADDRESS
EXIST	1
CUT	2

5

Indoor Unit Installation

<< As for the parts to be used for installation work, be sure to use the provided accessories and specified parts designated by our company. >>

■ **Install the indoor unit temporarily.**
   • Attach the hanger bracket to the suspension bolt.
     Be sure to fix it securely by using a nut and washer
     from the upper and lower sides of the hanger
     bracket. (Refer to Fig.)

   [PRECAUTION]
   Since the unit uses a plastic drain pan, prevent
   welding spatter and other foreign substances from
   entering the outlet hole during installation.

■ **Adjust the height of the unit.**

■ **Check the unit is horizontally level.**

[Securing the hanger bracket]   [How to secure washers]

Part to be procured
in the field

Washer for
hanging bracket
(accessory)

Hanger
bracket

Tighten
(double nut)

Insert
below washer
Washer
fixing plate
(accessory)

Level

Vinyl tube

⚠ **CAUTION**

   • Make sure the unit is installed level using a level or a plastic tube filled with water. In using a plastic tube instead of a level,
     adjust the top surface of the unit to the surface of the water at both ends of the plastic tube and adjust the unit horizontally.
     (One thing to watch out for in particular is if it is installed so that the slope is not in the direction of the drain piping, as this
     might cause leaking.)

■ **Tighten the upper nut.**

■ **Mounting the receiver.**
   Mount the receiver as shown below.

① Press the receiver into the
   mounting frame.

② Mount the completed
   assembly using two screws.

③ Press the decorative cover into
   the mounting frame.

Note) Mount the Remote controller cord far enough away from strong electrical wires (such as distribution wires for
       electrical lights, air conditioners, etc.) and from weak electrical wires (such as wires for telephones, intercoms, etc.).

For heat pump: If your feet feel cold when using the heating function, it is
                recommended that the air outlet grille shown at below be attached.

45°
(Adjustable angle)

Outdoor unit Installation

Install as described in the installation manual supplied with the outdoor unit.

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Refrigerant Piping Work

See the installation manual supplied with the outdoor unit.

1. Flaring the pipe end

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring is properly made.

(Cut exactly at right angles.)   Remove burrs

Flaring

Set exactly at the position shown below.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.02in (0-0.5mm)	0.04-0.06in (1.0-1.5mm)	0.06-0.08in (1.5-2.0mm)

Die

Check

Flare's inner surface must be flaw-free.

The pipe end must be evenly flared in a perfect circle.

Make sure that the flare nut is fitted.

⚠ WARNING

- Do not use mineral oil on flared part.
- Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
- Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
- Never install a drier to this R410A unit in order to guarantee its lifetime.
- The drying material may dissolve and damage the system.
  Incomplete flaring may cause refrigerant gas leakage.

2. Refrigerant piping

1) To prevent gas leakage, apply refrigeration machine oil to the inner surface of the flare. (Use refrigeration oil for R410A)

2) Align the centers of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.
   - Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and escaping gas.

Flare nut tightening torque			
Gas side			Liquid side
3/8 inch (9.5mm)	1/2 inch (12.7mm)	5/8 inch (15.9mm)	1/4 inch (6.4mm)
24.1-29.4ft•lbf (32.7-39.9N•m)	36.5-44.5ft•lbf (49.5-60.3N•m)	45.6-55.6ft•lbf (61.8-75.4N•m)	10.4-12.7ft•lbf (14.2-17.2N•m)

⚠ CAUTION

- **Overtightening may damage the flare and cause leaks.**

3) **After the work is finished, make sure to check that there is no gas leak.**

Do not apply refrigeration oil to the outer surface.

Apply refrigeration oil to the inner surface of the flare.

Torque wrench

Flare nut

Spanner

Flare nut

Piping union

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

4) **After checking for gas leaks, be sure to insulate the pipe connections.**
   - Insulate using the insulation for fitting included with the liquid and gas pipes. Besides, make sure the insulation for fitting on the liquid and gas piping has its seams facing up.
     (Tighten both edges with clamp.)
   - For the gas piping, wrap the medium sealing pad over the insulation for fitting (flare nut part).

Gas Piping Insulation Procedure

Piping insulation material (main unit)

Insulation for fitting (accessory)

Flare nut connection

Turn seams up

Attach to base

Main unit   Main unit

Clamp (accessory)

Piping insulation material (Field supplied)

Measure the length of the gas pipe as you will have to cover it with the sealing tape.

Small sealing pad (accessory)

Wrap the sealing tape around the gas pipe.

Liquid Piping Insulation Procedure

Liquid pipe

Gas pipe

Piping insulation material (main unit)

Insulation for fitting (accessory)

Flare nut connection

Turn seams up

Attach to base

Main unit

Clamp (accessory)

Piping insulation material (Field supplied)

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Refrigerant Piping Work

⚠ **CAUTION**

Be sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

Cautions on Pipe Handling
• Protect the open end of the pipe against dust and moisture.
  (Tighten both edges with clamp.)
• All pipe bends should be as gentle as possible. Use a pipe bender for bending.
  (See the minimum bend radius in the table below.)

Selection of Copper and Heat Insulation materials
When using commercial copper pipes and fittings, observe the following:
• Insulation material: Polyethylene foam
  Heat transfer rate: 0.041 to 0.052W/mK (0.024 to 0.030Btu/fth°F (0.035 to 0.045kcal/mh°C))
  Be sure to use insulation that is designed for use with HVAC Systems.
• Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Gas side			Liquid side	Gas pipe thermal insulation			Liquid pipe thermal insulation
O.D. 3/8 inch (9.5mm)	O.D. 1/2 inch (12.7mm)	O.D. 5/8 inch (15.9mm)	O.D. 1/4 inch (6.4mm)	I.D. 15/32-19/32 inch (12-15mm)	I.D. 9/16-5/8 inch (14-16mm)	I.D. 5/8-25/32 inch (16-20mm)	I.D. 5/16-13/32 inch (8-10mm)
Minimum bend radius				Thickness 13/32 inch (10mm) Min.			
1-3/16 inch (30mm) or more	1-9/16 inch (40mm) or more	1-15/16 inch (50mm) or more	1-3/16 inch (30mm) or more				
Thickness 0.031 inch (0.8mm) (C1220T-O)		Thickness 0.039 inch (1.0mm) (C1220T-O)	Thickness 0.031 inch (0.8mm) (C1220T-O)				

Also, when subject to high humidity, heat insulation of the refrigerant piping (the unit piping and branch piping) must be further reinforced.
Reinforce the insulation when installing the unit near bathrooms, kitchens, and other similar locations.
Refer to the following:
 • 86°F (30°C), more than 75% RH: 13/16 inch (20mm) Min. in thickness
 If the insulation is not sufficient, condensation may form on the surface of the insulation.
• Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

Drain Piping Work

⚠ **CAUTION**

Make sure all water is out before making the duct connection.

■ Install the drain piping.
• Make sure the drain works properly.
• The diameter of the drain pipe should be greater than or equal to the diameter of the connecting pipe (vinyl tube; pipe size: 25/32 inch (20mm); outer dimension: 1-1/32 inch (26mm)).

• Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air pockets from forming.

3

⚠ CAUTION

• **Water accumulating in the drain piping can cause the drain to clog.**

- To keep the drain tube from sagging, space hanging wires every 3 (1) to 5ft (1.5m).
- Use the drain hose and the metal clamp. Insert the drain hose fully into the drain socket and firmly tighten the metal clamp with the upper part of the tape on the hose end. Tighten the metal clamp until the screw head is less than 1/8 inch (4mm) from the hose.
- The two areas below should be insulated because condensation may form there causing water to leak.
  - Drain piping passing indoors
  - Drain sockets

Referring the figure below, insulate the metal clamp and drain hose using the included large sealing pad.

Clamp metal (accessory)

Large sealing pad (accessory)

Clamp metal (accessory)

Tape

Drain hose (accessory)

φ1/8 inch (4mm)

<PRECAUTIONS>

Drain piping connections
- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger.
- Do not twist or bend the drain hose, so that excessive force is not applied to it. (This type of treatment may cause leaking.)

■ **After piping work is finished, check drainage flows smoothly.**
- Gradually insert approximately 1L of water into the drain pan to check drainage in the manner described below.
  - Gradually pour approximately 1L of water from the outlet hole into the drain pan to check drainage.
  - Check the drainage.

Air outlet

Portable pump

Bucket   Refrigerant pipes

Drain outlet

Installing the Duct

Connect the duct supplied in the field.
Air inlet side

- Attach the duct and intake-side flange (field supply).
- Connect the flange to the main unit with accessory screws (in 16, 20 or 24 positions).
- Wrap the intake-side flange and duct connection area with aluminum tape or something similar to prevent air escaping.

⚠ CAUTION

- When attaching a duct to the intake side, be sure also to attach an air filter inside the air passage on the intake side. (Use an air filter whose dust collecting efficiency is at least 50% in a gravimetric technique.)

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Installing the Duct

Outlet side

- Connect the duct according to the inside of the outlet-side flange.
- Wrap the outlet-side flange and the duct connection area with aluminum tape or something similar to prevent air escaping.

Flange
(field supply)

Connection screw
(accessory)

Main unit

Flange

Insulation material
(field supply)

Aluminum tape
(field supply)

Aluminum tape
(field supply)

Air inlet side

Outlet side

⚠ **CAUTION**

- Be sure to insulate the duct to prevent condensation from forming. (Material: glass wool or polyethylene foam, 1 inch (25mm) thick)
- Use electric insulation between the duct and the wall when using metal ducts to pass metal laths of the net or fence shape or metal plating into wooden buildings.

Wiring

See the installation manual supplied with the outdoor unit.

■ **HOW TO CONNECT WIRINGS.**
- Wire only after removing the control box cover as shown in the Fig.

Control box cover

Wiring Diagram
(rear)
*Remote controller wiring

⚠ • Wrap the power supply wiring and the remote controller wiring with the sealing material as shown in the figure below.
(Otherwise, moisture or small creatures such as insects from the outside may cause short-circuit inside the control box.)
Attach securely so that there are no gaps.

Sealing material
(accessory)

Wiring
through hole

Wire

Outside
unit

Inside
unit

[How to adhere it]

Conduit mounting plate
(accessory)

Screw
(accessory)

Power supply wiring
Ground wire

Lock nut
(field supply)

Conduit
(field supply)

10

3

⚠ CAUTION

• When doing the wiring, make sure the wiring is neat and does not cause the control box cover to stick up, then close the cover firmly. When attaching the control box cover, make sure you do not pinch any wires.
• Outside the unit, separate the low voltage wiring (remote controller wiring) and high voltage wiring (ground wire and power supply wiring) at least 5in so that they do not pass through the same place together. Proximity may cause electrical interference, malfunctions, and breakage.

[PRECAUTION]

• See also the "Electrical Wiring Diagram Label" when wiring the unit for power supply.

[Connecting electrical wiring]

• **Power supply wiring and ground wire**
Remove the control box cover.
Next, pull the wires into the unit through the conduit and thread them through the insulation tube (accessory), then connect to the power wiring terminal block (4P).
Secure the wires covered by the insulation tube with the clamp (accessory).
Be sure to put the part of the sheathed vinyl into the control box.

⚠ WARNING

• **Do not use tapped wires, stranded wires, extension cords, or starburst connections, as they may cause overheating, electrical shock, or fire.**

11

Trial Operation and Testing

1. Trial operation and testing

(1) Measure the supply voltage and make sure that it falls in the specified range.
(2) Trial operation should be carried out in either cooling or heating mode.

Trial operation from remote controller
(1) Press ON/OFF button to turn on the system. (2) Simultaneously press center of TEMP button and MODE button. (3) Press MODE button twice. ("ア" will appear on the display to indicate that Trial Operation mode is selected.) (4) Trial operation mode terminates in approx. 30 minutes and switches into normal mode. To quit the trial operation, press ON/OFF button.

In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
• Trial operation may be disabled in either mode depending on the room temperature.
• After trial operation is complete, set the temperature to a normal level (79°F (26°C) to 82°F (28°C) in cooling mode, 68°F (20°C) to 75°F (24°C) in heating mode).
• For protection, the system disables restart operation for 3 minutes after it is turned off.

(3) Carry out the test operation in accordance with the Operation Manual to ensure that all functions and parts, are working properly.
 * The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
 * If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is turned on again.

2. Test items

Test items	Symptom (diagnostic display on RC)	Check
Indoor and outdoor units are installed properly on solid bases.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Drain pipe is properly installed.	Water leakage	
System is properly grounded.	Electrical leakage	
The specified wires are used for interconnecting wire connections.	Inoperative or burn damage	
Indoor or outdoor unit's air inlet or discharge has clear path of air. Shut-off valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote controller commands.	Inoperative	

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5. FDMQ Series
5.1 FDMQ09/12/15/18/24RVJU

CONTENTS

1. SAFETY CONSIDERATIONS

Read these **SAFETY CONSIDERATIONS for Installation** carefully before installing an air conditioner or heat pump. After completing the installation, make sure that the unit operates properly during the startup operation.
Instruct the user on how to operate and maintain the unit.
Inform users that they should store this installation manual with the operation manual for future reference.
Always use a licensed installer or contractor to install this product.
Improper installation can result in water or refrigerant leakage, electric shock, fire, or explosion.
Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

⚠ **DANGER** ··········· Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** ········· Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ··········· Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** ················· Indicates situations that may result in equipment or property-damage accidents only.

⚠ **DANGER** ─────────────────

- Refrigerant gas is heavier than air and replaces oxygen. A massive leak can lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
- Do not ground units to water pipes, gas pipes, telephone wires, or lightning rods as incomplete grounding can cause a severe shock hazard resulting in severe injury or death. Additionally, grounding to gas pipes could cause a gas leak and potential explosion causing severe injury or death.
- If refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce toxic gas if it comes into contact with fire. Exposure to this gas could cause severe injury or death.
- After completing the installation work, check that the refrigerant gas does not leak throughout the system.
- Do not install unit in an area where flammable materials are present due to risk of explosions that can cause serious injury or death.

- Safely dispose all packing and transportation materials in accordance with federal/state/local laws or ordinances. Packing materials such as nails and other metal or wood parts, including plastic packing materials used for transportation may cause injuries or death by suffocation.

⚠ **WARNING** ─────────────────

- Only qualified personnel must carry out the installation work. Installation must be done in accordance with this installation manual. Improper installation may result in water leakage, electric shock, or fire.
- When installing the unit in a small room, take measures to keep the refrigerant concentration from exceeding allowable safety limits. Excessive refrigerant leaks, in the event of an accident in a closed ambient space, can lead to oxygen deficiency.
- Use only specified accessories and parts for installation work. Failure to use specified parts may result in water leakage, electric shock, fire, or the unit falling.
- Install the air conditioner or heat pump on a foundation strong enough that it can withstand the weight of the unit. A foundation of insufficient strength may result in the unit falling and causing injuries.
- Take into account strong winds, typhoons, or earthquakes when installing. Improper installation may result in the unit falling and causing accidents.
- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local, state, and national regulations. An insufficient power supply capacity or improper electrical construction may lead to electric shock or fire.
- Make sure that all wiring is secured, that specified wires are used, and that no external forces act on the terminal connections or wires. Improper connections or installation may result in fire.
- When wiring, position the wires so that the electrical wiring box cover can be securely fastened. Improper positioning of the electrical wiring box cover may result in electric shock, fire, or the terminals overheating.
- Before touching electrical parts, turn off the unit.
- The circuit must be protected with safety devices in accordance with local and national codes, i.e. a circuit breaker.
- Securely fasten the outdoor unit terminal cover (panel). If the terminal cover/panel is not installed properly, dust or water may enter the outdoor unit causing fire or electric shock.
- When installing or relocating the system, keep the refrigerant circuit free from substances other than the specified refrigerant (R410A) such as air. Any presence of air or other foreign substance in the refrigerant circuit can cause an abnormal pressure rise or rupture, resulting in injury.
- Do not change the setting of the protection devices. If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may occur.

3

1

⚠ **CAUTION** ─────────────────────────

- Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.

- Do not allow children to play on or around the unit to prevent injury.

- The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.

- Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.

- Install drain piping to proper drainage. Improper drain piping may result in water leakage and property damage.

- Insulate piping to prevent condensation.

- Be careful when transporting the product.

- Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.

- Do not use a charging cylinder. Using a charging cylinder may cause the refrigerant to deteriorate.

- Refrigerant R410A in the system must be kept clean, dry, and tight.

    (a) Clean and Dry -- Foreign materials (including mineral oils such as SUNISO oil or moisture) should be prevented from getting into the system.
    (b) Tight -- R410A does not contain any chlorine, does not destroy the ozone layer, and does not reduce the earth's protection again harmful ultraviolet radiation. R410A can contribute to the greenhouse effect if it is released. Therefore take proper measures to check for the tightness of the refrigerant piping installation. Read the chapter *Refrigerant Piping Work* and follow the procedures.

- Since R410A is a blend, the required additional refrigerant must be charged in its liquid state. If the refrigerant is charged in a state of gas, its composition can change and the system will not work properly.

- The indoor unit is for R410A. See the catalog for indoor models that can be connected. Normal operation is not possible when connected to other units.

- Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit far away from fluorescent lamps as much as possible.

- Indoor units are for indoor installation only. Outdoor units can be installed either outdoors or indoors. This unit is for indoor use.

- Do not install the air conditioner or heat pump in the following locations:
    (a) Where a mineral oil mist or oil spray or vapor is produced, for example, in a kitchen.
    Plastic parts may deteriorate and fall off or result in water leakage.
    (b) Where corrosive gas, such as sulfurous acid gas, is produced.
    Corroding copper pipes or soldered parts may result in refrigerant leakage.
    (c) Near machinery emitting electromagnetic waves.
    Electromagnetic waves may disturb the operation of the control system and cause the unit to malfunction.

    (d) Where flammable gas may leak, where there is carbon fiber, or ignitable dust suspension in the air, or where volatile flammables such as thinner or gasoline are handled. Operating the unit in such conditions can cause a fire.

- Take adequate measures to prevent the outdoor unit from being used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke, or fire. Instruct the user to keep the area around the unit clean.

⚠ **NOTE** ─────────────────────────

- The indoor unit should be positioned where the unit and inter-unit wires (outdoor to indoor) are at least 3.3ft (1m) away from any televisions or radios. (The unit may cause interference with the picture or sound.) Depending on the radio waves, a distance of 3.3ft (1m) may not be sufficient to eliminate the noise.

- Dismantling the unit, treatment of the refrigerant, oil and additional parts must be done in accordance with the relevant local, state, and national regulations.

- Do not use the following tools that are used with conventional refrigerants: gauge manifold, charge hose, gas leak detector, reverse flow check valve, refrigerant charge base, vacuum gauge, or refrigerant recovery equipment.

- If the conventional refrigerant and refrigerator oil are mixed in R410A, the refrigerant may deteriorate.

- This air conditioner or heat pump is an appliance that should not be accessible to the general public.

- As design pressure is 604 psi, the wall thickness of field-installed pipes should be selected in accordance with the relevant local, state, and national regulations.

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2

2. BEFORE INSTALLATION

When unpacking the indoor unit or moving the unit after unpacked, hold the hangers (4 places) and do not apply force to other parts (particularly refrigerant piping, drain piping).

- For installation of the outdoor unit, refer to the installation manual attached to the outdoor unit.
- Do not throw away the accessories until the installation work is completed.
- After the indoor unit is carried into the room, to avoid the indoor unit from getting damaged, take measures to protect the indoor unit with packing materials.
  (1) Determine the route to carry the unit into the room.
  (2) Do not unpack the unit until it is carried to the installation location.
        Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the indoor unit.
- Have the user actually operate the air conditioner while looking at the operation manual.
  Instruct the user how to operate the air conditioner (particularly operation procedures, and temperature adjustment).
- Do not use the air conditioner in a salty atmosphere such as coastal areas, vehicles, vessels or where voltage fluctuation is frequent such as factories.
- Take off static electricity from the body when carrying out wiring and the electrical wiring box cover is removed.
  The electric parts may be damaged.

2-1 ACCESSORIES

Name	(1) Clamp metal	(2) Drain hose	(3) Duct flange connection screw	
			09/12 class	15/18/24 class
Quantity	1	1	10	18
Shape				

Name	Fitting insulation	(6) Sealing pad	(7) Sealing pad	(8) Clamp
Quantity	1 each	1	2	8
Shape	Thin (4) For liquid pipe / Thick (5) For gas pipe	Large (Dark gray)	Medium (Dark gray)	

Name	(9) Washer fixing plate	(10) Wire sealing pad	(11) Washer for hanger bracket
Quantity	4	2	8
Shape		Small (Gray)	

Name	(12) Conduit mounting plate	Others
Quantity	1	
Shape		• Operation manual • Installation manual • Warranty

2-2 OPTIONAL ACCESSORIES

- **A remote controller is required for the indoor unit.**
- Select a remote controller from the table below according to user request and install in an appropriate place.

Remote controller type	
Wired type	BRC1E73
Wireless type	BRC082A43

- **The indoor unit can be switched to lower suction. (Refer to 4. PREPARATION BEFORE INSTALLATION.)**
  The side cover plate (KDBD63A160) is required in the case of wiring from the bottom for underside suction.
  For installation work, refer to the instruction sheet provided with the side cover plate.

CARRY OUT THE WORK GIVING CAUTION TO THE FOLLOWING ITEMS AND AFTER THE WORK IS COMPLETED CHECK THESE AGAIN.

1. Items to be checked after the installation work is completed

Items to be checked	Symptom	Check
Are the indoor and outdoor units rigidly fixed?	Drop · vibration · noise	
Are the installation works of the outdoor and indoor units completed?	Does not operate · burnout	
Is the insulation of refrigerant piping and drain piping completely carried out?	Water leakage	
Does the drain flow out smoothly?	Water leakage	
Is the power supply voltage identical to that stated in the manufacturer's label on the air conditioner?	Does not operate · burnout	
Are you sure that there is no wrong wiring or piping or no loose wiring?	Does not operate · burnout	
Is grounding completed?	Danger in case of leakage	
Are the sizes of electric wiring according to the specification?	Does not operate · burnout	
Are any of air outlets or inlets of the indoor and outdoor units blocked with obstacles? (It may lead to capacity drop due to fan speed drop or malfunction of equipment.)	Does not cool / Does not heat	
Is the external static pressure set correctly?	Does not cool / Does not heat	

Also review the "SAFETY CONSIDERATIONS".

3

2. Items to be checked at time of delivery

Items to be checked	Check
Have you carried out field setting? (if necessary)	
Are the electrical wiring box cover, air filter, suction grille attached?	
Does the cool air discharge during the COOL operation and the warm air discharge during the HEAT operation? Does the indoor unit makes unpleasant sound of air discharge?	
Did you explain about operations while showing the operation manual to your user?	
Have you explained the description of COOL, HEAT, DRY and AUTOMATIC (cooling/heating) given in the operation manual to the user?	
If you set the fan speed at thermostat OFF, did you explain the set fan speed to the user.	
Did you hand the operation manual over to the user?	
Have you checked that there is no generation of abnormal noise (i.e., noise resulting from contamination or missing parts)?	
Is the printed circuit board switch not on the emergency (EMG.) side? The switch is factory set to the normal (NORM.) side.	
If an optional accessory is in use, did you check the operation of the optional accessory and make field settings as needed?	
Have you explained failure examples of **3. CHOOSING AN INSTALLATION SITE**?	

Items to be checked at time of delivery

Test items	Check
Did you explain about operations while showing the operation manual to the user?	
Did you hand the operation manual over to the user?	

Points for explanation about operations

The items with ⚠ WARNING and ⚠ CAUTION marks in the operation manual are the items pertaining to possibilities for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask the users to read the operation manual.

Note to the installer
Be sure to instruct customers how to properly operate the unit (especially operating different functions, and adjusting the temperature) by having them carry out operations while looking at the manual.

3. CHOOSING AN INSTALLATION SITE

Hold the hangers at 4 locations to move the indoor unit when unpacking or after unpacked, and do not apply force to the piping (refrigerant and drain) and air outlet flange. If the temperature and humidity in the ceiling is likely to exceed 86°F (30°C), RH80%, use the additional insulation stick to the indoor unit.
Use the insulation such as glass wool or polyethylene that has thickness of 3/8 inch (10mm) or more. However, keep the insulated outside dimension smaller than the ceiling opening so that the unit may go through the opening at installation.

(1) Select the installation location that meets the following conditions and get approval of the user.
  • Where the cool and warm air spreads evenly in the room.
  • Where there are no obstacles in the air passage.
  • Where drainage can be ensured.
  • Where the ceiling's lower surface is not remarkably inclined.
  • Where there is sufficient strength to withstand the mass of the indoor unit. (If the strength is insufficient, the indoor unit may vibrate and get in contact with the ceiling and generate unpleasant chattering noise.)
  • Where a space sufficient for installation and service can be ensured. **(Refer to Fig. 1 and Fig. 2)**
  • Where the piping length between the indoor and the outdoor units is ensured within the allowable length. (Refer to the installation manual attached to the outdoor unit.)
  • Where there is no risk of flammable gas leak.

[Installation Space Requirements]

Maintenance space for drain pan
Maintenance space for electrical components
17-11/16 (450) or more
Secure the maintenance space for the drain pan and electrical components.

Fig. 1 unit: inch (mm)

13/16 (20) or more
H1=9-5/8 (245)*
H2 or more*
100 (2500) or more
Ceiling
Floor

Fig. 2 unit: inch (mm)

• * Dimension H1 indicates the product height.
• * Secure a downward slope of at least 1/100 specified in **7. DRAIN PIPING WORK** and determine dimension H2.

<Failure example>
If there is an obstacle in the airflow path or proper installation space is not provided, the indoor unit will cause air volume reduction and take in air blown out of the indoor unit, thus resulting in performance degradation or turning the thermostat OFF frequently.

⚠ **CAUTION**

- Install the indoor and outdoor units, power supply wiring, remote controller wiring and transmission wiring at least 1 meter away from televisions or radios to prevent image interference or noise.
  (Depending on the radio waves, a distance of 1 meter may not be sufficient to eliminate the noise.)
- Install the indoor unit as far as possible from fluorescent lamps.
  If a wireless remote controller kit is installed, the transmission distance may be shorter in a room where an electronic lighting type (inverter or rapid start type) fluorescent lamp is installed.

(2) Use suspension bolts to install the unit.
Check whether or not the ceiling is strong enough to support the weight of the unit. If there is a risk that the ceiling is not strong enough, reinforce the ceiling before installing the unit.

4. PREPARATION BEFORE INSTALLATION

(1) Check the relation of location between the ceiling opening and the indoor unit suspension bolts. (unit: inch (mm))
- Provide one of the following service spaces for the maintenance and inspection of the electrical wiring box and drain pump or for other services.
  1. Inspection ports 1 and 2 (17-11/16 inch (450mm) × 17-11/16 inch (450mm)) (Fig. 3-2) and a minimum space of 11-13/16 inch (300mm) at the bottom of the product (Fig. 3-1).
  2. Inspection port 1 (17-11/16 inch (450mm) × 17-11/16 inch (450mm)) on the electrical wiring box side and inspection port 2 on the bottom of the product. (Fig. 4, arrow A-1)
  3. Inspection port 3 on the bottom of the product and on the bottom side of the electrical wiring box. (Fig. 4, arrow A-2)

< In the case of (1)-1 > unit: inch (mm)
Fig. 3-1

Fig. 3-2 unit: inch (mm)

< In the case of (1)-2, 3 >
Fig. 4 unit: inch (mm)

Table 1 unit: inch (mm)

	B	C	D	E
09/12 class	1-15/16 (50)	39-3/8 (1000)	40-7/8 (1038)	51-3/16 (1300)
15/18/24 class	(0)	27-9/16 (700)	29-1/16 (738)	39-3/8 (1000)

(2) Mount canvas ducts to the air outlet and inlet so that the vibration of the indoor unit will not be transmitted to the ducts or ceiling. Furthermore, attach sound absorbing material (thermal insulation material) to the duct inner walls and anti-vibration rubber to the suspension bolts (refer to **8. DUCT WORK**).

(3) The indoor unit is set to standard external static pressure.
- If external static pressure is higher or lower than the standard set value, the remote controller may be used to make on-site setting change in the external static pressure.
  Refer to **10. FIELD SETTING**.

5

(4) Open installation holes
(in the case of installation onto the existing ceiling).
- Open the installation holes on the ceiling of the installation location, and work on the refrigerant piping, drain piping, remote controller wiring, and wiring between the indoor and outdoor units to the piping connection port and wiring connection port of the indoor unit (refer to each piping and wiring procedure items).
- Ceiling framework reinforcement may be required in order to keep the ceiling horizontal and prevent ceiling vibration after opening the ceiling holes. For details, consult your building and upholstery work contractors.

(5) Install the suspension bolts.
- Use M8 or M10 bolts for hanging the indoor unit. Use hole-in-anchors for the existing bolts and embedded inserts or foundation bolts for new bolts, and fix the indoor unit firmly to the building so that it may withstand the mass of the unit.
In addition, adjust clearance (1-15/16 inch (50mm) - 3-15/16 inch (100mm)) from the ceiling in advance.

<Installation examples>

Ceiling slab
Foundation bolt
Long nut or turn-buckle
Indoor unit
Suspension bolt

Note) Components shown in the figure above are all local procurement.

(6) In the case of changing the preset suction to underside suction, replace the chamber cover and the suction flange. (Refer to Fig. 5)
1. Remove the suction flange and chamber cover.
2. Replace the suction flange and the chamber cover.

⚠ **CAUTION**

- Secure a sufficient maintenance space for the drain pan and electrical components before installing the indoor unit.
- Secure a sufficient maintenance space for the filter chamber, and peripheral components before installing the indoor unit.

Suction flange
Replacement
Chamber cover

Fig. 5

5. INDOOR UNIT INSTALLATION

Depending on the optional parts, it may be easier to attach them before installing the indoor unit. Refer to also the installation manual attached to the optional parts.
As for the parts to be used for installation work, be sure to use the provided accessories and specified parts designated by our company.

(1) Install the indoor unit temporarily.
- Fix the hanger to the suspension bolt.
Make sure to securely fix the hanger with the nut and the washer for hanger bracket (11) from the upper and lower side. **(Refer to Fig. 6)**
If the washer fixing plate (9) is used, the upper side washer for hanger bracket (11) may be protected from falling off. **(Refer to Fig. 7)**

[Fix the hanger]

Field supply
Washer for hanger bracket (11)
Tighten (double nut)

Fig. 6

[Washer fixing]

Washer fixing plate (9)
Upper nut
Insert
Washer for hanger bracket (11)

Fig. 7

- Keep the air outlet covered with a protective sheet to prevent weld spatter and other foreign materials from entering the indoor unit and damaging the resin drain pan.
(If holes or cracks are generated in the resin drain pan, water can leak.)

(2) Adjust the height of the unit.
(3) Check the unit is horizontally level. **(Refer to Fig. 8)**
(4) Remove the washer fixing plate (9) used for preventing the washer for hanger bracket (11) from dropping and tighten the upper side nut.

Hanger
Bottom of product
Vinyl tube
Level

Feed water into the tube and set the indoor unit to the water levels on the left and right.

[Maintaining horizontality]
Fig. 8

6

3

⚠ **CAUTION**

- **Install the indoor unit leveled.**
  If the indoor unit is inclined and the drain piping side gets high, it may cause malfunction of float switch and result in water leakage.
- **Attach nuts on the upper and lower side of hanger.**
  If there is no upper nut and the lower nut is over-tightened, the hanger and the top plate will deform and cause abnormal sound.
- **Do not insert materials other than that specified into the clearance between the hanger and the washer for hanger bracket (11).**
  Unless the washers are properly attached, the suspension bolts may come off from the hanger.

⚠ **WARNING**

The indoor unit must be securely installed on a place that can withstand the mass.
If the strength is insufficient, the indoor unit may fall down and cause injuries.

6. REFRIGERANT PIPING WORK

Refer to the installation manual for the outdoor unit also.
- Carry out insulation of both gas and liquid refrigerant piping securely. If not insulated, it may cause water leakage. For gas piping, use insulation material of which heat resistant temperature is not less than 230°F (110°C).
  For use under high humidity, strengthen the insulation material for refrigerant piping. If not strengthened, the surface of insulation material may sweat.

(1) Flaring the pipe end
    1. Cut the pipe end with a pipe cutter.
    2. Remove burrs with the cut surface facing downward, so that the filings do not enter the pipe.
    3. Put the flare nut on the pipe.
    4. Flare the pipe.
    5. Check that the flaring has been done correctly.

Cut exactly at right angles.   Remove burrs

Flaring
Set exactly at the position shown below.

A
Die

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.02in (0-0.5mm)	0.04-0.06in (1.0-1.5mm)	0.06-0.08in (1.5-2.0mm)

Check

The flare's inner surface must be flaw-free.

The pipe end must be evenly flared in a perfect circle.

Make sure that the flare nut is fitted.

⚠ **WARNING**

- **Do not apply mineral oil to the flare.**
- **Prevent mineral oil from getting into the system as this would reduce the service life of the units.**
- Never use piping which has been used for previous installations. Only use parts which are delivered with this unit.
- Never install a dryer to this R410A unit in order to guarantee its service life.
- The drying material may dissolve and damage the system.
- Incomplete flaring may result in refrigerant gas leakage.

⚠ **CAUTION**

- Use the flare nut fixed to the main unit. (This is to prevent the flare nut from cracking as a result of deterioration over time.)
- Use a pipe cutter and flare suitable for the type of refrigerant.
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.) (Refer to Fig. 10)
- Use a torque wrench when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.
- Protect the open end of the pipe against dust and moisture.
- Do not allow anything other than the designated refrigerant to get mixed into the refrigerant circuit, such as air, etc. If any refrigerant gas leaks while working on the unit, ventilate the room thoroughly right away.
- Use only the flare nuts attached to the air conditioner. If other flare nuts are used, it may cause refrigerant leakage.

(2) Refrigerant piping
    1. To prevent gas leakage, apply refrigeration machine oil only to the inner surface of the flare. (Use refrigeration oil for R410A)
    2. Align the centers of both flares and tighten the flare nuts 3 or 4 turns by hand, then tighten them fully with a spanner and a torque wrench.
      • Use a torque wrench when tightening the flare nuts to prevent damage to the flare nuts and gas leakage. **(Refer to Fig. 9)**

Flare nut tightening torque			
Gas side			Liquid side
3/8 inch (9.5mm)	1/2 inch (12.7mm)	5/8 inch (15.9mm)	1/4 inch (6.4mm)
24.1-29.4ft•lbf (32.7-39.9N•m)	36.5-44.5ft•lbf (49.5-60.3N•m)	45.6-55.6ft•lbf (61.8-75.4N•m)	10.4-12.7ft•lbf (14.2-17.2N•m)

7

• The refrigerant is pre-charged in the outdoor unit.

Tighten

Torque wrench

Spanner

Piping union

Flare nut

Fig. 9

Apply oil

Do not apply refrigeration oil to the outer surface.

Apply refrigeration oil only to the inner surface of the flare.

Flare nut

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

Fig. 10

⚠ **CAUTION**

Do not have oil adhere to the screw fixing part of resin parts.
If oil adheres, it may weaken the strength of screwed part.

Do not tighten flare nuts too tight.
If a flare nut cracks, the refrigerant may leak.

Insulation of field piping must be carried out up to the connection inside the casing.
If the piping is exposed to the atmosphere, it may cause sweating, burn due to touching the piping, electric shock or a fire due to the wiring touching the piping.

• After leak test, referring to **Fig. 11**, insulate both the gas and liquid piping connection with the attached fitting insulation (4) and (5) to prevent the pipings from getting exposed.
Then, tighten both the ends of insulating material with the clamp (8).
• Wrap the sealing pad (Medium) (7) around the fitting insulation (4) and (5) (flare nut section), both the gas and liquid piping.
• Make sure to bring the seam of fitting insulation (4) and (5) to the top.

Gas Piping Insulation Procedure

Fitting insulation (5)

Flare nut connection

Piping insulating material (unit)

Wind around the piping until top of the flare nut connection, beginning at the base.

Bring the seam to the top.

Do not leave clearance.

Unit

Clamp (8)

Piping insulating material (field supply)

Tighten the portion where overlapped by the piping insulating material.

Sealing pad (Medium) (7)

Do not expose the piping in order to prevent the vapor condensation.

Gas piping

Liquid piping

Liquid Piping Insulation Procedure

Fitting insulation (4)

Flare nut connection

Piping insulating material (unit)

Wind around the piping, beginning at the base.

Bring the seam to the top.

Do not leave clearance.

Unit

Clamp (8)

Piping insulating material (field supply)

Tighten the portion where overlapped by the piping insulating material.

Sealing pad (Medium) (7)

Do not expose the piping in order to prevent the vapor condensation.

Fig. 11

NOTE

1. In case of refrigerant shortage due to forgetting additional refrigerant charge etc., it will result in malfunction such as does not cool or does not heat.
Refer to the outdoor unit installation manual or technical document for refrigerant piping.

8

7. DRAIN PIPING WORK

(1) Carry out drain piping.
Carry out drain piping so that drainage is ensured.
- Select the piping diameter equal to or larger than (except for riser) that of the connection piping (polyvinyl chloride piping, nominal diameter 1 inch (25mm), outside diameter 1-1/4 inch (32mm)).
- Install the drain piping as short as possible with downward inclination of 1/100 or more and without such that air may not stagnate. **(Refer to Fig. 12)** (It may cause abnormal sound such as bubbling noise.)

40-60 inch
(1000-1500mm)

Support
Downward inclination of 1/100 or more

Good

Wrong

Fig. 12

⚠ **CAUTION**

If drain stagnates in the drain piping, the piping may be clogged.

- If sufficient downward inclination cannot be ensured, carry out upward drain piping.
- Install supports at a distance of 40 to 60 inch (1000 to 1500mm) so that the piping may not deflect. **(Refer to Fig. 12)**
- Make sure to use the attached drain hose (2) and the clamp metal (1).
  Insert the drain hose (2) into the drain socket up to the point where the socket diameter becomes larger.
  Put the clamp metal (1) to the taped hose end and tighten the clamp metal (1) with torque 10.6~13.3lbf • ft (120~150 N·cm).

Indoor unit   Clamp metal (1)
Drain hose (2)
Tape

Fig. 13

⚠ **CAUTION**

- Do not tighten the clamp metal (1) with the torque more than the specified value.
  The drain hose (2), the socket or the clamp metal (1) may be damaged.

- Wrap the vinyl tape around the end of the clamp metal (1) so that the sealing pad (Large) (6) to be used at the next process may not be damaged with the clamp end or bend the tip of the clamp metal (1) inward as shown. **(Refer to Fig. 14)**

<In case of sticking vinyl tape>

Tightened part
approx. 90°
Vinyl tape

Stick vinyl tape without tearing the sealing pad (Large) (6).

<In case of bending the tip>

Tightened part
approx. 90°

Bend the tip without tearing the sealing pad (Large) (6).

Fig. 14

< Caution to be taken when carrying out upward drain piping (Refer to Fig. 15) >
- The maximum height of the drain riser is 29-9/16 inch (675mm). Since the drain pump mounted on this indoor unit is a high head type, from the characteristic point of view, the higher the drain riser the lower the draining noise.
  Therefore, the drain riser of 11-13/16 inch (300mm) or higher is recommended.
- For upward drain piping, keep the horizontal piping distance of 11-13/16 inch (300mm) or less between the drain socket root to the drain riser.

unit: inch (mm)

Ceiling slab
11-13/16 (300) or less   40-60
(1000-1500)   Support
(33-7/16 (850) or less)
Adjustable
(26-9/16 (675) or less)
Clamp metal (1)
Upward drain piping
(Field supply)
Drain hose (2)

Drain hose (2)

Level or upward inclination

Keep the drain hose level or make a slight up-grade so that air may not stagnate in the drain hose.
If air stagnates, the drain may flow oppositely when the drain pump stops and generate abnormal sound.

Fig. 15

3

⚠ **CAUTION**

- To avoid the attached drain hose (2) getting excessive force, do not bend nor twist it.
  It may cause water leakage.
- As for drain piping connection, do not connect the drain hose directly to a sewage that gives off ammonia odor. (The ammonia in the sewage may go through the drain piping and corrode the heat exchanger of the indoor unit.)
- In case of centralized drain piping, carry out piping work according to the procedure shown in the following **Fig. 16**.

29-9/16 inch (675mm)

Centralized drain piping

(Make a downward inclination of 1/100 or more to avoid stagnation of air.)

⚠ If water stagnates in the drain piping, it may cause clogging of drain piping.

Fig. 16

- As for the size of centralized drain piping, select the size that meets the capacity of indoor units to be connected. (Refer to the technical document)
- Positioning the upward drain piping at an angle may cause float switch malfunction and lead to water leakage.
- While replacing with new indoor unit, use the attached new drain hose (2) and the clamp metal (1).
  If an old drain hose or a clamp metal is used, it may cause water leakage.

(2) After piping work is finished, check if drainage flows smoothly.

[When the electric wiring work is finished]

- Gradually pour 1/4 gal of water from the inspection port at the bottom of the drain socket on the left side of the drain socket into the drain pan giving caution to avoid splashing water on the electric components such as drain pump and confirm drainage by operating the indoor unit under cooling mode according to **10. FIELD SETTING**. **(Refer to Fig. 17)**

Electrical wiring box
Drain socket
Filling port
Drain pan
Electrical wiring box cover
Terminal block for wiring between the indoor and outdoor units
Air outlet
Socket for maintenance (with rubber cap)
Access window
Drain pump position
Screw
Plastic container for pouring water

[Method of adding water]
Fig. 17

[When the electric wiring work is not finished]

- The electric wiring works (including grounding) must be carried out by a qualified electrician.

- If a qualified person is not present, after the electric wiring work is finished, check the drainage according to the method specified in **[When the electric wiring work is finished]**.
  1. Open the electrical wiring box cover and connect the ground wiring to the ground terminal.
  2. Make sure the electrical wiring box cover is closed before turning on the power supply.
     - Throughout the whole process, carry out the work giving caution to the wiring around the electrical wiring box so that the connectors may not come off.
  3. Gradually pour 1 litre of water from the air outlet on the left side of the drain socket into the drain pan giving caution to avoid splashing water on the electric components such as drain pump. **(Refer to Fig. 17)**
  4. When the power supply is turned on, the drain pump will operate. Drainage can be checked at the transparent part of the drain socket.
     (The drain pump will automatically stop after 10 minutes.)
     The drainage of water can be confirmed with water level change in the drain pan through the access window.
     - Do not connect the drain piping directly to the sewage that gives off ammonia odor.
       The ammonia in the sewage may go through the drain piping and corrode the heat exchanger of the indoor unit.
     - Do not apply external force to the float switch. (It may result in malfunction)
     - Do not touch the drain pump.
       Touching the drain pump may cause electric shock.
  5. Turn off the power supply after checking drainage, and remove the power supply wiring.
  6. Attach the electrical wiring box cover as before.

(3) Sweating may occur and result in water leakage. Therefore, make sure to insulate the following 2 locations (drain piping that laid indoors and drain sockets).

- Use the provided sealing pad (large) (6), and perform the thermal insulation of the clamp metal (1) and drain hose (2) after checking the drainage of water. **(Refer to Fig. 18)**

Sealing pad (Large) (6)
No clearance is allowed.
Unit

Drain hose (2)
Sealing pad (Large) (6)
Start wrapping from where the clamp metal (1) is tightened.
Clamp metal (1)
Wrap the sealing pad (Large) (6) so that the clamp metal (1) end side may be doubled.

Fig. 18

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8. DUCT WORK

Pay the utmost attention to the following items and conduct the duct work.

- Check that the duct is not in excess of the setting range of external static pressure for the unit. (Refer to the technical datasheet for the setting range.)
- Attach a canvas duct each to the air outlet and air inlet so that the vibration of the equipment will not be transmitted to the duct or ceiling.
  Use a sound-absorbing material (insulation material) for the lining of the duct and apply vibration insulation rubber to the suspension bolts.
- At the time of duct welding, perform the curing of the duct so that the sputter will not come in contact with the drain pan for the filter.
- If the metal duct passes through a metal lath, wire lath, or plate of a wooden structure, separate the duct and wall electrically.
- Be sure to heat insulate the duct for the prevention of dew condensation. (Material: Glass wool or styrene foam; Thickness: 1 inch (25mm))
- Be sure to attach the field supply air filter to the air inlet of the unit or field supply inlet in the air passage on the air suction side. (Be sure to select an air filter with a duct collection efficiency of 50 weight percent.)
- Explain the operation and washing methods of the locally procured components (i.e., the air filter, air inlet grille, and air outlet grille) to the user.
- Locate the air outlet grille on the indoor side for the prevention of drafts in a position where indirect contact with people.
- The air conditioner incorporates a function to adjust the fan to rated speed automatically. **(10. FIELD SETTING)** Therefore, do not use booster fans midway in the duct.

Connection method of ducts on air inlet and outlet sides.

- Connect the field supply duct in alignment with the inner side of the flange.
- Connect the flange and unit with the duct flange connection screw (3).
- Wrap aluminium tape around the flange and duct joint in order to prevent air leakage.

Fig. 19

⚠ **CAUTION**

Connect the flange and unit with the flange connection screw (3) regardless of whether the duct is connected to the air inlet side.

9. ELECTRIC WIRING WORK

9-1 GENERAL INSTRUCTIONS

- Make certain that all electric wiring work is carried out by qualified personnel according to the applicable legislation and this installation manual, using a separate dedicated circuit.
  Insufficient capacity of the power supply circuit or improper electrical construction may lead to electric shock or a fire.
- Make sure to install a ground fault circuit interrupter.
  Failure to do so may cause electric shock and a fire.
- Do not turn on the power supply (branch switch, branch overcurrent circuit breaker) until all the works are finished.
- Multiple number of indoor units are connected to one outdoor unit. Name each indoor unit as A-unit, B-unit ….. and the like. When these indoor units are wired to the outdoor unit, always wire the indoor unit to the terminal indicated with the same symbol on the terminal block. If the wiring and the piping are connected to the different indoor units and operated, it will result in malfunction.
- Make sure to ground the air conditioner.
  Grounding resistance should be according to applicable legislation.
- Do not connect the ground wiring to gas or water pipings, lightning conductor or telephone ground wiring.
  - Gas piping ....Ignition or explosion may occur if the gas leaks.
  - Water piping ....Hard vinyl tubes are not effective grounds.
  - Lightning conductor or telephone ground wiring ....
    Electric potential may rise abnormally if struck by a lightning bolt.
- For electric wiring work, refer to also the "WIRING DIAGRAM" attached to the electrical wiring box cover.
- Carry out wiring between the outdoor units, indoor units and the remote controllers according to the wiring diagram.
- Carry out installation and wiring of the remote controller according to the "installation manual" attached to the remote controller.
- Do not touch the Printed Circuit Board assembly. It may cause malfunction.

⚠ **WARNING**

- Do not use tapped wires, extension cords, or starburst connections, as they may cause overheating, electric shock, or fire.
- Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
- Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

⚠ **CAUTION**

- When clamping wiring, use the included clamping material to prevent outside pressure being exerted on the wiring connections and clamp firmly. When doing the wiring, make sure the wiring is neat and does not cause the electrical wiring box cover to stick up, then close the cover firmly.
- Outside the unit, separate the low voltage wiring (remote controller wiring) and high voltage wiring (wiring between units, ground, and other power wiring) at least 2 in. so that they do not pass through the same place together. Proximity may cause electrical interference, malfunctions, and breakage.

9-2 WIRING EXAMPLE

For the wiring of outdoor units, refer to the installation manual attached to the outdoor units.

Confirm the system type.

- **Multi system:** 2 through 6 (The number of connectable units will vary according to model) indoor units connect to 1 outdoor unit. The indoor unit is controlled by remote controller connected to each indoor unit.

| Multi system |

Fig. 20

NOTE

1. All transmission wiring except for the remote controller wires is polarized and must match the terminal symbol.
2. In case a shielding wire is to be used, connect a shielded portion with the ⏚ of a remote controller terminal block. (Also, connect the ground for the remote control to a grounded metal part.)

9-3 SPECIFICATION FOR FIELD WIRE

Table 2

	Wire	Size	Length (ft.)
Wiring between units	Wire size and length must comply with local codes.	–	–
Remote controller wiring	Sheathed (2 wire)	AWG 18 - 16	Max.1640*
Wiring to ground terminal	Wire size and length must comply with local codes.	–	–

* This will be the total extended length in the system when doing group control.

9-4 WIRING CONNECTION METHOD

⚠ CAUTION FOR WIRING

- For connection to the terminal block, use ring type crimp style terminals with insulation sleeve or insulate the wirings properly.

Fig. 21

- Connect the terminal as shown in Fig. 22. When installing a single core wire.
- Do not carry out soldering finish when stranded wirings are used. (Otherwise, the loosening of wiring may result in abnormal heat radiation.)

Fig. 22

(Abnormal heating may occur if the wirings are not tightened securely.)

- Use the required wirings, connect them securely and fix these wirings securely so that external force may not apply to the terminals.
- Use a proper screw driver for tightening the terminal screws. If an improper screw driver is used, it may damage the screw head and a proper tightening cannot be carried out.
- If a terminal is over tightened, it may be damaged. Refer to the table shown below for tightening torque of terminals.

Table 3   unit: lbf • ft (N • m)

	Tightening torque
Terminal block for remote controller (6P)	0.58 - 0.72 (0.79 - 0.98)
Terminal block for power supply (4P)	0.87 - 1.06 (1.18 - 1.44)

- Do not carry out soldering finish when stranded wirings are used.

⚠ WARNING

- When wiring, form the wirings orderly so that the electrical wiring box cover can be securely fastened. If the electrical wiring box cover is not in place, the wirings may come out or be sandwiched by the box and the lid and cause electric shock or a fire.

(1) Remove the electrical wiring box cover.

Fig. 23

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(2) Attach the conduit to the conduit mounting plate (12).

Fig. 24-1

- Attach the wire sealing pad (small) (10) to the conduit, the wiring between the indoor and outdoor units, and the ground wiring.

(Viewed from the side)

Fig. 24-2

- Loosen the screws (2 points) in part A.

Fig. 24-3

- Insert the hook part of the conduit mounting plate (12) into part B and secure the conduit mounting plate (12) with the screws loosened (2 points).

NOTE
Remove the wiring fixture if you have difficulty performing this step.

Fig. 24-4

(3) Connect the wiring into the electrical wiring box through the wiring intake beside the electrical wiring box.

Fig. 25

(4) Follow the instructions below and perform wiring in the electrical wiring box.

Fig. 26

NOTE
Secure the wiring between the wiring intake and conduit with the clamp (8) so that the wiring will not become loose.

(5) Mount the electrical wiring box cover and wrap the wire sealing pad (small) (10) so that the wiring through hole will be covered by the sealing pad.
- Seal the clearance around the wirings with putty or insulating material (field supply).
  (If insects and small animals get into the indoor unit, short-circuiting may occur inside the electrical wiring box.)

Fig. 27

(6) Securely fix each wiring with the provided clamp material (8).

Fig. 28

- See the installation manual supplied with the outdoor unit.

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10. FIELD SETTINGS

─ ⚠ **CAUTION** ──────────────

Before carrying out field setting, check the items mentioned in
**1. Items to be checked after the installation work is
completed** on page 3.
- Check if all the installation and piping works for the air
  conditioner are completed.
- Check that the outside panel and piping cover of the indoor
  and outdoor units are closed.

< FIELD SETTINGS >
**After turning on the power supply, carry out field setting
from the remote controller according to the installation
state.**
- Carry out setting at 3 places, "Mode No.", "FIRST CODE No."
  and "SECOND CODE No.".
  The settings shown by ☐ in the following tables indicate
  those when shipped from the factory.
- The method of setting procedure and operation is shown in
  the installation manual attached to the remote controller.

  NOTE 🖅
  - Though setting of "Mode No." is carried out as a group, if
    you intend to carry out individual setting by each indoor
    unit or confirmation after setting, carry out setting with the
    Mode No. shown in the parenthesis().

- Ask the user to keep the manual attached to the remote
  controller together with the operation manual.
- Do not carry out settings other than those shown in the table.
- Settings are performed by selecting "Mode No.", "FIRST
  CODE No.", and "SECOND CODE No.".

10-1 SETTINGS FOR EXTERNAL STATIC PRESSURE
- Make settings in either method (a) or method (b).

  **(a) Make settings with Air volume automatic adjustment
  function.**
  "Air volume automatic adjustment" function: The air volume
  is adjusted to the rated air volume automatically.

─ ⚠ **CAUTION** ──────────────

- Be sure to check that the external static pressure is within
  the specification range before making settings. The external
  static pressure will not be automatically adjusted and air
  volume insufficiency or water leakage may result if the
  external static pressure is outside the range. (Refer to the
  technical document for the setting range of external static
  pressure.)

(1) Check that the electrical wiring and duct work have been
completed.
(If the closing damper is set midway, be sure to check that
the damper is opened. Furthermore, check that the air
passage on the suction side is provided with an air filter
(field supply)).

(2) If air conditioner has more than one air outlet and air inlet,
be sure to make adjustments so that the air volume ratio of
each air outlet and the corresponding air inlet will conform
to the designed air volume ratio.
In that case, set the operating mode to "Fan". (In the case
of changing the air volume, press the fan speed button on
the remote controller and change the current selection to
"High", "Medium", or "Low".)

(3) Make settings to adjust the air volume automatically.
After setting the operating mode to "Fan", set the air
conditioner to field setting mode with the operation of the
air conditioner stopped. Select Mode No. [21] (11 in the
case of batch settings), select FIRST CODE No. "7", and
set the SECOND CODE No. to "03".
Return to the "Basic screen" ("Normal mode" if a wireless
remote controller is used), and press the ON/OFF button.
The operation lamp is lit, and the indoor unit will go into fan
operation for air volume automatic adjustments (at which
time, do not adjust the opening of the air outlet or inlet).
The air volume adjustments will automatically terminate
approximately 1 to 15 minutes after the indoor unit comes
into operation, and the operation lamp will be OFF and the
indoor unit will come to a stop.

Table 4

Mode No.	FIRST CODE No.	Setting content	SECOND CODE No.		
			01	02	03
11(21)	7	Air volume adjustment	OFF	Air volume adjustment completion	Air volume adjustment start

─ ⚠ **CAUTION** ──────────────

- If airflow pathway changes, such as duct and air outlet
  changes, are made after air volume adjustments, be sure to
  make "Air volume automatic adjustment" again.
- If airflow pathway changes, such as duct and air outlet
  changes, are made after **11. TRIAL OPERATION AND
  TESTING** or air conditioner relocation, contact your dealer.

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(b) Select external static pressure with the remote controller.
Check with Mode No. [21] per indoor unit that the SECOND CODE No. for the above "Air volume adjustment" is set to "01" (OFF). (The SECOND CODE No. is factory set to "01" (OFF).) Change the SECOND CODE No. by referring to the table below according to the external static pressure of the duct to be connected.

Table 5   09/12 class

External static pressure	Mode No.	FIRST CODE No.	SECOND CODE No.
30Pa			03
40Pa			04
50Pa			05
60Pa			06
70Pa			07
80Pa			08
90Pa	13(23)	6	09
100Pa			10
110Pa			11
120Pa			12
130Pa			13
140Pa			14
150Pa			15

Table 5   15/18/24 class

External static pressure	Mode No.	FIRST CODE No.	SECOND CODE No.
50Pa			05
60Pa			06
70Pa			07
80Pa			08
90Pa			09
100Pa	13(23)	6	10
110Pa			11
120Pa			12
130Pa			13
140Pa			14
150Pa			15

10-2 SETTING WHEN AN OPTIONAL ACCESSORY IS ATTACHED

- For setting when attaching an optional accessory, refer to the installation manual attached to the optional accessory.

10-3 SETTING FILTER SIGN

- A message to inform the air filter cleaning time will be indicated on the remote controller.
- Set the SECOND CODE No. shown in the Table 6 according to the amount of dust or pollution in the room.
- The periodical filter cleaning time can be shortened depending on the environment.

Table 6

Contamination	Hours until indication	Mode No.	FIRST CODE No.	SECOND CODE No.
Normal	Approx. 2500 hrs		0	01
More contaminated	Approx. 1250 hrs	10(20)		02
With indication			3	01
No indication*				02

* Use "No indication" setting when cleaning indication is not necessary such as the case of periodical cleaning being carried out.

10-4 REMOTE CONTROL SETTINGS

<In the case of using a wireless remote controller>

- In the case of using a wireless remote controller, address settings for the wireless remote controller are required. For settings, refer to the installation manual provided with the wireless receiver kit.

11. TRIAL OPERATION AND TESTING

11-1 TRIAL OPERATION AND TESTING

- Trial operation should be carried out in either COOL or HEAT operation.

1. **Measure the supply voltage and make sure that it is within the specified range.**

2. **In COOL operation, select the lowest programmable temperature; in HEAT operation, select the highest programmable temperature.**

3. **Carry out the trial operation following the instructions in the operation manual to ensure that all functions and parts, are working properly.**
   - To protect the air conditioner, restart operation is disabled for 3 minutes after the system has been turned off.

4. **After trial operation is complete, set the temperature to a normal level (78°F to 82°F (26°C to 28°C) in COOL operation, 68°F to 75°F (20°C to 24°C) in HEAT operation).**
   - When operating the air conditioner in COOL operation in winter, or HEAT operation in summer, set it to the trial operation mode using the following method.

     Refer to | For wired remote controller | on page 16.

     Refer to | For wireless remote controller | on page 17.

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For wired remote controller

1) Set to COOL or HEAT operation using the remote controller.
2) Press and hold Cancel button for 4 seconds or longer. Service settings menu is displayed.
3) Select Test Operation in the service settings menu, and press Menu/OK button. Basic screen returns and "Test Operation" is displayed at the bottom.
4) Press On/Off button within 10 seconds, and the test operation starts.
 Monitor the operation of the indoor unit for a minimum of 10 minutes. During test operation, the indoor unit will continue to cool/heat regardless of the temperature setpoint and room temperature.
   • In the case of above-mentioned procedures 3) and 4) in reverse order, test operation can start as well.
5) Press and hold Cancel button for 4 seconds or longer in the basic screen.
 Service settings menu is displayed.
6) Select Test Operation in the service settings menu, and press Menu/OK button. Basic screen returns and normal operation is conducted.
   • Test operation will stop automatically after 15-30 minutes. To stop the operation, press On/Off button.

Basic screen

1)
2)

| Cool | Set to Cool 68F |

Press and hold Cancel button for 4 seconds or longer during backlight lit.

Service Settings menu screen

3)

Service Settings 1/3
Test Operation
Maintenance Contact
Field Settings
Energy Saving Options
Prohibit Buttons
Min Setpoints Differential
Setting

Press Menu/OK button.

4)

Cool
80°F
Test Operation

Press On/Off button (within 10 seconds).

5)

Cool
80°F
Test Operation

Press and hold Cancel button for 4 seconds or longer during backlight lit.

6)

Service Settings 1/3
Test Operation
Maintenance Contact
Field Settings
Energy Saving Options
Prohibit Buttons
Min Setpoints Differential
Setting

Press Menu/OK button.

Basic screen

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For wireless remote controller

1) Press [MODE] and select the COOL or HEAT operation.

2) Press [/TEST] twice. "Test" is displayed.

3) Press [ON/OFF] within 10 seconds, and the test operation starts.

Monitor the operation of the indoor unit for a minimum of 10 minutes. During test operation, the indoor unit will continue to cool/heat regardless of the temperature setpoint and room temperature.

- In the case of above-mentioned procedures 1) and 2) in reverse order, test operation can start as well.
- Test operation will stop automatically after 15 - 30 minutes.
  To stop the operation, press [ON/OFF] .
- Some of the functions cannot be used in the test operation mode.

Precautions

1) Refer to "**11-2 HOW TO DIAGNOSE FOR MALFUNCTION**" if the unit does not operate properly.

11-2 HOW TO DIAGNOSE FOR MALFUNCTION

- If the air conditioner does not operate normally after installing the air conditioner, a malfunction shown in the table below may happen.

Wired remote controller display	Description
No display	• Power outage, power voltage error or open-phase • Incorrect wiring (between indoor and outdoor units) • Indoor PC-board assembly failure • Remote controller wiring not connected • Remote controller failure • Open fuse or tripped circuit breaker (outdoor unit)
"Checking the connection. Please stand by." *	• Indoor PC-board assembly failure • Wrong wiring (between indoor and outdoor units)

* "Checking the connection. Please stand by" will be displayed for up to 90 seconds following the application of power to the indoor unit. This is normal and does not indicate a malfunction.

■ Diagnose with the display on the liquid crystal display remote controller.

With the wired remote controller

When the operation stops due to a malfunction, operation lamp blinks, and the malfunction code is indicated on the liquid crystal display. In such a case, diagnose the fault contents by referring to [Error History] in the service settings menu.
In the case of group control, the unit No. is displayed so that the indoor unit with the trouble can be identified.

With the wireless remote controller

(Refer also to the operation manual attached to the wireless remote controller)
When the operation stops due to a malfunction the display on the indoor unit blinks. In such a case, diagnose the fault contents with the error code which can be found by following procedures.

1) Press the INSPECTION/TEST OPERATION button, " " is displayed and " 0 " blinks.
2) Press the TEMPERATURE SETTING button and find the unit No. which stopped due to trouble.

Number of beeps

3 short beeps................. Perform all the following operations
1 short beep .... Perform (3) and (6)
1 long beep.................... No trouble

3) Press the OPERATION MODE SELECTOR button and upper figure of the error code blinks.
4) Continue pressing the TEMPERATURE SETTING button until it makes 2 short beeps and find the upper code.
5) Press the OPERATION MODE SELECTOR button and lower figure of the error code blinks.
6) Continue pressing the TEMPERATURE SETTING button until it makes a long beep and find the lower code.
   - A long beep indicate the error code.

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11-3 MALFUNCTION CODE

- For places where the malfunction code is written in white, the " 👁 " indication is not displayed. Though the system continues operating, be sure to inspect the system and make repairs as necessary.
- Depending on the type of indoor or outdoor unit, the malfunction code may or may not be displayed.

Malfunction code	Descriptions and measures	Remarks
A1	Indoor Printed Circuit Board failure	
A3	Drain level abnormal	
A5	High pressure control or freeze-up protector	
A6	Indoor fan motor overload, over current, lock	
A6	Indoor Printed Circuit Board connection failure	
A8	Indoor unit power supply voltage abnormal	
AJ	Capacity setting failure	Capacity setting adapter or capacity data error, or disconnection of the capacity setting adapter, failure to connect the adapter, or the capacity is not set to the data-retention IC.
C1	Transmission error between indoor Printed Circuit Board (Master) and indoor Printed Circuit Board (Slave)	
C4	Indoor heat exchanger liquid pipe temperature sensor malfunction	Abnormal stop is applied depending on the model or condition.
C5	Indoor heat exchanger condenser / evaporator temperature sensor malfunction	Abnormal stop is applied depending on the model or condition.
C9	Suction air thermistor malfunction	Abnormal stop is applied depending on the model or condition.
CJ	Remote controller air thermistor malfunction	Remote controller thermo does not function, but body thermo operation is enabled.

Malfunction code	Descriptions and measures	Remarks
E0	Action of safety device (Outdoor unit)	
E1	Outdoor Printed Circuit Board failure (Outdoor unit)	
E5	Compressor motor lock malfunction (Outdoor unit)	
E6	Compressor motor lock by over current (Outdoor unit)	
E7	Outdoor fan motor lock malfunction (Outdoor unit)	
E7	Outdoor fan instant overcurrent malfunction (Outdoor unit)	
E8	Input overcurrent (Outdoor unit)	
EA	Cooling/heating switch malfunction (Outdoor unit)	
F3	Discharge piping temperature malfunction (Outdoor unit)	
F6	High pressure control (in cooling) (Outdoor unit)	
F8	Operation halt due to compressor internal temperature abnormality	
H0	Sensor fault for inverter (Outdoor unit)	
H6	Operation halt due to faulty position detection sensor	
H8	CT abnormality (Outdoor unit)	
H9	Outdoor air thermistor system malfunction (Outdoor unit)	Abnormal stop is applied depending on the model or condition.
J3	Discharge piping thermistor system malfunction (Outdoor unit)	Abnormal stop is applied depending on the model or condition.
J6	Outdoor heat exchanger distributor liquid piping thermistor malfunction (Outdoor unit)	Abnormal stop is applied depending on the model or condition.
L3	Reactor thermistor malfunction (Outdoor unit)	
L4	Overheated heat-radiating fin (Outdoor unit)	Inverter cooling failure.
L5	Instantaneous overcurrent (Outdoor unit)	The compressor engines and turbines may be experiencing a ground fault or short circuit.

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P4	Heat-radiating fin thermistor malfunction (Outdoor unit)	Abnormal stop is applied depending on the model or condition.
U0	Suction piping temperature abnormal (Outdoor unit)	The refrigerant may be insufficient. Abnormal stop is applied depending on the model or condition.
U2	Power voltage malfunction (Outdoor unit)	The inverter open-phase or main circuit condenser may be malfunctioning. Abnormal stop is applied depending on the model or condition.
U4 UF	Transmission error (between indoor and outdoor units)	Wiring error between indoor and outdoor unit. Or Indoor and outdoor Printed Circuit Board failure.
U5	Transmission error (between indoor and remote controller units)	Transmission between indoor unit and remote controller is not performed properly.
U7	Transmission error of the inverter module	
UA	Field setting error	System setting error of the simultaneous on/off multi-split type.
UE	Transmission error (between indoor unit and centralized remote controller)	
UC	Remote controller address setting error	

⚠ **CAUTION**

After test operation is completed, check the items mentioned in the clause 2 **2. Items to be checked at time of delivery** on page 4.
If the interior finish work is not completed when the test operation is finished, for protection of the air conditioner, ask the user not operate the air conditioner until the interior finish work is completed.
If the air conditioner is operated, the inside of the indoor units may be polluted by substances generated from the coating and adhesives used for the interior finish work and cause water splash and leakage.

⚠ **To the operator carrying out test operation**

After test operation is completed, before delivering the air conditioner to the user, confirm that the electrical wiring box cover is closed.
In addition, explain the power supply status (power supply ON/OFF) to the user.

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3P500432-1

6. FVXS Series

6.1 FVXS09/12/15/18NVJU

Contents

Safety Considerations

Read these **Safety Considerations for Installation** carefully before installing an air conditioner or heat pump. After completing the installation, make sure that the unit operates properly during the startup operation.
Instruct the user on how to operate and maintain the unit.
Inform users that they should store this installation manual with the operation manual for future reference.
Always use a licensed installer or contractor to install this product. Improper installation can result in water or refrigerant leakage, electric shock, fire, or explosion.
Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

⚠ **DANGER** ·········· Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** ········· Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ·········· Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** ·············· Indicates situations that may result in equipment or property-damage accidents only.

⚠ **DANGER** ─────────────

- Refrigerant gas is heavier than air and replaces oxygen. A massive leak can lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
- Do not ground units to water pipes, gas pipes, telephone wires, or lightning rods as incomplete grounding can cause a severe shock hazard resulting in severe injury or death. Additionally, grounding to gas pipes could cause a gas leak and potential explosion causing severe injury or death.

- If refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce toxic gas if it comes into contact with fire. Exposure to this gas could cause severe injury or death.
- After completing the installation work, check that the refrigerant gas does not leak throughout the system.
- Do not install unit in an area where flammable materials are present due to risk of explosions that can cause serious injury or death.
- Safely dispose all packing and transportation materials in accordance with federal/state/local laws or ordinances. Packing materials such as nails and other metal or wood parts, including plastic packing materials used for transportation may cause injuries or death by suffocation.

⚠ **WARNING** ─────────────

- Only qualified personnel must carry out the installation work. Installation must be done in accordance with this installation manual. Improper installation may result in water leakage, electric shock, or fire.
- When installing the unit in a small room, take measures to keep the refrigerant concentration from exceeding allowable safety limits. Excessive refrigerant leaks, in the event of an accident in a closed ambient space, can lead to oxygen deficiency.
- Use only specified accessories and parts for installation work. Failure to use specified parts may result in water leakage, electric shock, fire, or the unit falling.
- Install the air conditioner or heat pump on a foundation strong enough that it can withstand the weight of the unit. A foundation of insufficient strength may result in the unit falling and causing injuries.
- Take into account strong winds, typhoons, or earthquakes when installing. Improper installation may result in the unit falling and causing accidents.

1

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- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local, state, and national regulations. An insufficient power supply capacity or improper electrical construction may lead to electric shock or fire.
- Make sure that all wiring is secured, that specified wires are used, and that no external forces act on the terminal connections or wires. Improper connections or installation may result in fire.
- When wiring, position the wires so that the electrical wiring box cover can be securely fastened. Improper positioning of the electrical wiring box cover may result in electric shock, fire, or the terminals overheating.
- Before touching electrical parts, turn off the unit.
- It is recommended to install a ground fault circuit interrupter if one is not already available. This helps prevent electric shock or fire.
- Securely fasten the outdoor unit terminal cover (panel). If the terminal cover/panel is not installed properly, dust or water may enter the outdoor unit causing fire or electric shock.
- When installing or relocating the system, keep the refrigerant circuit free from substances other than the specified refrigerant (R410A) such as air. Any presence of air or other foreign substance in the refrigerant circuit can cause an abnormal pressure rise or rupture, resulting in injury.
- Do not change the setting of the protection devices. If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may occur.

⚠ **CAUTION** ────────────────────

- Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.
- Do not allow children to play on or around the unit to prevent injury.
- The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.
- Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.
- Install drain piping to proper drainage. Improper drain piping may result in water leakage and property damage.
- Insulate piping to prevent condensation.
- Be careful when transporting the product.
- Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.
- Do not use a charging cylinder. Using a charging cylinder may cause the refrigerant to deteriorate.
- Refrigerant R410A in the system must be kept clean, dry, and tight.

  (a) Clean and Dry -- Foreign materials (including mineral oils such as SUNISO oil or moisture) should be prevented from getting into the system.

  (b) Tight -- R410A does not contain any chlorine, does not destroy the ozone layer, and does not reduce the earth's protection again harmful ultraviolet radiation. R410A can contribute to the greenhouse effect if it is released. Therefore take proper measures to check for the tightness of the refrigerant piping installation. Read the chapter *Refrigerant Piping Work* and follow the procedures.

- Since R410A is a blend, the required additional refrigerant must be charged in its liquid state. If the refrigerant is charged in a state of gas, its composition can change and the system will not work properly.
- The indoor unit is for R410A. See the catalog for indoor models that can be connected. Normal operation is not possible when connected to other units.
- Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit far away from fluorescent lamps as much as possible.
- Indoor units are for indoor installation only. Outdoor units can be installed either outdoors or indoors. This unit is for indoor use.
- Do not install the air conditioner or heat pump in the following locations:
  (a) Where a mineral oil mist or oil spray or vapor is produced, for example, in a kitchen.
      Plastic parts may deteriorate and fall off or result in water leakage.
  (b) Where corrosive gas, such as sulfurous acid gas, is produced.
      Corroding copper pipes or soldered parts may result in refrigerant leakage.
  (c) Near machinery emitting electromagnetic waves. Electromagnetic waves may disturb the operation of the control system and cause the unit to malfunction.
  (d) Where flammable gas may leak, where there is carbon fiber, or ignitable dust suspension in the air, or where volatile flammables such as thinner or gasoline are handled. Operating the unit in such conditions can cause a fire.
- Take adequate measures to prevent the outdoor unit from being used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke, or fire. Instruct the user to keep the area around the unit clean.

⚠ **NOTE** ────────────────────

- Install the power supply and inter-unit wires for the indoor and outdoor units at least 3.5ft away from televisions or radios to prevent image interference or noise. Depending on the radio waves, a distance of 3.5ft may not be sufficient to eliminate the noise.
- Dismantling the unit, treatment of the refrigerant, oil and additional parts must be done in accordance with the relevant local, state, and national regulations.
- Do not use the following tools that are used with conventional refrigerants: gauge manifold, charge hose, gas leak detector, reverse flow check valve, refrigerant charge base, vacuum gauge, or refrigerant recovery equipment.
- If the conventional refrigerant and refrigerator oil are mixed in R410A, the refrigerant may deteriorate.
- This air conditioner or heat pump is an appliance that should not be accessible to the general public.
- As design pressure is 478 psi, the wall thickness of field-installed pipes should be selected in accordance with the relevant local, state, and national regulations.

2

Accessories

Ⓐ Mounting plate	1	Ⓑ Titanium apatite deodorizing filter	2	Ⓒ Drain hose	1
Ⓓ Insulation tape	2	Ⓔ Wireless remote controller	1	Ⓕ Remote controller holder	1
Ⓖ Fixing screw for remote controller holder 1/8" × 13/16" (M3 × 20mm)	2	Ⓗ Indoor unit fixing screw 3/16" × 1" (M4 × 25mm)	9	Ⓙ Dry battery AAA. LR03 (alkaline)	2
Ⓚ Operation manual	1	Ⓛ Installation manual	1	Ⓜ Warranty	1

Choosing an Installation Site

• Before choosing the installation site, obtain user approval.

1. Indoor unit

The indoor unit should be positioned in a place where:
1) the restrictions on installation requirements specified in "**Indoor Unit Installation Diagram**" on page 4 are met,
2) both the air inlet and air outlet are unobstructed,
3) the unit is not exposed to direct sunlight,
4) the unit is away from the source of heat or steam,
5) there is no source of machine oil vapour (this may shorten the indoor unit service life),
6) cool/warm air is circulated throughout the room,
7) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may affect the remote controller range,
8) the unit is at least 3.3ft (1m) away from any television or radio set (the unit may cause interference with the picture or sound),
9) no laundry equipment is nearby.

2. Wireless remote controller

Turn on all the fluorescent lamps in the room, if any, and find a location where remote controller signals are properly received by the indoor unit (within 23ft (7m)).

3

Indoor Unit Installation Diagram

• The indoor unit may be mounted in any of the 3 styles shown here.

Exposed		Half concealed	Concealed
Ⓐ Mounting plate Molding			
Floor Installation	Wall Installation		Grid (field supply)

• Recommended mounting plate retention spots and dimensions.

19-11/16 (500)
18-11/16 (475)
3-1/8 (80)
2-9/16 (65)
3/8 (10)
1-7/8 (47)
11 (280)

2-1/2 (64)
(27-9/16 (700))
5-1/4 (134)
1 (26)
1-3/8 (35)
5-7/8 (150)
25-3/8 (644)
5-1/2 (140)
22-5/8 (574)
(23-5/8 (600))
9-13/16 (250)
8-1/4 (210)
9-1/16 (230)
1-3/8 (35)
6-5/16 (160)
1-3/8 (35)

unit: inch (mm)

Ⓑ Titanium apatite deodorizing filter (2)

Ⓔ Wireless remote controller

Ⓖ Fixing screw for remote controller holder
1/8" × 13/16" (M3 × 20mm)

Ⓕ Remote controller holder

Front grille
Air filter
Front panel
2-3/4" (70mm) or more
1-15/16" (50mm) or more from walls
1-15/16" (50mm) or more from walls
Caulk pipe hole gap with putty.

4

Indoor Unit Installation

1. Refrigerant piping

1) Drill a hole (φ2-9/16 inch (65mm) in diameter) in the spot indicated by the ⬨ symbol in the illustration as below.
2) The location of the hole is different depending on which side of the pipe is taken out.
3) For piping, refer to "**6. Connecting the refrigerant pipe**" on page12.
4) Allow space around the pipe for a easier indoor unit pipe connection.

[Bottom piping]

Exposed installation

Half concealed installation

Concealed installation

unit: inch (mm)

[Left/Right -side piping]

Exposed installation

Half concealed installation

Concealed installation

unit: inch (mm)

5

[Back piping]

2-15/16 (75) | 2-15/16 (75)

Left back piping | Right back piping

1-3/4 (45) | 1-3/4 (45)

unit: inch (mm)

About the outdoor unit refrigerant pipe
• In order to connect the pipe, the outdoor unit refrigerant pipe must have a length of at least 13-3/4 inch (350mm) measured from the wall.

Wall

13-3/4 (350) or more

Outdoor unit refrigerant pipe

2-15/16 (75)

1-3/4 (45) Floor

unit: inch (mm)

⚠ **CAUTION**

Minimum allowable length
• The suggested shortest pipe length is 8.2ft (2.5m), in order to avoid noise from the outdoor unit and vibration.
  (Mechanical noise and vibration may occur depending on how the unit is installed and the environment in which it is used.)
• Refer to the installation manual for the outdoor unit for the maximum pipe length.
• For multi-connections, refer to the installation manual for the multi outdoor unit.

6

Indoor Unit Installation

2. Drilling a wall hole and installing wall embedded pipe

⚠ **WARNING**

For metal frame or metal board walls, be sure to use a wall embedded pipe and wall hole cover in the feed-through hole to prevent possible heat, electric shock, or fire.

- Be sure to caulk the gaps around the pipes with caulking material to prevent condensation.

  1) Drill a feed-through hole with a ϕ2-9/16 inch (65mm) diameter through the wall at a downward angle toward the outside.
  2) Insert a wall embedded pipe into the hole.
  3) Insert a wall hole cover into wall pipe.
  4) After completing refrigerant piping, wiring, and drain piping, caulk the pipe hole gap with putty.

Wall embedded pipe (field supply) — Inside ←→ Outside — Caulking (field supply) — ϕ2-9/16" (65mm) — Wall hole cover (field supply)

3. Drain piping

- The drain pipe should be **inclined downward** so that water will flow smoothly without any accumulation. (Should not be trap.)

The drain pipe should be inclined downward.
No trap is permitted.
Do not put the end of the hose in water.

- Use commercial rigid polyvinyl chloride pipe (general VP 20 pipe, outer diameter 1 inch (26mm), inner diameter 13/16 inch (20mm)) for the drain pipe.
- The drain hose (outer diameter ϕ11/16 inch (ϕ18mm) at connecting end, 8-11/16 inch (220mm) long) is supplied with the indoor unit.

  1) Perform drain piping work as outlined in the figure. (See **Fig. 1**)
     - Insert the ©️ drain hose into the socket of the drain pan. (See **Fig. 2**) Fully insert the drain hose until it adheres to a seal of the socket.
  2) **Insulate the indoor drain pipe with 3/8 inch (10mm) or more of insulation material to prevent condensation.**
  3) Remove the air filters and pour some water into the drain pan to check the water flows smoothly.

5-7/8 (150)
Insert drain hose to this depth so it won't be pulled out of drain pipe.
3-15/16 (100)
3-15/16 (100)
8-11/16 (220)
©️ Drain hose
1-15/16 (50) or more
Reducer
Vinyl chloride drain pipe (VP-20)
Vinyl chloride drain pipe (VP-30)
unit: inch (mm)

Drain pan
Seal
Drain pan
©️ Drain hose
Seal
©️ Drain hose

Fig. 1   **Fig. 2**

⚠ **CAUTION**

Use polyvinyl chloride adhesive agent for gluing. Failure to do so may cause water leakage.

7

4. Installing indoor unit

4-1. Preparation

- Remove the front panel.
  1) Slide until the 2 stoppers click inside.
  2) Open the front panel forward and remove the string.
  3) Remove the front panel.

1)Slide the stoppers.

String

Open the front panel   2)Remove the string.

- Remove the front grille.
  1) Remove the 4 screws.
  2) Pull the front grille and remove the 3 tabs.

3 tabs

Front grille

Casing

Remove front grille

4 screws

- Remove the upper and the side casings.
  1) Remove the 7 screws.
  2) Slide and remove the upper casing (2 tabs).
  3) Slide and remove the left and right casings (2 tabs on each side).

Upper casing

Side casing

Side casing

7 screws   Slit portions

- During installation, if needed, cut the slit portions using nippers as shown in the illustration below.

[For moldings]   **[For side piping]**

Side casing

Bottom frame

Slit portions

Bottom frame   Side casing

Slit portions

8

Indoor Unit Installation

4-2. Installation

| Exposed installation |

1) Secure the indoor unit

[Floor Installation]

- Secure the indoor unit using 6 screws. (2 screws for floor and 4 screws for rear wall)

Casing

2 screws
(H) Indoor unit fixing screws
3/16" × 1" (M4 × 25mm)

4 screws
(H) Indoor unit fixing screws
3/16" × 1" (M4 × 25mm)

[Wall Installation]

- Secure the (A) mounting plate using 5 screws.
- Secure the indoor unit using 4 screws for rear wall.

5 screws
(H) Indoor unit fixing screws
3/16" × 1" (M4 × 25mm)

(A) Mounting plate

The (A) mounting plate should be installed on a wall which can support the weight of the indoor unit.

Molding

4 screws
(H) Indoor unit fixing screws
3/16" × 1" (M4 × 25mm)

2) Once refrigerant piping and drain piping connections are complete, fill in the gap of the through hole with putty. **Any gaps will result in the accumulation of condensation on the refrigerant pipe and drain pipe, as well as allowing the intrusion of insects and dirt.**

3) Attach the left, right and upper casings in their original positions using 7 screws.

4) Attach the front grill in its original position using 4 screws.

5) Attach the front panel in its original position.
- Attach the string to the right, inner-side of the front grille.
- Close the front panel and slide until the 2 stoppers click outside.

Slide the stoppers

9

3

Half concealed installation

1) The size of a wall opening space shown in the illustration on the right.

26-3/8 – 27-3/16 (670-690)

Open size

Opening space

23-1/16 – 23-7/16 (585 – 595)

Floor

unit: inch (mm)

2) The rear of the unit can be fixed with screws at the points shown in the illustration as below. Be sure to install the propping object in accordance with the depth of the inner wall.

25-3/8 (644)

Screw hole   Screw hole

Fixing point on the back

5-7/8 (150)   5-1/2 (140)

9-13/16 (250)   Opening hole   9-1/16 (230)

Propping object (field supply)

3-3/4 (95)

Propping object (field supply)

9-13/16 (250)

7-7/8 (200)

unit: inch (mm)

⚠ **CAUTION**

The propping object for installing the main unit must be used, or there will be a gap between the unit and the wall.

3) Secure the indoor unit using 6 screws. (2 screws for floor and 4 screws for rear wall)

2 screws
Ⓗ Indoor unit fixing screws
3/16" × 1" (M4 × 25mm)

4 screws
Ⓗ Indoor unit fixing screws
3/16" × 1" (M4 × 25mm)

4) Once refrigerant piping and drain piping connections are complete, fill in the gap of the through hole with putty.
   Any gaps will result in the accumulation of condensation on the refrigerant pipe and drain pipe, as well as allowing the intrusion of insects and dirt.

5) Attach the left, right and upper casings in their original positions using 7 screws.

6) Attach the front grill in its original position using 4 screws.

7) Attach the front panel in its original position.
   • Attach the string to the right, inner-side of the front grille.
   • Close the front panel and slide until the 2 stoppers click outside.

Slide the stoppers

⚠ **CAUTION**

• Use drain pan edge for horizontal projection of the indoor unit.
• Install the indoor unit flush against wall.

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Indoor Unit Installation

| Concealed installation |

- Install the unit according to the instructions below. Failure to do so may cause lead to both cooling and heating failure and the condensation inside the house.

      1) Allow enough space between the main unit and ceiling not to obstruct the flow of cool/warm air.

      2) Place a partition plate between outlet and inlet sections.

      3) Place a partition plate on the right side.

      4) Change the upward airflow dipswitch (SW2-4) to ON to limit the upward airflow. (Factory default: OFF)

         • Remove the front grille.

         • Switch the dipswitch (SW2-4) on the PCB in the electrical equipment box to ON.

Upward airflow dipswitch

⚠ **CAUTION**

Be sure to turn on the upward airflow switch. Failure to do so may cause incomplete cooling/heating and formation of condensation inside the house.

      5) Use a movable lattice at the air outlet to allow the adjustment of cool/warm airflow direction.

      6) Lattice size should be 70% or more of open rate.

Right side partition plate

1-15/16 (50) or more   Partition plate   1-15/16 (50) or more

Movable lattice   Right side partition plate   Partition plate   2-3/4 (70) or more

Upper lattice must not project

9/16 – 13/16 (15 – 20)

70% or more of open rate

Partition plate

16-1/8 (410)

Movable lattice

1-9/16 (40) or less

4-3/4 (120)

13/16 – 1-3/16 (20-30)   unit: inch (mm)

- For the installation process refer to "**Exposed installation**" on page 9.

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3

5. Flaring the pipe end

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward, so that the filings do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring has been done correctly.

⚠ WARNING

- Do not apply mineral oil to the flare.
- Prevent mineral oil from getting into the system as this would reduce the service life of the units.
- Never use piping which has been used for previous installations. Only use parts which are delivered with this unit.
- Never install a dryer to this R410A unit in order to guarantee its service life.
- The drying material may dissolve and damage the system.
- Incomplete flaring may result in refrigerant gas leakage.

Cut exactly at right angles. / Remove burrs

Check

The flare's inner surface must be flaw-free.

The pipe end must be evenly flared in a perfect circle.

Make sure that the flare nut is fitted.

Flaring

Set exactly at the position shown below.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
A	0-0.020 inch (0-0.5mm)	0.039-0.059 inch (1.0-1.5mm)	0.059-0.079 inch (1.5-2.0mm)

6. Connecting the refrigerant pipe

⚠ CAUTION

- Use the flare nut fixed to the main unit. (This is to prevent the flare nut from cracking as a result of deterioration over time.)
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- Use a torque wrench when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

- Align the center of both flares and tighten the flare nuts 3 or 4 turns by hand, then tighten them fully with a spanner and a torque wrench.

Apply oil

Do not apply refrigeration oil to the outer surface.

Apply refrigeration oil to the inner surface of the flare.

Flare nut

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

Tighten

Torque wrench

Spanner

Piping union

Flare nut

	Piping size	Flare nut tightening torque
Gas side	O.D. 3/8 inch (9.5mm)	24.1-29.4ft • lbf (32.7-39.9N • m)
	O.D. 1/2 inch (12.7mm)	36.5-44.5ft • lbf (49.5-60.3N • m)
Liquid side	O.D. 1/4 inch (6.4mm)	10.5-12.7ft • lbf (14.2-17.2 N • m)

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Indoor Unit Installation

6-1. Caution on piping handling

1) Protect the open end of the pipe against dust and moisture.
2) All pipe bends should be as gentle as possible. Use a pipe bender for bending.

Rain

Be sure to place a cap.

If no flare cap is available, cover the flare mouth with tape to keep dirt or water out.

Wall

6-2. Selection of copper and heat insulation materials

When using commercial copper pipes and fittings, observe the following:
- Insulation material: Polyethylene foam
  Heat transfer rate: 0.041 to 0.052W/mK (0.024 to 0.030Btu/fth°F (0.035 to 0.045kcal/mh°C))
  Be sure to use insulation that is designed for use with HVAC Systems.
- ACR Copper only.

Gas pipe   Inter-unit wiring   Liquid pipe

Gas pipe insulation   Finishing tape   Liquid pipe insulation

- Be sure to insulate both the gas and liquid piping and observe the insulation dimensions as below.

	Piping size	Minimum bend radius	Piping thickness	Thermal insulation size	Thermal insulation thickness
Gas side	O.D. 3/8 inch (9.5mm)	1-3/16 inch (30mm) or more	0.031 inch (0.8mm) (C1220T-O)	I.D. 15/32-19/32 inch (12-15mm)	13/32 inch (10mm) Min.
	O.D. 1/2 inch (12.7mm)	1-9/16 inch (40mm) or more		I.D. 9/16-5/8 inch (14-16mm)	
Liquid side	O.D. 1/4 inch (6.4mm)	1-3/16 inch (30mm) or more		I.D. 5/16-13/32 inch (8-10mm)	

- Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

7. Checking for gas leakage

1) Check for leakage of gas after air purging.
2) Refer to the section on pressure test and evacuating system in the installation manual for the outdoor unit.

Check for leakage here.
- Apply soapy water and check carefully for leaking gas.
- Wipe soapy water off after the check is complete.

8. Attaching the connection pipe

- Attach the pipe after checking for gas leakage, described above.
  1) Cut the insulated portion of the on-site piping, matching it up with the connecting portion.
  2) Secure the slit on the refrigerant piping side with the butt joint on the auxiliary piping using the tape, making sure there are no gaps.
  3) Wrap the slit and the butt joint with the Ⓓ insulation tape, making sure there are no gaps.

1) Refrigerant pipe   Slit

2) Refrigerant pipe   Slit   Tape

3) Refrigerant pipe   Ⓓ Insulation tape   Auxiliary pipe

⚠ CAUTION
- Insulate the joint of the pipes securely.
  Incomplete insulation may lead to water leakage.
- Push the pipe inside so it does not place undue force on the front grille.

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9. Wiring

3

With a multi indoor unit , **install as described in the installation manual supplied with the multi outdoor unit.**

• Live the sensor securing plate, remove the front electrical wiring box cover, and connect the branch wiring to the terminal block.

1) As shown in the illustration, insert the wires including the ground wire into the conduit and secure them with lock nut onto the conduit mounting plate.

2) Strip wire ends (3/4 inch (20mm)).

3) Match wire colours with terminal numbers on indoor and outdoor unit's terminal blocks and firmly secure the wires in the corresponding terminals with the screws.

4) Connect the ground wires to the corresponding terminals.

5) Pull the wires lightly to make sure they are securely connected.

6) Make sure that the wires do not come in contact with the metal conduit for the heat exchanger.

7) In case of connecting to an adapter system, run the remote controller cable and attach the S21. (Refer to **"10. When connecting to an HA system"** on page 15.)

Back

⚠ WARNING

• Do not use tapped wires, stranded wires, extension cords, or starburst connections, as they may cause overheating, electric shock, or fire.

• Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.

• Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

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Indoor Unit Installation

10. When connecting to an HA system

1) Remove the front panel and the front grille. (Refer to "**4-1. Preparation**" on page 8.)
2) Open up the sensor securing plate. (See **Fig. 3**)
3) Remove the front electrical wiring box cover (4 tabs). (See **Fig. 3**)
4) Remove connectors ① ② ③. (See **Fig. 4** and **Fig. 5**)
5) After removing the ground wires (2 screws), remove the electrical wiring box (1 screw). (See **Fig. 6**)
6) Remove the thermistor. (See **Fig. 7**)
7) Remove the side electrical wiring box cover (7 tabs). (See **Fig. 3**)
8) Cut off the pins using a nipper. (See **Fig. 3**)
9) Wire and connect the HA connection cord to the S21 connector. (See **Fig. 3**)
10) Install the side electrical wiring box cover while being careful not to pinch the HA connection cord or ground wires (7 tabs).
11) Attach the thermistor.
12) Install the ground wires (2 screws) and the electrical wiring box (1 screw).
13) Install the connectors ① ② and guide the cord as shown in the figure. (See **Fig. 4**)
14) Install connector ③ and guide the cord as shown in the figure. (See **Fig. 5**)
15) Attach the front electrical wiring box cover (4 tabs), and close the sensor securing plate.
16) Attach the front panel and the front grille as they were.

Sensor securing plate

S21

Front electrical wiring box cover

Side electrical wiring box cover

Cut off the pins using a nipper.

Be careful not to pinch the HA connection cord or ground wire.

Fig. 3

Connector ①

Connector ②

Fig. 4

Connector ③

Fig. 5

Screws

Ground wires

Fig. 6

Thermistor

Fig. 7

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3

11. How to set the different addresses

- When 2 indoor units are installed in 1 room, the 2 wireless remote controllers can be set for different addresses.
  Change the address setting of one of the 2 units.
  When cutting the jumper be careful not to damage any of the surrounding parts.
  1) Remove the electrical wiring box. (Refer to "**10. When connecting to an HA system**" on page 15 steps 1)-7).)
  2) Cut the address jumper (JA) on the printed circuit board.
  3) Cut the address jumper (J4) in the remote controller.
  4) Attach the electrical wiring box as they were. (Refer to "**10. When connecting to an HA system**" on page 15 steps 10)-15).)
  5) Attach the front panel and the front grille as they were.

JA	ADDRESS
EXIST	1
CUT	2

JA

Sensor securing plate

Jumper

(J8)   (J4)

Side electrical wiring box cover

Front electrical wiring box cover

J4	ADDRESS
EXIST	1
CUT	2

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Trial Operation and Testing

1. Trial operation and testing

- Trial operation should be carried out in either COOL or HEAT operation.

1-1. Measure the supply voltage and make sure that it is within the specified range.

1-2. In COOL operation, select the lowest programmable temperature; in HEAT operation, select the highest programmable temperature.

1-3. Carry out the trial operation following the instructions in the operation manual to ensure that all functions and parts, such as the movement of the flap, are working properly.

- To protect the air conditioner, restart operation is disabled for 3 minutes after the system has been turned off.
- When connecting to a multi outdoor unit, if trial operation is conducted in HEAT operation directly after the circuit breaker is turned on, in some cases no air will be output for about 3 to 20 minutes in order to protect the air conditioner.

1-4. After trial operation is complete, set the temperature to a normal level (78°F to 82°F (26°C to 28°C) in COOL operation, 68°F to 75°F (20°C to 24°C) in HEAT operation).

- When operating the air conditioner in COOL operation in winter, or HEAT operation in summer, set it to the trial operation mode using the following method.

  1) Press ⏻ to turn on the system.

  2) Press ⏶ , ⏷ and Mode at the same time.

  3) Press ⏶ Temp , then select " 〒 ", and press Mode for confirmation.

  - Trial operation will stop automatically after about 30 minutes.

    To stop the operation, press ⏻ .

  - Some of the functions cannot be used in the trial operation mode.
- The air conditioner draws a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

2. Test items

Test Items	Symptom	Check
Indoor and outdoor units are installed properly on solid bases.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
System is properly grounded.	Electrical leakage	
The specified wires are used for inter-unit wiring connections.	No operation or burn damage	
Indoor or outdoor unit's air inlet or air outlet are unobstructed.	Incomplete cooling/heating function	
Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote control commands.	No operation	
☀ will be displayed when the MODE button is pressed.*	No heating	

*Check that the jumper (J8) has not been cut. If it has been cut, contact your dealer.

Jumper (J8)

17

7. FFQ Series

7.1   FFQ09/12/15/18Q2VJU

Contents

3

Safety Considerations

Read these **Safety Considerations for Installation** carefully before installing an air conditioner or heat pump. After completing the installation, make sure that the unit operates properly during the startup operation.
Instruct the user on how to operate and maintain the unit. Inform users that they should store this installation manual with the operation manual for future reference.
Always use a licensed installer or contractor to install this product. Improper installation can result in water or refrigerant leakage, electric shock, fire, or explosion.
Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

⚠ **DANGER** ·········· Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** ········ Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ········· Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** ·············· Indicates situations that may result in equipment or property-damage accidents only.

⚠ **DANGER** ─────────────────

- Refrigerant gas is heavier than air and replaces oxygen. A massive leak can lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.

- Do not ground units to water pipes, gas pipes, telephone wires, or lightning rods as incomplete grounding can cause a severe shock hazard resulting in severe injury or death. Additionally, grounding to gas pipes could cause a gas leak and potential explosion causing severe injury or death.

- If refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce toxic gas if it comes into contact with fire. Exposure to this gas could cause severe injury or death.

- After completing the installation work, check that the refrigerant gas does not leak throughout the system.

- Do not install unit in an area where flammable materials are present due to risk of explosions that can cause serious injury or death.

- Safely dispose all packing and transportation materials in accordance with federal/state/local laws or ordinances. Packing materials such as nails and other metal or wood parts, including plastic packing materials used for transportation may cause injuries or death by suffocation.

⚠ **WARNING** ─────────────────

- Only qualified personnel must carry out the installation work. Installation must be done in accordance with this installation manual. Improper installation may result in water leakage, electric shock, or fire.

- When installing the unit in a small room, take measures to keep the refrigerant concentration from exceeding allowable safety limits. Excessive refrigerant leaks, in the event of an accident in a closed ambient space, can lead to oxygen deficiency.

- Use only specified accessories and parts for installation work. Failure to use specified parts may result in water leakage, electric shock, fire, or the unit falling.

- Install the air conditioner or heat pump on a foundation strong enough that it can withstand the weight of the unit. A foundation of insufficient strength may result in the unit falling and causing injuries.

- Take into account strong winds, typhoons, or earthquakes when installing. Improper installation may result in the unit falling and causing accidents.

1

- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local, state, and national regulations. An insufficient power supply capacity or improper electrical construction may lead to electric shock or fire.

- Make sure that all wiring is secured, that specified wires are used, and that no external forces act on the terminal connections or wires. Improper connections or installation may result in fire.

- When wiring, position the wires so that the electrical wiring box cover can be securely fastened. Improper positioning of the electrical wiring box cover may result in electric shock, fire, or the terminals overheating.

- Before touching electrical parts, turn off the unit.

- The circuit must be protected with safety devices in accordance with local and national codes, i.e. a fuse, a circuit breaker, a disconnect or a GFCI.

- Securely fasten the outdoor unit terminal cover (panel). If the terminal cover/panel is not installed properly, dust or water may enter the outdoor unit causing fire or electric shock.

- When installing or relocating the system, keep the refrigerant circuit free from substances other than the specified refrigerant (R410A) such as air. Any presence of air or other foreign substance in the refrigerant circuit can cause an abnormal pressure rise or rupture, resulting in injury.

- Do not change the setting of the protection devices. If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may occur.

⚠ CAUTION

- Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.

- Do not allow children to play on or around the unit to prevent injury.

- The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.

- Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.

- Install drain piping to proper drainage. Improper drain piping may result in water leakage and property damage.

- Insulate piping to prevent condensation.

- Be careful when transporting the product.

- Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.

- Do not use a charging cylinder. Using a charging cylinder may cause the refrigerant to deteriorate.

- Refrigerant R410A in the system must be kept clean, dry, and tight.

    (a) Clean and Dry -- Foreign materials (including mineral oils such as SUNISO oil or moisture) should be prevented from getting into the system.

    (b) Tight -- R410A does not contain any chlorine, does not destroy the ozone layer, and does not reduce the earth's protection again harmful ultraviolet radiation. R410A can contribute to the greenhouse effect if it is released. Therefore take proper measures to check for the tightness of the refrigerant piping installation. Read the chapter *Refrigerant Piping Work* and follow the procedures.

- Since R410A is a blend, the required additional refrigerant must be charged in its liquid state. If the refrigerant is charged in a state of gas, its composition can change and the system will not work properly.

- The indoor unit is for R410A. See the catalog for indoor models that can be connected. Normal operation is not possible when connected to other units.

- Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit far away from fluorescent lamps as much as possible.

- Indoor units are for indoor installation only. Outdoor units can be installed either outdoors or indoors. This unit is for indoor use.

- Do not install the air conditioner or heat pump in the following locations:
    (a) Where a mineral oil mist or oil spray or vapor is produced, for example, in a kitchen.
        Plastic parts may deteriorate and fall off or result in water leakage.
    (b) Where corrosive gas, such as sulfurous acid gas, is produced.
        Corroding copper pipes or soldered parts may result in refrigerant leakage.
    (c) Near machinery emitting electromagnetic waves.
        Electromagnetic waves may disturb the operation of the control system and cause the unit to malfunction.
    (d) Where flammable gas may leak, where there is carbon fiber, or ignitable dust suspension in the air, or where volatile flammables such as thinner or gasoline are handled. Operating the unit in such conditions can cause a fire.

- Take adequate measures to prevent the outdoor unit from being used as a shelter by small animals. Small animals making contact with electrical parts can cause malfunctions, smoke, or fire. Instruct the user to keep the area around the unit clean.

⚠ NOTE

- The indoor unit should be positioned where the unit and inter-unit wires (outdoor to indoor) are at least 3.3ft (1m) away from any televisions or radios. (The unit may cause interference with the picture or sound.) Depending on the radio waves, a distance of 3.3ft (1m) may not be sufficient to eliminate the noise.

- Dismantling the unit, treatment of the refrigerant, oil and additional parts must be done in accordance with the relevant local, state, and national regulations.

- Do not use the following tools that are used with conventional refrigerants: gauge manifold, charge hose, gas leak detector, reverse flow check valve, refrigerant charge base, vacuum gauge, or refrigerant recovery equipment.

- If the conventional refrigerant and refrigerator oil are mixed in R410A, the refrigerant may deteriorate.

- This air conditioner or heat pump is an appliance that should not be accessible to the general public.

- As design pressure is 604 psi, the wall thickness of field-installed pipes should be selected in accordance with the relevant local, state, and national regulations.

2

Before Installation

- Leave the unit inside its packaging until you reach the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, this to avoid damage or scratches to the unit.
  When unpacking the unit or when moving the unit after unpacking, be sure to lift the unit by holding on to the hanger bracket without exerting any pressure on other parts, especially on refrigerant piping, drain piping and other resin parts.
- Refer to the installation manual of the outdoor unit for items not described in this manual.
- Caution concerning refrigerant series R410A:
  The connectable outdoor units must be designed exclusively for R410A.

Precautions

- Do not install or operate the unit in places mentioned below.
  - Places with mineral oil, or filled with oil vapor or spray like in kitchens. (Plastic parts may deteriorate.)
  - Where corrosive gas like sulphurous gas exists. (Copper tubing and brazed spots may corrode.)
  - Where volatile flammable gas like thinner or gasoline is used.
  - Where machines generating electromagnetic waves exist. (Control system may malfunction.)
  - Where the air contains high levels of salt such as near the ocean and where voltage fluctuates a lot (e.g. in factories). Also inside vehicles or vessels.
- When selecting the installation site, use the supplied template for installation.
- Do not install accessories on the casing directly. Drilling holes in the casing may damage electrical wires and consequently cause fire.

3

Accessories

Ⓐ Drain hose	1	Ⓑ Clamp metal	1	Ⓒ Washer for hanger bracket	8	Ⓓ Clamp	7
Ⓔ Template (cut out from upper part of packing)	1	Ⓕ Screws (M5) (for template)	4	Ⓖ Fitting insulation (for gas pipe)	1	Ⓗ Fitting insulation (for liquid pipe)	1
Ⓙ Sealing pad (large)	1	Ⓚ Sealing pad (medium A)	1	Ⓛ Sealing pad (medium B)	1	Ⓜ Sealing pad (small)	1
Ⓝ Washer for conduit	1	Ⓟ Operation manual	1	Ⓠ Installation manual	1	Ⓡ Warranty	1

3

Optional Accessories

• The optional decoration panel and remote controller are required for this indoor unit.

Table 1

Optional decoration panel		
Type A	BYFQ60B3W1	Color: White
Type B	BYFQ60C2W1W	Color: White
Type B	BYFQ60C2W1S	Color: Silver

• There are 2 types of remote controllers: wired and wireless. Select a remote controller from Table 2 according to customer request and install in an appropriate place.

Table 2

Remote controller type	Heat Pump type
Wired type	BRC1E73
Wireless type	BRC082A41W / BRC082A42W / BRC082A42S

• If you wish to use a remote controller that is not listed in Table 2, select a suitable remote controller after consulting catalogs and technical materials.

Choosing an Installation Site

Hold the unit by the 4 hanger brackets when opening the box and moving it, and do not exert pressure on to any other part, piping (refrigerant, drain, etc.), or plastic parts.
If the temperature or humidity inside the ceiling might rise above 86°F (30°C) or RH 80%, respectively, add extra insulation to the unit.
Use polyethylene foam as insulation and make sure it is at least 3/8 inch (10mm) thick and fits inside the ceiling opening.

Select the air flow directions best suited to the room and point of installation.
For air discharge in 3 directions, it is necessary to make field settings by means of the remote controller and to close the air outlet (s).
Refer to the installation manual of the blocking pad kit (sold separately) and to "Field Settings" on page 16.
• Before choosing the installation site, obtain user approval.
  The indoor unit should be positioned in a place where:
  1) both the air inlet and air outlet are unobstructed,
  2) the unit is not exposed to direct sunlight,
  3) the unit is away from the source of heat or steam,
  4) there is no source of machine oil vapor (this may shorten the indoor unit service life),
  5) cool/warm air is circulated throughout the room,
  6) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may affect the remote controller range,
  7) no laundry equipment is nearby,
  8) drainage can be performed without any problem,
  9) the weight of the indoor unit can be adequately supported,
  10) the wall is not significantly tilted,
  11) room can be left for installation and service work,
  12) there is no risk of flammable gas leaking,
  13) the required length of indoor-outdoor piping would not exceed the specified maximum length (see the installation manual that came with the outdoor unit for details).

4

Choosing an Installation Site

Installation Space Requirements

unit:inch (mm)

• Leave 8 inch (200mm) or more space where marked with the *****, on sides where the air outlet is closed.

Air flow direction

• The air direction shown is an example.
• Select the appropriate number of directions according to the shape of the room and the location of the unit. (Field settings have to be made using the remote controller and the outlet vents have to be shut off if 2 or 3 directions are selected.
  See the blocking pad kit (sold separately) installation manual for details.)

Air flow direction (Example)

Air outlet in 2 directions   Air outlet in 3 directions   Air outlet in 4 directions

Use suspension bolts for installation. Check whether the ceiling is strong enough to support the weight of the unit or not. If there is a risk, reinforce the ceiling before installing the unit.

(Installation pitch is marked on the template. Refer to it to check for points requiring reinforcing.)

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Indoor Unit Installation

1. Relation of ceiling opening to unit and suspension bolt position

| For decoration panel type A |
| For decoration panel type B |

Top view

Top view

Refrigerant piping

Suspension bolt (×4)

27-9/16 (700) Decoration panel
23-1/16-26 (585-660) Ceiling opening
22-5/8 (575) Indoor unit
21 (533) Suspension bolt pitch

21 (533) Suspension bolt pitch
22-5/8 (575) Indoor unit
2-1/2 (63)
23-1/16-26 (585-660) Ceiling opening
27-9/16 (700) Decoration panel

Refrigerant piping

Suspension bolt (×4)

24-7/16 (620) Decoration panel
23-1/16-23-7/16 (585-595) Ceiling opening
22-5/8 (575) Indoor unit
21 (533) Suspension bolt pitch

21 (533) Suspension bolt pitch
22-5/8 (575) Indoor unit
2-1/2 (63)
23-1/16-23-7/16 (585-595) Ceiling opening
24-7/16 (620) Decoration panel

Side view

23-1/16-26 (585-660) Ceiling opening

11-1/4 (285)
7-1/16 (180)
≥*13/16 (20)
Hanger bracket
False ceiling
≥*13/16 (20)

Side view

23-1/16-23-7/16 (585-595) Ceiling opening

11-3/4 (298)
7-1/2 (190)
≥*1/2 (12.5)
Hanger bracket
False ceiling
≥*1/2 (12.5)

unit: inch (mm)

NOTE

- *If the panel does not extend over the ceiling by this amount, supplement with extra ceiling material or restore the ceiling.
- Install the inspection opening on the electrical wiring box side where maintenance and inspection of the electrical wiring box and drain pump are easy.

Electrical wiring box

17-11/16×17-11/16 (450×450)
Inspection opening

11-3/4 (300)

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Indoor Unit Installation

2. Make the ceiling opening needed for installation where applicable (For existing ceilings)

- Refer to the Ⓔ template for ceiling opening dimensions.
- Create the ceiling opening required for installation. From the side of the opening to the casing outlet, implement the refrigerant and drain piping and wiring for remote controller (unnecessary for wireless type) and wiring between units. Refer to each Drain piping work or Wiring section.
- After making an opening in the ceiling, it may be necessary to reinforce ceiling beams to keep the ceiling level and to prevent it from vibrating. Consult the builder for details.

3. Installing the suspension bolts

(Use either a M8-M10 size bolt or the equivalent)
Use a hole-in anchor for existing ceilings, and a sunken insert, sunken anchor or other field supplied parts for new ceilings to reinforce the ceiling to bear the weight of the unit. Adjust clearance (2-4 inch (50-100mm)) from the ceiling before proceeding further.
- All the above parts are field supplied.

Installation Example

Ceiling slab
Anchor
Long nut or turn-buckle
Suspension bolt
False ceiling
2-4 (50-100)
unit:inch (mm)

4. Installing the indoor unit

When installing optional accessories (except for the decoration panel), read also the installation manual of the optional accessories. Depending on the field conditions, it may be easier to install optional accessories before the indoor unit is installed. However, for existing ceilings, always install fresh air intake kit before installing the unit. As for the parts to be used for installation work, be sure to use the provided accessories and specified parts designated by Daikin.

For new ceilings

1) Install the indoor unit temporarily.
- Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and Ⓒ washer from the upper and lower sides of the hanger bracket.

Securing the hanger bracket

Nut (field supply)
Hanger bracket
Ⓒ Washer
Double nut (field supply, tighten)

2) Refer to the Ⓔ template for ceiling opening dimension. Consult the builder or carpenter for details.
- The center of the ceiling opening is indicated on the Ⓔ template. This indication also indicates the center of the unit.
- The Ⓔ template can be rotated by 90° to be able to indicate the correct dimensions on all 4 sides.
- After cutting the template from the packaging, attach the Ⓔ template to the unit with Ⓕ screws (×4) as shown in figure.
- Ceiling height is shown on the side of the Ⓔ template. Adjust the height of the unit according to this indication.

Installation of template

Ⓔ Template
Ⓕ Screws
Ⓕ Screws
Center of the ceiling opening

Ceiling work

3) Adjust the unit to the right position for installation. (Refer to **1. Relation of ceiling opening to unit and suspension bolt position**.)

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⚠ **CAUTION** ───

If the unit is tilted against condensate flow, the float switch may malfunction and cause water to drip.

4) Check the unit is horizontally level.
   • The indoor unit is equipped with a built-in drain pump and float switch. Verify that it is level by using a water level or a water-filled vinyl tube.
5) Remove the Ⓔ template.

Maintaining horizontality

Water level

Vinyl tube

Vinyl tube

For existing ceilings

1) Install the indoor unit temporarily.
   • Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and Ⓒ washer from the upper and lower sides of hanger bracket.

Securing the hanger bracket

Nut
(field supply)

Hanger bracket

Ⓒ Washer

Double nut
(field supply, tighten)

2) Adjust the height and position of the unit.
   (Refer to **1. Relation of ceiling opening to unit and suspension bolt position**.)

3) Perform steps 4) in **For new ceilings** .

5. Drain piping work

⚠ **CAUTION** ───

• Water pooling in the drainage piping can cause the drain to clog.
• **Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger.**
• **Keep in mind that the drain pipe becomes blocked if water collects on it.**

1. Install of drain piping

   • Install the drain piping as shown in the figure and take measures against condensation. Improperly rigged piping could lead to leaks and eventually wet furniture and belongings.
   • Keep piping as short as possible and slope it downwards at a gradient of at least 1/100 so that air may not remain trapped inside the pipe.
   • Keep pipe size equal to or greater than that of the connecting pipe (vinyl pipe of nominal diameter 13/16 inch (20mm) and outer diameter 1 inch (26mm)).
   • Push the supplied drain hose as far as possible over the drain socket.
   • If the drain hose cannot be sufficiently set on a slope, refer to **"Precautions for drain raising piping"**.
   • To keep the drain hose from sagging, space hanger bracket every 40-60 inch (1000-1500mm).

40-60 inch
(1000-1500mm)

Hanger bracket

1/100
gradient or more

GOOD   **WRONG**   **WRONG**

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Indoor Unit Installation

- Tighten the Ⓑ clamp metal as indicated in the illustration.
- After the testing of drain piping is finished, attach the drain Ⓙ sealing pad (large) supplied with the unit over the uncovered part of the drain socket (= between drain hose and unit body).
- Wrap the supplied large sealing pad over the Ⓑ clamp metal and Ⓐ drain hose to insulate and fix it with clamps.
- Insulate the complete drain piping inside the building (field supply).
- If the drain hose cannot be sufficiently set on a slope, fit the hose with drain raising piping (field supply).

Precautions for drain raising piping

- Install the drain raising pipes at a height of less than H2.
- Install the drain raising pipes at a right angle to the indoor unit and no more than 11-3/4 inch (300mm) from the unit.

Decoration panel	H1	H2
Type A	8-1/16 (205)	≤25-3/8 (645)
Type B	8-11/16 (220)	≤24-13/16 (630)

unit: inch (mm)

- To ensure no excessive pressure is applied to the included Ⓐ drain hose, do not bend or twist the hose when installing as it could cause leakage.
- If converging multiple drain pipes, install according to the procedure shown below.

Select converging drain pipes with gauges is suitable for the operating capacity of the unit.

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2. After piping work is finished, check if drainage flows smoothly

• Add approximately 1/4 gal of water slowly from the air outlet and check drainage flow.

Method of adding water

Drain pipe

Drain socket
(water flow view point)

Drain pump location

Service drain outlet
(with rubber plug)
Use this outlet to
drain water from
the drain pan.

Plastic container for pouring
Tube should be about 4 inch
(100mm) long.

unit: inch (mm)

≥4
(100)

When electric wiring work is finished

• Check drainage flow during COOL operation, explained in **"Trial operation and testing"** on page 17.

When electric wiring work is not finished

⚠ CAUTION

Electrical wiring work should be done by a certified electrician.

• If someone who does not have the proper qualifications performs the work, perform the following actions after the trial operation is complete.

1) Remove the electrical wiring box cover (2 screws). Connect the single phase power supply (SINGLE PHASE 60 Hz 208/230V) to connections No.1 and No.2 on the terminal block for power supply.
Do not connect to No.3 of the terminal block for power supply or the drain pump will not operate.
When carrying out wiring work around the electrical wiring box, make sure none of the connectors come undone.
Be sure to attach the electrical wiring box cover before turning on the power.

2) After confirming drainage, turn off the power supply and remove the power supply wiring.

3) Attach the electrical wiring box cover as before.

Screws

Electrical wiring box cover

Terminal block for power supply

Ground

No.2
No.1

Single phase power supply
(60Hz 208/230V)

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Indoor Unit Installation

6. Wiring

Refer also to the installation manual for the outdoor unit.

⚠ WARNING

- Do not use tapped wires, extension cords, or starburst connections, as they may cause overheating, electric shock, or fire.
- Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
- Do not connect the power wire to the indoor unit. Doing so may cause electric shock or fire.

⚠ CAUTION

- When connecting the connection wire to the terminal block using a single core wire, be sure to perform curling.
  Problems with the installation may cause heat and fires.

  Good   **Wrong**

- When clamping wiring, use the included clamping material to prevent outside pressure being exerted on the wiring connections and clamp firmly. When doing the wiring, make sure the wiring is neat and does not cause the electrical wiring box cover to stick up, then close the cover firmly.
- Outside the unit, separate the low voltage wiring (remote controller wiring) and high voltage wiring (wiring between units, ground, and other power wiring) at least 2 in. so that they do not pass through the same place together. Proximity may cause electrical interference, malfunctions, and breakage.

Tightening torque for the terminal blocks

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.
- Refer to the table below for the tightening torque of the terminal screws.

unit: lbf • ft (N • m)

	Tightening torque
Terminal block for remote controller (6P)	0.58 - 0.72 (0.79 - 0.98)
Terminal block for power supply (4P)	0.87 - 1.06 (1.18 - 1.44)

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Precautions for power supply wiring

Use a round crimp-style terminal for connection to the terminal block for power supply. If it cannot be used due to unavoidable reasons, be sure to observe the following instructions:

- In wiring, make certain that prescribed wires are used, carry out complete connections, and fix the wires so that external forces are not applied to the terminals.

Wiring
Attach insulation sleeve
Round crimp-style terminal

- Use copper wire only.
- For electric wiring work, refer also to **"Wiring diagram label"** attached to the electrical wiring box cover.
- For remote controller wiring details, refer to the installation manual attached to the remote controller.
- A circuit breaker capable of shutting down power supply to the entire system must be installed.
- **Specifications for field wire**

The remote controller wiring should be procured locally.

Table 3

	Wire	Size	Length (ft.)
Wiring between units	Wire size and length must comply with local codes.	–	–
Remote controller wiring	Sheathed (2 wire)	AWG 18 - 16	Max.1640*
Wiring to ground terminal	Wire size and length must comply with local codes.	–	–

* This will be the total extended length in the system when doing group control.

⚠ CAUTION

- Arrange the wires and fix a cover firmly so that the cover does not float during wiring work.
- Do not clamp remote controller wiring together with wiring between units. Doing so may cause malfunction.
- Remote controller wiring and wiring between units should be located at least 2 inch (50mm) from other electric wires. Not following this guideline may result in malfunction due to electrical noise.

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Indoor Unit Installation

Connection of wiring between units, ground wire and remote controller wiring

Wiring between units and ground wire

1) Remove the electrical wiring box cover (2 screws).

Screws

Electrical wiring box cover

2) Insert the wires including the ground wire into the conduit, and secure the conduit to the hole in the electrical wiring box using a lock nut and the Ⓝ washer for conduit, as shown in the illustration.

Hole in the electrical
wiring box

Lock nut
(field supply)

Conduit pipe

Conduit
(field supply)

Ⓝ Washer for conduit

3) Connect the ground wire to the corresponding terminals.
4) Match wire colors with terminal numbers on the terminal block for power supply of indoor and outdoor unit and firmly secure the wires in the corresponding terminals with screws.
5) In doing this, pull the wires inside through the hole and fix the wires securely with the included Ⓓ clamp.
6) Give enough slack to the wires between the Ⓓ clamp and terminal block for power supply.
7) Pull the wires inside through the hole and connect them to the terminal block for remote controller (no polarity). Securely fix the remote controller wiring with the included Ⓓ clamp.
8) Give enough slack to the wires between the Ⓓ clamp and the terminal block for remote controller.
9) Attach the electrical wiring box cover as before.
10) After all wiring connections are done, fill in any gaps in the casing wiring holes with putty or Ⓜ sealing pad (small) thus to prevent small animals or dirt from entering the unit from outside and causing short circuits in the electrical wiring box.

Conduit

Opening for cable

Firmly fix the wires with
the terminal screws.

Outdoor
unit

Wire size and length must
comply with local codes.

Indoor
unit

Firmly fix the wires with
the terminal screws.

Terminal block for remote controller

Terminal block for power supply

Remote controller wiring

Ⓓ Clamp

Ⓓ Clamp

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Refrigerant Piping Work

Refer also to the installation manual for the outdoor unit.

⚠ WARNING

- Do not apply mineral oil on flared part.
- Prevent mineral oil from getting into the system as this would reduce the service life of the units.
- Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
- Never install a dryer to this R410A unit in order to guarantee its service life.
- The drying material may dissolve and damage the system.
- Incomplete flaring may result in refrigerant gas leakage.

Execute thermal insulation work completely on both sides of the gas and the liquid piping. Otherwise, a water leakage can result sometimes.
Be sure to use insulation designed for use with HVAC systems.
Also, in cases where the temperature and humidity of the refrigerant piping sections might exceed 86°F (30°C) or RH80%, reinforce the refrigerant insulation. (13/16 inch (20mm) or thicker) Condensation may form on the surface of the insulating material.
Before refrigerant piping work, check which type of refrigerant is used. Proper operation is not possible if the types of refrigerant are not the same.

1. Flaring the pipe end

1) Cut the pipe end with a pipe cutter.
2) Remove burrs with the cut surface facing downward so that the filings do not enter the pipe.
3) Put the flare nut on the pipe.
4) Flare the pipe.
5) Check that the flaring has been done correctly.

Cut exactly at right angles. Remove burrs.

Flaring
Set exactly at the position shown below.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)
Die	A	0-0.020 inch (0-0.5mm)	0.039-0.059 inch (1.0-1.5mm)	0.059-0.079 inch (1.5-2.0mm)

Check

The flare's inner surface must be flaw-free.

The pipe end must be evenly flared in a perfect circle.

Make sure that the flare nut is fitted.

2. Refrigerant piping

⚠ CAUTION

- Use the flare nut fixed to the main unit. (This is to prevent the flare nut from cracking as a result of deterioration over time.)
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- Use a torque wrench when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

- Align the centers of both flares and tighten the flare nuts 3 or 4 turns by hand, then tighten them fully with a spanner and a torque wrench.

Apply oil

Do not apply refrigeration oil to the outer surface.

Apply refrigeration oil only to the inner surface of the flare.

Flare nut

Do not apply refrigeration oil to the flare nut to avoid tightening with excessive torque.

Tighten

Torque wrench

Spanner

Piping union

Flare nut

	Piping size	Flare nut tightening torque
Gas side	O.D. 3/8 inch (9.5mm)	24-1/8–29-1/2lbf • ft (32.7-39.9N • m)
	O.D. 1/2 inch (12.7mm)	36-1/2–44-1/2lbf • ft (49.5-60.3N • m)
Liquid side	O.D. 1/4 inch (6.4mm)	10-1/2–12-3/4lbf • ft (14.2-17.2N • m)

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Refrigerant Piping Work

Cautions on piping handling

- Protect the open end of the pipe from dust and moisture.
- All pipe bends should be as gentle as possible. Use a pipe bender for bending.

Be sure to place a cap.

Rain

Wall

If no flare cap is available, cover the flare mouth with tape to keep dirt and water out.

Selection of copper and heat insulation materials

When using commercial copper pipes and fittings, observe the following:
- Insulation material: Polyethylene foam
  Heat transfer rate: 0.041 to 0.052W/mK (0.024 to 0.030Btu/fth°F (0.035 to 0.045kcal/mh°C))
  Be sure to use insulation that is designed for use with HVAC Systems.
- ACR Copper pipe only.

Gas pipe   Liquid pipe

Gas pipe insulation   Liquid pipe insulation

Finishing tape   Drain hose

- Be sure to insulate both the gas and liquid piping and observe the insulation dimensions as below.

	Piping size	Minimum bend radius	Piping thickness	Thermal insulation size	Thermal insulation thickness
Gas side	O.D. 3/8 inch (9.5mm)	1-3/16 inch (30mm) or more	0.031 inch (0.8mm) (C1220T-O)	I.D. 15/32-19/32 inch (12-15mm)	13/32 inch (10mm) Min.
	O.D. 1/2 inch (12.7mm)	1-9/16 inch (40mm) or more		I.D. 9/16-5/8 inch (14-16mm)	
Liquid side	O.D. 1/4 inch (6.4mm)	1-3/16 inch (30mm) or more		I.D. 5/16-13/32 inch (8-10mm)	

- Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

- Make absolutely sure to execute thermal insulation works on the pipe-connecting section, after checking for gas leakage, by thoroughly studying the following figures and using the included thermal insulating materials Ⓖ fitting insulation and Ⓗ fitting insulation. Fasten both ends with the Ⓓ clamps.

Piping insulation procedure

Gas piping	Liquid piping

Ⓖ Fitting insulation (for gas pipe)   Flare nut connection   Main unit

Gas piping

Ⓓ Clamps (use 2 clamps per insulation)   Attach to base

Wrap over from the base of the unit to the top of the flare nut connection

Ⓚ Medium 1 sealing pad for gas piping

Ⓗ Fitting insulation (for liquid pipe)   Flare nut connection   Main unit

Liquid piping

Ⓓ Clamps (use 2 clamps per insulation)   Attach to base

Wrap over from the base of the unit to the top of the flare nut connection

Ⓛ Medium 2 sealing pad for liquid piping

Liquid pipe   Gas pipe

Ⓗ Fitting insulation (for liquid pipe)

Ⓖ Fitting insulation (for gas pipe)

Ⓓ Clamps (use 2 clamps per insulation)

⚠ CAUTION

Be sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

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Installation of the Decoration Panel

With the wireless remote controller, field setting and trial operation cannot be performed without attaching the decoration panel.
Read **"Trial Operation and Testing"** before making a trial operation without attaching the decoration panel.
Refer to the installation manual attached to the decoration panel.
After installing the decoration panel, ensure that there is no space between the unit body and decoration panel.

Field Settings

⚠ CAUTION

When performing field setting or trial operation without attaching the decoration panel, do not touch the drain pump. This may cause electric shock.

- **Make sure the electrical wiring box cover is closed on the indoor and outdoor units.**
- **Field settings must be made from the remote controller and in accordance with installation conditions.**
- Setting can be made by changing the "Mode No.", "FIRST CODE NO." and "SECOND CODE NO.".
- The "Field Settings" included with the remote control lists the order of the settings and method of operation.

```
Field Settings
Unit No         Mode
   0            20
  0−01    1−01    2−02    3−01
  4−−−    5−−−    6−−−    7−−−
  8−−−    9−−−    10−−−   11−−−
 12−−−   13−−−    14−−−   15−−−
              Setting        ◄♦►
```

1. Setting air outlet direction

- For changing air outlet direction (2 or 3 directions), refer to the installation manual attached to the blocking pad kit (sold separately) or the service manual.
  (SECOND CODE NO. is factory set to "01" for air outlet in 4 directions.)

2. Setting for options

- For settings for options, see the installation manual provided with the option.

3. Setting air filter sign

- Remote controllers are equipped with liquid crystal display air filter signs to display the time to clean air filters.
- Change the SECOND CODE NO. depending on the amount of dirt or dust in the room.
  (SECOND CODE NO. is factory set to "01" for air filter contamination-light.)

Setting	Time until AIR FILTER CLEANING TIME INDICATOR lamp lights up (Long life type)	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Air filter contamination-light	Approx. 2500 hrs	10 (20)	0	01
Air filter contamination-heavy	Approx. 1250 hrs			02
Display on	–		3	01
Display off				02

When using wireless remote controllers
- When using the wireless remote controllers, wireless remote controller address setting is necessary. Refer to the installation manual attached to the wireless remote controller.

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Field Settings

4. When implementing group control

- When using as a pair unit, you may control up to 16 units with the remote controller.
- In this case, all the indoor units in the group will operate in accordance with the group control remote controller.
- Select a remote controller which matches as many of the functions (swing flap, etc.) in the group as possible.

Wiring Method (Refer to **"6. Wiring"** on page 11.)
1) Remove the electrical wiring box cover.
2) Cross-wire the terminal block for remote controller (P$_1$, P$_2$) inside the electrical wiring box. (There is no polarity.)
   (Refer to Table 3 in **"6. Wiring"** on page 12)

5. 2 remote controllers (controlling 1 indoor unit by 2 remote controllers)

- When using 2 remote controllers, one must be set to "MAIN" and the other to "SUB".

Wiring Method (Refer to **"6. Wiring"** on page11.)
1) Remove the electrical wiring box cover.
2) Add remote controller 2 to the terminal block for remote controller (P1, P2) in the electrical wiring box. (There is no polarity.)
   (Refer to Table 3 in **"6. Wiring"** on page 12)

Trial Operation and Testing

⚠ **CAUTION**

When performing field settings or trial operation without attaching the decoration panel, do not touch the drain pump. This may cause electric shock.

- After finishing the construction of refrigerant piping, drain piping, and electric wiring, conduct trial operation accordingly to protect the unit.

1. Trial operation and testing

Make sure to install the decoration panel before carrying out trial operation if the wireless remote controller is used.
- Trial operation should be carried out in either COOL or HEAT operation.

1-1. Measure the supply voltage and make sure that it is within the specified range.

**1-2. In COOL operation, select the lowest programmable temperature;
in HEAT operation, select the highest programmable temperature.**

**1-3. Carry out the trial operation following the instructions in the operation manual
to ensure that all functions and parts, such as the movement of the louvers, are
working properly.**
- To protect the air conditioner, restart operation is disabled for 3 minutes after the system has been turned off.

**1-4. After trial operation is complete, set the temperature to a normal level (78°F to 82°F
(26°C to 28°C) in COOL operation, 68°F to 75°F (20°C to 24°C) in HEAT operation).**
- When operating the air conditioner in COOL operation in winter, or HEAT operation in summer, set it to the trial operation mode using the following method.

Refer to | **For wired remote controller** | on page 18.
Refer to | **For wireless remote controller** | on page 19.

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For wired remote controller

1) Set to COOL or HEAT operation using the remote controller.
2) Press and hold Cancel button for 4 seconds or longer. Service settings menu is displayed.
3) Select Test Operation in the service settings menu, and press Menu/OK button. Basic screen returns and "Test Operation" is displayed at the bottom.
4) Press On/Off button within 10 seconds, and the test operation starts.
   Monitor the operation of the indoor unit for a minimum of 10 minutes. During test operation, the indoor unit will continue to cool/heat regardless of the temperature setpoint and room temperature.
   • In the case of above-mentioned procedures 3) and 4) in reverse order, test operation can start as well.
5) Press Menu/OK button in the basic screen. Main menu is displayed.
6) Select Air Flow Direction in the main menu and check that air flow direction is actuated according to the setting. For operation of air flow direction setting, see the operation manual.
7) After the operation of air flow direction is confirmed, press Menu/OK button. Basic screen returns.
8) Press and hold Cancel button for 4 seconds or longer in the basic screen.
   Service settings menu is displayed.
9) Select Test Operation in the service settings menu, and press Menu/OK button. Basic screen returns and normal operation is conducted.
   • Test operation will stop automatically after 15-30 minutes. To stop the operation, press On/Off button.
10) If the decoration panel has not been installed, turn off the power after the test operation.

Basic screen

1)
2)
Press and hold Cancel button for 4 seconds or longer during backlight lit.

Service Settings menu screen

3)
Press Menu/OK button.

4)
5)
Press On/Off button (within 10 seconds).

Press Menu/OK button.

Main menu screen

6)
Press Menu/OK button.

7)
Change the air flow direction by using ▲▼ (Up/Down)button.

Press Menu/OK button.

8)
Press and hold Cancel button for 4 seconds or longer during backlight lit.

9)
Press Menu/OK button.

Basic screen

Trial Operation and Testing

| For wireless remote controller |

1) Press [MODE] and select the COOL or HEAT operation.

2) Press [/TEST] twice. "Test" is displayed.

3) Press [ON/OFF] within 10 seconds, and the test operation starts.

Monitor the operation of the indoor unit for a minimum of 10 minutes. During test operation, the indoor unit will continue to cool/heat regardless of the temperature setpoint and room temperature.
- In the case of above-mentioned procedures 1) and 2) in reverse order, test operation can start as well.

- Test operation will stop automatically after 15 - 30 minutes. To stop the operation, press [ON/OFF] .
- Some of the functions cannot be used in the test operation mode.

3

Precautions

1) Refer to **"3. How to diagnose for malfunction"** if the unit does not operate properly.

2. Test items

Test items	Symptom	Check
Indoor and outdoor units are installed securely.	Fall, vibration, noise	
Is the outdoor unit fully installed?	No operation or burn damage	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
Does the power supply voltage correspond to that shown on the name plate?	No operation or burn damage	
Only specified wires are used for all wiring, and all wires are connected correctly.	No operation or burn damage	
System is properly grounded.	Electrical leakage	
Is wiring size according to specifications?	No operation or burn damage	
Is something blocking the air outlet or inlet of either the indoor or outdoor units?	Incomplete cooling/heating function	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear	
Pipes and wires are connected to the corresponding connection ports / terminal blocks for the connected unit.	No cooling/heating	
Stop valves are opened.	Incomplete cooling/heating function	
Check that the connector of the lead wires of the decoration panel is connected securely.	Louvers do not move	
Indoor unit properly receives wireless remote control commands.	No operation	

Items to be checked at time of delivery
Also review the **"Precautions"** on page 3

Test items	Check
Are the electrical wiring box cover, air filter, suction grille attached?	
Did you explain about operations while showing the operation manual to your customer?	
Did you hand the operation manual over to your customer?	

Points for explanation about operations

The items with ⚠ WARNING and ⚠ CAUTION marks in the operation manual are the items pertaining to possibilities for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the operation manual.

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Note to the installer

Be sure to instruct customers how to properly operate the unit (especially cleaning the filter, operating different functions, and adjusting the temperature) by having them carry out operations while looking at the manual.

3. How to diagnose for malfunction

- If the air conditioner does not operate normally after installing the air conditioner, a malfunction shown in the table below may happen.

Wired remote controller display	Description
No display	• Power outage, power voltage error or open-phase • Incorrect wiring (between indoor and outdoor units) • Indoor PC-board assembly failure • Remote controller wiring not connected • Remote controller failure • Open fuse or tripped circuit breaker (outdoor unit)
"Checking the connection. Please stand by." *	• Indoor PC-board assembly failure • Wrong wiring (between indoor and outdoor units)

* "Checking the connection. Please stand by" will be displayed for up to 90 seconds following the application of power to the indoor unit. This is normal and does not indicate a malfunction.

■ Diagnose with the display on the liquid crystal display remote controller.

With the wired remote controller

When the operation stops due to a malfunction, operation lamp blinks, and the malfunction code is indicated on the liquid crystal display. In such a case, diagnose the fault contents by referring to ▮Error History▮ in the service settings menu.
In the case of group control, the unit No. is displayed so that the indoor unit with the trouble can be identified.

With the wireless remote controller

(Refer also to the operation manual attached to the wireless remote controller)
When the operation stops due to a malfunction the display on the indoor unit blinks. In such a case, diagnose the fault contents with the error code which can be found by following procedures.

1) Press the INSPECTION/TEST OPERATION button, " 👁 " is displayed and " 0 " blinks.
2) Press the TEMPERATURE SETTING button and find the unit No. which stopped due to trouble.

    Number of beeps   3 short beeps............................ Perform all the following operations
                                     1 short beep .... Perform (3) and (6)
                                     1 long beep............................... No trouble

3) Press the OPERATION MODE SELECTOR button and upper figure of the error code blinks.
4) Continue pressing the TEMPERATURE SETTING button until it makes 2 short beeps and find the upper code.
5) Press the OPERATION MODE SELECTOR button and lower figure of the error code blinks.
6) Continue pressing the TEMPERATURE SETTING button until it makes a long beep and find the lower code.
    • A long beep indicate the error code.

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3P436085-1

7.2   <BYFQ60B3W1> Decoration Panel

The English text is the original instruction. Other languages are translations of the original instructions.

Read this manual attentively before installation. Do not throw it away. Keep it in your files for future reference.

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Be sure only to use accessories made by Daikin that are specifically designed for the use with the equipment and have them installed by a professional.

If unsure of installation procedures or use, always contact your dealer for advice and information.

Before installation

■ Leave the unit inside its packaging until you reach the installation site.

Rotary fan

Cut off the main power before opening the grille.

■ Refer to the installation manual of the indoor unit for items not described in this manual.

NOTE **To the installer**

Be sure to instruct the customer how to properly operate the system showing him or her the operation manual of the indoor unit.

Accessories

Installation manual		Wire harness	
Screws (4x)		Temporary latch	
Fibre glass tube		Tie wrap (7x)	

Preparation before installation

For this unit, you are able to select air flow directions. To discharge air in 2 or 3 directions, it is necessary to purchase the optional blocking pad kit for sealing air discharge outlets.

Handling of the decoration panel

To prevent any damage to the decoration panel, take care of the following:
- Never place the decoration panel facing down.
- Never let the decoration panel lean against a wall.
- Never place the decoration panel on a sharp or projecting object.
- Never touch or put pressure on the swing flap in order to prevent malfunction of the swing flap.

Preparing the decoration panel for installation

1 Remove the suction grille from the decoration panel.

1 Decoration panel
2 Suction grille
3 Lever

■ Push the suction grille lever (3) inward and open the suction grille (2). (See figure 1)

■ Detach the suction grille from the decoration panel by lifting the suction grille up approximately 45 degrees (A) until the position is reached on which removal of the suction grille is possible (B). (See figure 2)

Installation of the decoration panel to the indoor unit

Refer to the installation manual of the indoor unit for details on installing the indoor unit.

Installation and wiring of the decoration panel.

Make sure to turn off the power supply before wiring!

For installation and wiring of the decoration panel see figure 6.

	1	Screws
A	1	Tie wrap
	2	Latch
		Socket X36
		Socket X80
B	1	Tie wrap
	2	Latch
C	1	Tie wrap
	2	Tie wrap
	3	Fibre glass tube
	4	Tie wrap

1 Attach wire harness from panel accessory set to unit and to other wire harness by two tie wraps (1). (See figure 6-C)

2 Lead the wire harness through unit's groove and attach it by tie wrap (1) to the rest of wire harnesses. (See figure 6-B)

3 Open two latches (2) and insert the wire harness so it is in the same condition as other wire harnesses. (See figure 6-A and 6-B)

4 Insert wire harness into switch box using lower hole, insert two connectors into proper sockets (X36, X80) and secure the wire harness by tie wrap (1). (See figure 6-A)

5 Provisionally tighten the 2 supplied screws (1) approximately 5 mm (0.2 in) into the indoor unit as marked in figure. (See figure 6)

6 Attach latch (2) from panel accessory set to unit according to figure 3. Then turn this latch up. (See figure 3)

7 Slide the panel over the provisionally tightened screws matching the 2 attachment holes ( ).

8 Turn decoration panel lever (1) 90 degrees and then turn temporary latch (2) down to secure panel in temporary position. (See figure 3)

9 Attach remaining screws and tighten all 4 screws until the thickness of the sealing material between the decoration panel and the indoor unit reduces to 6-8 mm. (See figure 4)

1	Indoor unit
2	Ceiling
3	Sealing material
4	Decoration panel
5	Air outlet

10 Pull the fibre glass tube (3) over decoration panel wire harness. Then connect both wire harnesses together and move the fibre glass tube over this connection. Secure the fiber glass tube by two tie wraps (2) according to figure 6-C. Then attach decoration panel wire harness to unit by tie wrap (4). (See figure 6-C)

⚠ Make sure that the swing flap motor lead wire is not caught between the indoor unit and the decoration panel and inbetween the electric component box lid.

Precautions

■ Improper tightening of the screws - (See figure 5) - may cause air to leak into the unit and between the ceiling and the decoration panel (1), resulting in formation of contamination (2) and dew (3).

■ If there is a gap remaining between the ceiling and the decoration panel after tightening the screws, re-adjust the indoor unit body height. The indoor unit must be kept leveled and the drain piping kept unaffected.

Installation of the suction grille

Install the suction grille by reversing the procedure shown in "Preparing the decoration panel for installation" on page 1.

■ The suction grille may be installed in 4 directions by simply turning it 90 degrees.

■ Change the direction when adjusting the direction of the suction grille of multiple units or to comply with the demands of the customer.

NOTE Be careful not to get the swing flap motor lead wire get caught when installing the suction grille.

4P345302-1B

7.3 <BYFQ60C2W1W(S)> Decoration Panel

1

90°

2

3

4-8 mm (0.16-0.31 in)

4

5

7

5
(X36A)

6

The English text is the original instruction. Other languages are translations of the original instructions.

Read this manual attentively before installation. Do not throw it away. Keep it in your files for future reference.

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Be sure only to use accessories made by Daikin that are specifically designed for the use with the equipment and have them installed by a professional.

If unsure of installation procedures or use, always contact your dealer for advice and information.

Before installation

■ Leave the unit inside its packaging until you reach the installation site.

Rotary fan

Cut off the main power before opening the grille.

■ Refer to the installation manual of the indoor unit for items not described in this manual.

NOTE **To the installer**

Be sure to instruct the customer how to properly operate the system showing him or her the operation manual of the indoor unit.

Accessories

Installation manual	
Screws (4x)	
Grille hinge (2x)	

Preparation before installation

For this unit, you are able to select air flow directions. To discharge air in 2 or 3 directions, it is necessary to purchase the optional blocking pad kit for sealing air discharge outlets.

Handling of the decoration panel

To prevent any damage to the decoration panel, take care of the following:
- Never place the decoration panel facing down.
- Never let the decoration panel lean against a wall.
- Never place the decoration panel on a sharp or projecting object.
- Never touch or put pressure on the swing flap in order to prevent malfunction of the swing flap.

Preparing the decoration panel for installation

1 Remove the suction grille from the decoration panel.

1	Decoration panel
2	Suction grille
3	Lever

■ Remove the transporting tape from the decoration panel suction grille and flaps.

■ Push the suction grille lever (3) inward and open the suction grille (2). (See figure 1)

■ Detach the suction grille from the decoration panel by lifting the suction grille up approximately 90 degrees (A) until the position is reached on which removal of the suction grille is possible (B). (See figure 2)

Installation of the decoration panel to the indoor unit

Refer to the installation manual of the indoor unit for details on installing the indoor unit.

1 Install the decoration panel (See figure 3)

1	Temporary latch
2	Hook
3	Swing flap motor lead wire
4	Piping area
5	Piping side mark
6	Drain area
7	Drain side mark

1 Hold the decoration panel against the indoor unit by matching the piping side and drain side marks on the decoration panel with the position of the piping area and drain area of the indoor unit.

2 Turn 2 panel temporary latches up into the hooks of the indoor unit so the decoration panel is temporarily fixed to the indoor unit. (See figure 3)

3 Make sure that the swing flap motor lead wire isn't caught between the decoration panel and the indoor unit.

4 Attach 4 supplied screws and check whether the decoration panel is properly aligned with the indoor unit and ceiling.

5 Tighten all 4 screws until the thickness between of the sealing material between the decoration panel and the indoor unit reduces to 4-8 mm. (See figure 4)

1	Indoor unit
2	Ceiling
3	Sealing material
4	Decoration panel
5	Air outlet

Precautions

■ Improper tightening of the screws - (See figure 5) - may cause air to leak into the unit and between the ceiling and the decoration panel (1), resulting in formation of contamination (2) and dew (3).

■ If there is a gap remaining between the ceiling and the decoration panel after tightening the screws, re-adjust the indoor unit body height. The indoor unit must be kept leveled and the drain piping kept unaffected.

2 Wiring of the decoration panel (See figure 6)

⚠ Make sure to turn off the power supply before wiring!

1	Screws (2)
2	Switch box
3	Swing flap motor lead wire
4	Swing flap motor lead wire fixed by tie wrap to the rest of the wires (See detail in figure 6)
5	Connector of the indoor unit PCB (X36A)
6	Tie wrap

1 Remove the electric components box lid. Loosen 2 screws and slide the electric components box lid in the direction of the arrows.

2 Securely connect the connector of swing flap motor lead wire installed on the decoration panel. Attach the swing flap motor lead wire to the rest of the wires firmly by tie wrap (from indoor unit accessory set). (See figure 6)

3 Replace the electric components box lid reversing the procedure to remove it.

⚠ Make sure that the swing flap motor lead wire is not caught between the indoor unit and the decoration panel and inbetween the electric component box lid.

Installation of the suction grille to decoration panel

Install the suction grille (See figure 7)

1	Decoration panel
2	Suction grille
3	Suction grille hinge (attached to decoration panel)

1 Remove the transportation tape which is securing 2 suction grille hinges in place.

2 Attach the suction grille to hinges by pressing the hinge and inserting both ends of hinge to holes on the suction grille. (See figure 7)

3 Make sure that the suction grille is attached to the decoration panel properly by 2 hinges.

4 Close the suction grille by reversing the procedure shown in "Preparing the decoration panel for installation" on page 1.

■ The suction grille may be installed in 4 directions by simply turning it 90 degrees.

■ Change the direction when adjusting the direction of the suction grille of multiple units or to comply with the demands of the customer.

4P340850-1B

8. Remote Controllers

8.1   <BRC1E73> Wired Remote Controller for FDMQ, FFQ Series

1. Safety Considerations

The original instructions are written in English. All other languages are translations of the original instructions.

All phases of the field-installation, including, but not limited to, electrical, piping, safety, etc. must be in accordance with manufacturer's instructions and must comply with national, state, provincial and local codes.

Read these **SAFETY CONSIDERATIONS** carefully before installing the remote controller.

After completing the installation, ensure that the remote controller operates properly during the startup operation.

Train the customer to operate and maintain the remote controller. Inform customers that they should store this Installation Manual with the Operation Manual for future reference.

Always use a licensed installer or contractor to install this product. Improper installation can result in electrical shock, fire, or explosion.

Meanings of **WARNING, CAUTION**, and **NOTE** Symbols.

⚠ **WARNING**	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ **CAUTION**	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
⚠ **NOTE**	Indicates situations that may result in equipment or property-damage accidents only.

⚠ WARNING
Only qualified personnel must carry out the installation work.
Consult your Daikin dealer regarding relocation and reinstallation of the remote controller. Improper installation work may result in electric shocks or fire.
Electrical work must be performed in accordance with relevant local and national regulations and with instructions in this installation manual. Improper installation may cause electrical shocks or fire.
Use only specified accessories and parts for installation work. Failure to use specified parts may result in electric shocks, fire, or the unit falling.
Do not disassemble, reconstruct, or repair. Electric shock or fire may occur.
Make sure that all wiring is secured, that specified wires are used, and that no external forces act on the terminal connections or wires. Improper connections or installation may result in fire.
Before touching electrical parts, confirm the power-off to the unit.

2

⚠ CAUTION

Keep water out of the remote controller.
To avoid electric shock due to entry of water or insects, fill the wiring through-hole with putty.
Do not wash the remote controller with water as it may result in electrical shocks or fire.

Do not touch the remote controller buttons with wet fingers.
Touching the buttons with wet fingers can cause an electric shock.

Do not install the remote controller in the following locations:
(a) Where a mineral oil mist or oil spray or vapor is produced, for example, in a kitchen.
   Plastic parts may deteriorate.
(b) Where corrosive gas, such as sulfurous acid gas, is produced.
(c) Near machinery emitting electromagnetic waves.
   Electromagnetic waves may disturb the operation of the control system and cause the unit to malfunction.
(d) Where flammable gas may leak, where there is carbon fiber or ignitable dust suspensions in the air, or where volatile flammables such as thinner or gasoline are handled.
   Operating the unit in such conditions can cause a fire.
(e) High temperature area or direct flame.
   Overheating and/or fire can occur.
(f) Moist area, where there is exposure to water. If water enters the inside of the remote controller, it may cause electric shock and electrical components may fail.

⚠ NOTE

Install the control wires for the indoor and the remote controller at least 3.5 feet (1 meter) away from televisions or radios to prevent image interference or noise. Depending on the radio waves, a distance of 3.5 feet (1 meter) may not be sufficient to eliminate the noise.

When remote controller's temperature sensor is used, select the installation location as per the following:
● A place where average temperature in the room can be detected.
● A place where it is not exposed to direct sunlight.
● A place where it is far away from any heat source.
● A place where it is not affected directly by outside air.

3

2. Accessories

The following accessories are included.

Drywall screw	Drywall anchor	Wire tie	Operation manual	Installation manual	Wiring retainer
(2 pcs.)	(2 pcs.)	(1 pc.)	(1 pc.)	(1 pc.)	(1 pc.)

3. Remote Controller Installation Procedure

3-1 Determine where to install the remote controller.

Make sure to follow the **Safety Considerations** when determining the location.

3-2 If the control wire for the remote controller is to be routed from the rear, consider the location of the access hole in the lower case for making a hole in the wall.

[Unit : inch (mm)]

External view of the remote controller

φ 5/16 to 3/8 (8 to 10)

Align the center of the wall hole with the center of the access hole on the controller lower case when planning the installation.

Lower case Through-hole

1-9/16 (40)

1-15/16 (48.5)

Access hole
φ 5/16 to 3/8 (8 to 10)

⚠ **NOTE**

If the hole size is too large or not in the proper location, it may be seen after the remote controller is installed.

3-3 Remove upper case.

Insert a screwdriver in the recess of lower case to remove the upper case (2 points).

Remote controller printed-circuit board is installed on the upper case. Be careful not to damage the printed-circuit board with the screwdriver.

Be careful not to let dust or moisture touch the printed-circuit board.

Upper case

Screwdriver

Insert and twist the screwdriver lightly for removal.

Lower case

4

3-4 Determine the location where the wiring will enter the remote controller (back, left side, top left, top center).

3-4-1 Back outlet

Cut off resin area (notched area).

3-4-2 Left outlet

Cut the plastic at the notched area and remove any remaining burrs.

3-4-3 Top left outlet

Cut the plastic at the notched area and remove any remaining burrs.

3-4-4 Top center outlet

Cut the plastic at the notched area and remove any remaining burrs.

3-5 Install wiring.

⚠ **NOTE**

1. Switch box and control wiring are filed supplied.
2. Do not touch the remote controller printed-circuit board.

Wiring Specifications

Wiring Type	Non-shielded, 2-conductor, stranded copper wire
Wiring Size	AWG-18
Wiring Length	Maximum 1640 feet (500 m)

5

Prepare the wiring for connection to the remote controller following these instructions:

Approx. 3/8 inch (10 mm)

Remove the wire jacket and insulation

Cutting guideline

To simplify the wiring, maintain a 3/8 inch (10 mm) difference between the length of the two conductors.

Length of jacket to be removed:
- Approx. 6 inch (150 mm) for top left outlet
- Approx. 8 inch (200 mm) for top center outlet

Connect the terminals (P/P1, N/P2) of the remote controller to the terminals (P1, P2) of the indoor unit. (P1 and P2 are not polarity sensitive.)

3-5-1 Back outlet

Indoor unit
P1 P2

Lower case

Upper case

Printed-circuit board

Wire tie

Wire tie

Wire attachment point

Cross-section A - A

Secure the wire at the attachment point by using furnished wire tie.

\<Wire attachment guideline\>

6

3-5-2 Left outlet

Indoor unit
P1 P2

Upper case
Printed-circuit board
Lower case

3-5-3 Top left outlet

Wiring retainer

Wiring retainer   Upper case

Wire

Cross-section B - B

As shown to the left, install the furnished wiring retainer to prevent the wires from being pinched during installation.

Indoor unit
P1 P2

Upper case
Printed-circuit board
Lower case

3-5-4 Top center outlet

Indoor unit
P1 P2

Wiring retainer

Lower case

Upper case
Printed-circuit board

7

⚠ NOTE

● To prevent electrical noise and possible communication errors, avoid installing the remote controller wiring parallel to or in the vicinity of line voltage circuits.

3-6 Installation procedure for the lower case.

When wiring the remote controller through the top center or rear access points, attachment of the wire to the lower case is required before it is wall mounted. Closely follow the wiring procedures.

3-6-1 Wall installation

Secure by using furnished drywall anchors and screws (2 pcs.).

Drywall anchors

Drywall screws

3-6-2 Switch box installation

Secure by using field supplied machine screws (2 pcs.).

[Unit : inch (mm)]

Switch box
(field supply) or
(use optional accessory
KJB211A)

Switch box

3-5/16 (84)

1-13/16
(46)

Machine screws (field supply) or
(use optional accessory KJB211A)

⚠ NOTE

● Install the control on a flat surface only.
● To prevent deformation of the lower case, avoid over-tightening the installation screws.

3-7 Install the upper case.

● Align the upper case with tabs of the lower case (6 points), insert and install the upper case.
● Install the wiring with care to prevent pinching.
● Peel off the protective membrane which overlays the upper case.

4. Functions and Menu Items of Remote Controller Buttons

4-1 Functions and menu items

3

(1) Operation mode selector button

(11) LCD (with backlight)

(4) Up button ▲
(5) Down button ▼
(6) Right button ▶
(7) Left button ◀

(9) Operation lamp

(8) On/Off button

(3) Menu/OK button

(10) Cancel button

(2) Fan speed control button

(1) Operation mode selector button
  Used to change the mode.

(2) Fan speed control button
  Used to change the fan control.

(3) Menu/OK button
  ● Used to access the main menu.
    (For details of the main menu, see the operation manual.)
  ● Used to enter the item selected.

Main Menu

∗Airflow Direction
∗Individual Airflow Direction
∗Ventilation
  Schedule
  Off Timer
  Celsius / Fahrenheit
  Filter Auto Clean
  Maintenance Information
  Configuration
  Current Settings
  Clock & Calendar
  Daylight Saving Time
  Language

∗Depending on connected model

(4) Up button ▲
  ● Used to raise the setpoint temperature.
  ● The previous menu items will be highlighted.
    (The highlighted items will be scrolled continuously when the button is pressed continuously.)
  ● Used to change the selected item.

(5) Down button ▼
  ● Used to lower the setpoint temperature.
  ● Items below the currently selected item will be highlighted.
    (The highlighted items will be scrolled continuously when the button is pressed continuously.)
  ● Used to change the selected item.

(6) Right button ▶
  ● Used to highlight items to the right of the currently selected item.
  ● Display contents are changed to next screen per page.

10

(7) Left button ◀
- Used to highlight items to the left of the currently selected item.
- Display contents are changed to previous screen per page.

(8) On/Off button
Press once to operate, and press once again to stop.

(9) Operation lamp
Green lamp lights up during operation. The lamp will flash if a malfunction occurs.

(10) Cancel button
- Used to return to the previous screen.
- Press and hold this button for 4 seconds or longer to display service settings menu.

(11) LCD (with backlight)
The backlight will illuminate for approximately 30 seconds by pressing any operation button.

Service Settings menu

Test Operation
Maintenance Contact
Field Settings
∗Energy Saving Options
Prohibit Function
Min Setpoints Differential
∗Outdoor unit AirNet Address
Error History
∗Indoor Unit Status
∗Outdoor Unit Status
Forced Fan ON
Switch Main Sub Controller
Filter Indicator
∗Brush/Filter Ind.
∗Disable Filter Auto Clean

∗Depending on connected model

⚠ **NOTE**
- Operate the button while the backlight is illuminated.
- When one indoor unit is controlled by two remote controllers (main / sub) only the first controller to be accessed by the user will illuminate it's backlight.

4-2 Button menu display descriptions

<Service settings menu screen>

Service Settings	1/3
Test Operation	
Maintenance Contact	
Field Settings	
Energy Saving Options	
Prohibit Function	
Min Setpoints Differential	
Setting	⬍

Highlighted display (selected items)

In the highlighted display (selected items) setting screen, button operation descriptions are displayed.

11

5. Power-on

● Check for completion of indoor/outdoor unit wiring.
● Ensure that covers have been replaced on electrical component boxes for both indoor and outdoor units prior to restoring power.

5-1 The following message is displayed after power-on.
Checking the connection. Please stand by.

When the above message is displayed, the backlight will not be ON.

⎡**In the case that 1 indoor unit is controlled by 2 remote controllers:**⎤

Make sure to set the sub remote controller when the above message is displayed. Hold **Mode** button for 4 seconds or longer to set.
When the display is changed from "Main RC" to "Sub RC" the setting is completed.

5-2 Basic screen is displayed.

\<Main remote controller\>

5-1
Checking the connection. Please stand by.
Main RC

⬇

Error Code U5
Checking the connection. Please stand by.
Main RC

⬇

\<Basic screen\>

5-2
Fan
❧ ■ _ _

\<Sub remote controller\>

5-1
Checking the connection. Please stand by.
Main RC

⬇

Error Code U5
Checking the connection. Please stand by.
Main RC

Press and hold 4 seconds or longer **Mode** button of sub remote controller side.

⬇

Checking the connection. Please stand by.
Sub RC

⬇

\<Basic screen\>

5-2
Fan
❧ ■ _ _

┌─ **NOTE** ─────────────────────────┐
If sub remote controller is not set at power-on in the case of one indoor unit controlled by two remote controllers, **Error Code: U5** is displayed in the connection checking screen.
Select the sub remote controller by pressing **Mode** button of either one of the remote controllers for 4 seconds or longer.
If the basic screen is not displayed in 2 minutes after the "Sub RC" is displayed, shut off the power supply and check the wiring.
└─────────────────────────────────┘

┌─ **NOTE** ─────────────────────────┐
When selecting a different language, refer to **Chapter 12**. **Language**.
(See page 21.)
└─────────────────────────────────┘

12

3

6. Field Settings

6-1 Press and hold **Cancel** button for 4 seconds or longer. Service settings menu is displayed.

6-2 Select Field Settings in the Service Settings menu, and press **Menu/OK** button. Field settings screen is displayed.

6-3 Highlight the mode, and select desired "Mode No." by using ▲▼ (Up/Down) button.

6-4 In the case of setting per indoor unit during group control (When Mode No. such as 20 , 21 , 22 , 23 , 25 are selected), highlight the unit No. and select "Indoor unit No." to be set by using ▲▼ (Up/Down) button. (In the case of group setting, this operation is not needed.)

> In the case of individual setting per indoor unit, current settings are displayed. And, SECOND CODE NO. " - " means no function.

6-5 Highlight SECOND CODE NO. of the FIRST CODE NO. to be changed, and select desired "SECOND CODE NO." by using ▲▼ (Up/Down) button. Multiple identical mode number settings are available.

> In the case of setting for all indoor units in the remote control group, available SECOND CODE NO. is displayed as " ＊ " which means it can be changed. When SECOND CODE NO. is displayed as " - ", there is no function.

\<Basic screen\>

6-1

> Fan

Press and hold **Cancel** button for 4 seconds or longer during backlight lit.

\<Service settings menu screen\>

6-2

> Service Settings   1/3
> Test Operation
> Maintenance Contact
> Field Settings
> Energy Saving Options
> Prohibit Function
> Min Setpoints Differential
>   Setting

Press **Menu/OK** button.

\<Service settings screen\>

In the case of individual setting per indoor unit

6-3
6-4
6-5

> Field Settings
> Unit No   Mode
>   0   20
>   0–01   1–01   2–02   3–01
>   4––   5––   6––   7––
>   8––   9––   10––   11––
> 12––   13––   14––   15––
>   Setting

In the case of group total setting

6-3
6-5

> Field Settings
>   Mode
>   10
>   0 01 1 ＊ 2–＊   3–＊
>   4 –– 5 –– 6––   7––
>   8 –– 9 –– 10–– 11––
> 12   13   14–– 15––
>   Setting

SECOND CODE NO.

FIRST CODE (SW) NO.

Press **Menu/OK** button.

6-6 Press **Menu/OK** button. Setting confirmation screen is displayed.

6-7 Select Yes and press **Menu/OK** button. Setting details are determined and field settings screen returns.

6-8 In the case of multiple setting changes, repeat "**6-3**" to "**6-7**".

6-9 After all setting changes are completed, press **Cancel** button twice.

6-10 Backlight goes out, and [**Checking the connection. Please stand by.**] is displayed for initialization. After the initialization, the basic screen returns.

<Setting confirmation screen>

6-6
6-7

Field Settings
Save the settings?

Yes No

Setting ▶

Press **Menu/OK** button.

Setting confirmation

3

┌─ **NOTE** ──┐
● Installation of optional accessories on the indoor unit may require changes to field settings. See the manual of the optional accessory.
● For field setting details related to the indoor unit, see installation manual shipped with the indoor unit.
└───┘

Mode No. (Note 1)	First Code No.	Description	Second Code No. (Note 2) (Items in bold are factory default settings)			
			01	02	03	04
10 (20)	2	Priority of thermistor sensors for space temperature control	The return air thermistor is primary and the remote controller thermistor is secondary.	The remote controller thermistor is not utilized. Only the return air thermistor will be utilized.	Only the remote controller thermistor will be utilized.	———
	5	Room temperature value reported to multizone controllers	Return air thermistor	Thermistor designated by 10-2 above (Note 3)	———	———
12 (22)	2	Thermo-on/off deadband (Note 4)	2F (1C)	1F (0.5C)	———	———
1c	1	Thermistor sensor for auto changeover and setback control by the remote controller	Utilize the return air thermistor	Utilize the remote controller thermistor	———	———
	3	Access permission level setting	Level 2	Level 3	———	———
1e	2	Setback availability	N/A	Heat only	Cool only	Cool/Heat

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Notes) 1. Field settings are normally applied to the entire remote control group, however if individual indoor units in the remote control group require specific settings or for confirmation that settings have been established, utilize the mode number in parenthesis.
2. Any features not supported by the connected indoor unit will not be displayed.
3. When mode 10-2-01 is selected, only the return air temperature value is reported to the multizone controller.
4. The actual default deadband value will depend upon the indoor unit model.

7. Test Operation

Also see installation manuals furnished with the indoor unit and the outdoor unit.

● Verify that the wiring of the indoor unit and the outdoor unit is completed.
● Ensure that covers have been replaced on electrical component boxes for both indoor and outdoor units prior to restoring power.
● After refrigerant piping, drain piping and electric wiring are completed, clean inside of the indoor unit and decorative panel.
● Perform the test operation according to following procedure.
● To protect the compressor, apply power to the outdoor unit at least 6 hours prior to test operation.
● Set the remote controller display mode to standard or detailed display mode. Refer to Operation Manual for the setting method.

Notes for backlight

● The backlight will be ON for 30 seconds by pressing any button.
● The initial push of the button will only turn on the backlight. While the backlight is turned on, the buttons assigned functionality will be available.

7-1 Set the operation mode to cooling by using the remote controller.

7-2 Press and hold **Cancel** button for 4 seconds or longer. Service settings menu is displayed.

7-3 Select Test Operation in the service settings menu, and press **Menu/OK** button. Basic screen returns and message "Test Operation" is displayed at the bottom.

\<Basic screen\>

7-1
7-2

Cool	Set to
	68F

Press and hold **Cancel** button for 4 seconds or longer while the backlight is on.

\<Service settings menu screen\>

7-3

Service Settings	1/3
Test Operation	
Maintenance Contact	
Field Settings	
Energy Saving Options	
Prohibit Function	
Min Setpoints Differential	
Setting	

Press **Menu/OK** button.

15

3

7-4 Press **On/Off** button within 10 seconds, and the test operation starts. Monitor the operation of the indoor unit for a minimum of 10 minutes. During test operation, the indoor unit will continue to cool regardless of the temperature setpoint and room temperature.
∗ Note) In the case of above-mentioned procedures **7-3** and **7-4** in reverse order, test operation can start as well.

7-5 Press **Menu/OK** button in the basic screen. Main menu is displayed.

7-6 In the case of a model having airflow direction function, select Airflow Direction in the main menu and check that airflow direction is actuated according to the setting. For operation of airflow direction setting, see the operation manual.

7-7 After the operation of airflow direction is confirmed, press **Menu/OK** button. Basic screen returns.

7-8 Press and hold **Cancel** button for 4 seconds or longer in the basic screen. Service settings menu is displayed.

7-9 Select Test Operation in the service settings menu, and press **Menu/OK** button. Basic screen returns and normal operation is conducted.
∗ Note) The test operation will automatically finish in 30 minutes.

7-10 Check the functions according to the operation manual.

7-11 When the decorative panel is not installed, shut off the power supply after the test operation finishes.

● If construction activities are planned within the space following the test operation procedure, recommend to the customer that the indoor unit is not operated to prevent contamination from paints, drywall dust and other airborne materials.

7-4
7-5

Cool

Test Operation

Press **On/Off** button (within 10 seconds).

Press **Menu/OK** button.

<Main menu screen>

7-6

Main Menu	1/3
Airflow Direction	
Individual Airflow Direction	
Ventilation	
Schedule	
Off Timer	
Celsius / Fahrenheit	
Setting	

Press **Menu/OK** button.

7-7

Airflow Direction

Swing

Setting

Change the airflow direction by using ▲▼ (Up/Down) button.

Press **Menu/OK** button.

7-8

Cool

Test Operation

Press and hold **Cancel** button for 4 seconds or longer while the backlight is on.

7-9

Service Settings	1/3
Test Operation	
Maintenance Contact	
Field Settings	
Energy Saving Options	
Prohibit Function	
Min Setpoints Differential	
Setting	

Press **Menu/OK** button.

<Basic screen>

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⚠ NOTE

● If operation is not possible due to a malfunction, refer to following │Failure diagnosis method│ .
● After the test operation finishes, check whether the error code history is displayed on the maintenance information screen of the main menu according to the following procedure.

7-12 Press **Menu/OK** button in the basic screen. Main menu screen is displayed.

7-13 Select │Maintenance Information│ in the main menu, and press **Menu/OK** button.

7-14 Maintenance information screen is displayed. Check whether the error code history is displayed on the screen.
＊ If no error code history is displayed following this procedure the system has normally completed the test operation mode.

7-15 If the error code history is displayed, conduct the failure diagnosis referring to <Error code list> in the installation manual of the indoor unit.
After the failure diagnosis finishes, press and hold **On/Off** button for 4 seconds or longer in the maintenance information screen to erase the error code history.

<Basic screen>

7-12

Cool | Set to
68F

Press **Menu/OK** button.

<Main menu screen>

7-13

Main Menu   2/3
Filter Auto Clean
Maintenance Information
Configuration
Current Setting
Clock & Calendar
Daylight Saving Timer
        Setting

Press **Menu/OK** button.

7-14
7-15

Error Code:U5
Contact Info
0123-456-7890

Indoor Model   ––/000
Outdoor Model   ––/000

Press and hold **On/Off** button for 4 seconds or longer during backlight lit.

Failure diagnosis method

● Whenever the remote controller display is blank or displays [**Checking the connection. Please stand by.**], troubleshoot the system with the items in the Description column of the following table.
● If an error occurs, **CODE** is displayed on the LCD as shown to the right. Conduct the failure analysis referring to <Error code list> in the installation manual of the indoor unit. When the unit No. which detected the error during group control is confirmed, refer to **Chapter 8: Procedure for Checking Error History**.

Cool

Test Operat. CODE : U5

17

Remote controller display	Description
No display	● Power outage, power voltage error or open-phase ● Incorrect wiring (between indoor and outdoor units) ● Indoor printed-circuit board assembly failure ● Remote controller wiring not connected ● Remote controller failure ● Open fuse or tripped circuit breaker (outdoor unit)
Checking the connection. Please stand by. ∗	● Indoor printed-circuit board assembly failure ● Wrong wiring (between indoor and outdoor units)

∗ [**Checking the connection. Please stand by.**] will be displayed for up to 90 seconds following the
application of power to the indoor unit. This is normal and does not indicate a malfunction.

3

8. Procedure for Checking Error History

8-1 Press and hold **Cancel** button for
4 seconds or longer in the basic
screen. Service settings menu is
displayed.

8-2 Select Error History in the service
settings menu, and press **Menu/OK**
button. The error history menu screen
is displayed.

8-3 Select RC Error History in the error
history menu, and press **Menu/OK**
button.
Error codes and unit No. can be
confirmed in the RC error history
screen.

8-4 In the error history, the 10 most recent
items are displayed in order of
occurrence.

8-5 Press **Cancel** button in the RC error
history screen 3 times.
The basic screen returns.

8-1   **<Basic screen>**

<Service settings menu screen>

8-2
```
Service Settings              2/3
Outdoor unit AirNet Address
Error History
Indoor Unit Status
Outdoor Unit Status
Forced Fan ON
Switch Main Sub Controller
         Setting           ▲▼
```
Press **Menu/OK** button.

8-3
```
Error History
RC Error History
Indoor unit Error History



         Setting           ▲▼
```
Press **Menu/OK** button.

8-4
8-5
```
RC Error History            1/3
    Unit Error    Date      Time
01    —      — / — / —   — : —
02    —      — / — / —   — : —
03    —      — / — / —   — : —
04    —      — / — / —   — : —

                        ◄ ►
```
Unit No.
Latest record

9. Adding Maintenance Contact Information

● Registration of the maintenance contact.

9-1 Press and hold **Cancel** button for 4 seconds or longer in the basic screen.
Service settings menu is displayed.

9-2 Select Maintenance Contact in the service settings menu, and press **Menu/OK** button. Maintenance contact menu screen is displayed.

9-3 Select Maintenance Contact , and press **Menu/OK** button.

9-4 Enter the telephone number.
Scroll through the numbers by using ▲▼ (Up/Down) buttons. Start from the left side. Blank digits should remain as " - ".

9-5 Press **Menu/OK** button.
Setting confirmation screen is displayed.

9-6 Select Yes and press **Menu/OK** button.
Setting details are saved and service settings menu screen returns.

9-7 Press **Cancel** button once.
The basic screen returns.

9-1 **<Basic screen>**

<Service settings menu screen>

9-2

Service Settings	1/3
Test Operation	
Maintenance Contact	
Field Settings	
Energy Saving Options	
Prohibit Function	
Min Setpoints Differential	
Setting	

Press **Menu/OK** button.

9-3

Maintenance Contact
None
Maintenance Contact

Setting

Press **Menu/OK** button.

9-4

Maintenance Contact

█ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─

Setting

9-5

Maintenance Contact

0 1 2 3 ─ 4 5 ─ ─ ─ ─ ─ ─ ─ ─

Setting

Press **Menu/OK** button.

<Setting confirmation screen>

9-6

Maintenance Contact
Save the settings?

Yes   No

Setting

Press **Menu/OK** button.

<Service settings menu screen>

19

10. Confirming Registered Details

10-1 Press **Menu/OK** button in the basic
screen.
Main menu is displayed.
Select Maintenance Information in the
main menu, and press **Menu/OK**
button.

10-2 Press **Cancel** button twice.
The basic screen returns.

<Basic screen>

10-1

Cool | Set to
        | **68**F

Press **Menu/OK** button.

<Main menu screen>

Main Menu   2/3
Filter Auto Clean
Maintenance Information
Configuration
Current Setting
Clock & Calendar
Daylight Saving Time
            Setting

Press **Menu/OK** button.

Maintenance Information
Contact Info
0123-456-7890

Indoor Model   ––—/000
Outdoor Model   ––—/000

Registered details
are displayed.

11. Clock & Calendar

11-1 Press **Menu/OK** button in the basic
screen.
Main menu is displayed.
Select Clock & Calendar in the main
menu, press **Menu/OK** button.

11-2 Press ▲▼ buttons to
select Date & Time on the clock &
calendar screen.
∗ The date & time screen will appear
when **Menu/OK** button is pressed.

<Basic screen>

<Main menu screen>

11-1

Main Menu   2/3
Filter Auto Clean
Maintenance Information
Configuration
Current Setting
Clock & Calendar
Daylight Saving Time
            Setting

Press **Menu/OK** button.

11-2

Clock & Calendar
Date & Time
12H/24H Clock

            Setting

Press **Menu/OK** button.

20

11-3 Select **year**, **month**, **day** and **time** by using ◄► (Left/Right) button and set by using ▲▼ (Up/Down) button in the date & time screen. Press and hold the button for continuous change of the numeric value.
∗ Day of the week is set automatically.

11-4 Press **Menu/OK** button.
Setting confirmation screen is displayed.

11-5 Select Yes and press **Menu/OK** button.
Setting details are saved and basic screen returns.

∗ If power outage exceeds 48 hours, reset is needed.

11-3
11-4

Date & Time
Year 2015
Month 1
Day 1
Thursday
12:00A
Setting ◄▲▼►

Press **Menu/OK** button.

11-5

Date & Time
Save the settings?

Yes No

Setting ►

Press **Menu/OK** button.

<Basic screen>

12. Language

12-1 Press **Menu/OK** button in the basic screen.
Main menu is displayed.
Select Language in the main menu, press **Menu/OK** button.

12-2 Press ▲▼ (Up/Down) buttons to select **Language** on the language screen.
English/Français/Español
Press **Menu/OK** button.

<Basic screen>

<Main menu screen>

12-1

Main Menu 3/3
Language

Setting ↕

Press **Menu/OK** button.

12-2

Language

English

Setting ↕

3P243521-7L

8.2   <BRC082A43> Wireless Remote Controller for FDMQ Series

Wireless Remote Controller Kit   Installation manual

CONTENTS

1.   SAFETY CONSIDERATIONS

Please read these "SAFETY CONSIDERATIONS" carefully before installing air conditioning equipment and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained.

Also, inform customers that they should store this installation manual along with the operation manual for future reference. This air conditioner comes under the term "appliances not accessible to the general public".

Meaning of warning, caution and note symbols.

⚠ **WARNING** .... Indication a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** .... Indication a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be sued to alert against unsafe practices.

⚠ **NOTE** .... Indication situation that may result in equipment or property-damage-only accidents.

—⚠ WARNING————————————

• **Perform installation work in accordance with this installation manual.**
  Improper installation may result in electric shocks or fire.
• **Be sure to use only the specified accessories and parts for installation work.**
  Failure to use the specified parts may result in, electric shocks, fire or the unit falling.
• **Before touching electrical parts, turn off the unit.**
• **Do not touch the switch with wet fingers.**
  Touching a switch with wet fingers can cause electric shock.

—⚠ CAUTION ————————————

• **Refer also to the installation manuals attached to the indoor unit and the decoration panel.**
• **Confirm that the following conditions are satisfied prior to installation.**
  Ensure that nothing interrupts the operation of the wireless remote controller. (Ensure that there is neither a source of light nor fluorescent lamp near the receiver. Also, ensure that the receiver is not exposed of direct sunlight.)
  Ensure that the operation display lamp and other indicators are easy to see.

• **The installation position of this receiver is one corner of the decoration panel. Therefore, confirm that its position is set so that the signal from the wireless remote controller can be easily transmitted and its display can be easily seen.**
• **If both this kit and fresh air intake kit are installed, only one duct chamber shall be used. Refer to the installation manual of the fresh air intake kit (optional hand book).**

2.   BEFORE INSTALLATION

2-1   ACCESSORIES

Check if the following accessories are included with the unit.

Name	(1) Receiver	(2) Wireless remote controller	(3) Remote controller holder
Quantity	1 pc.	1 pc.	1 pc.
Shape			

Name	(4) Dry cell battery LR03 (AM4)	(5) Unit No. label	(6) Screw for installing remote controller holder
Quantity	2 pcs.	1 pc.	2 pcs.
Shape			M3.5

Name	(7) Mounting screw (Black)	(8) Mounting screw	(9) Paper pattern printing
Quantity	2 pcs.	2 pcs.	1 pc.
Shape	M4	M5	3-15/16×1-15/16 (in.)

Name	(10) Winged bar	(11) Operation manual	(12) Installation manual
Quantity	1 pc.	1 pc.	1 pc.
Shape			

2-2   NOTE TO THE INSTALLER

Be sure to instruct the customer how to properly operate the system showing him/her the attached operation manual.

3.   REMOTE CONTROLLER INSTALLATION

<Installing wireless remote controller>
• Do not throw the remote controller or impose large shocks. Also, do not store where it may be exposed to moisture or direct sunlight.

2

- When operating, point the transmitting part of the remote controller in the direction of the receiver.
- The direct transmitting distance of the remote controller is approximately 23 ft..
- The signal cannot be transmitted if something such as curtains blocks the receiver and the remote controller.
- **Installing to a wall or a pillar**
  1. Fix the remote controller holder (3) with the screws (6).

  2. Slide the remote controller (2) into the remote controller holder (3) from the top.

- **How to put the dry cell batteries**
  1. Remove the back cover of the remote controller (2) to the direction pointed by the arrow mark.
  2. Put the dry cell batteries.
     Use two LR03<AM4> dry cell batteries (4). Put the dry cell batteries (4) correctly to fit their (+) and (−).
  3. Close the back cover as before.

4. RECEIVER INSTALLATION

⚠ **CAUTION**

- Do not install more than 3 receivers in the vicinity of one another.
- With 4 or more units, there is always the possibility of malfunction.

4-1. Preparations before installation
Remove the upper part of the receiver (1).
- Insert the screwdriver (−) here and gently work off the upper part of the receiver (1).

Upper part

Receiver (1)

Lower part

4-2. Determination of address and MAIN/SUB remote controller
If setting multiple wireless remote controllers to operate in 1 room, perform address setting for the receiver and the wireless remote controller. If setting multiple wired remote controllers in 1 room, change the MAIN/SUB switch of the receiver.

4-3. Setting procedure
- Setting the receiver
  Set the wireless address switch (SS2) on the PC-board according to the table below.

Unit No.	No.1	No.2	No.3
Wireless address switch (SS2)	1 2 3	1 2 3	1 2 3

The side painted black indicates the switch knob position.

Lower part

⚠ **CAUTION**
Change the setting so that the internal electronic equipments are not damaged with a pen etc.

When using both a wired and a wireless remote controller for 1 indoor unit, the wired controller should be set to MAIN. Therefore, set the MAIN/SUB switch (SS1) of the receiver to SUB.

	MAIN	SUB
MAIN/ SUB switch (SS1)	M S	M S

4-4. Receiver installation

⚠ **WARNING**
Be sure to turn off the power before installation.

⚠ **CAUTION**
<Precautions on transmission wiring>
1. When wiring, run the wiring away the power supply wiring in order to avoid receiving electric noise (external noise).
2. When wiring, refer to the wiring diagram of indoor unit (attached to indoor unit) as well.

WIRING SPECIFICATION

Wiring type	Sheathed wire (2 wire)
Size	AWG18-16
Wiring length	Max 650 ft. (See Note)

⚠ **NOTE**
Keep wires to less than 650 ft. total when using 2 remote controllers (wired or wireless) and when not.

3

4-5. Attaching the receiver (for ceiling installation)
1. Prepare the ceiling for the receiver.
   • Open a hole in the ceiling for the receiver. (Use paper pattern printing (9)).

(Length : in.)

2. Wire the indoor unit and fix the lower part.
   • Install the winged bar (10) to the lower part and fit the part with the screws (8). Then, wire (field supplied) accordingly. (Connect the P1 and P2 terminals on the rear of the lower part to the P1 and P2 terminals on the indoor unit. The P1 and P2 terminals have no polarity.)

   • Insert the lower part into the opening in the ceiling, first by pressing the wings inward to fit the hole and then by pushing from the screws (8) until it sits flat on the ceiling.

   • Tighten the screws (8) until the lower part is fixed in place.

(Tighten both screws (8) evenly. Overtightening may deform the case and possibly make it harder to install the upper part.)

• Attach the upper part of receiver (1).

(Install the upper part on the lower part being careful parts are facing in the correct direction. After installation, turn on the power, and test emergency run button.)

4-6 Attaching the receiver (for wall mounting)
1. Wire the indoor unit.

(Connect the P1 and P2 terminals on the rear of the lower part to the P1 and P2 terminals on the indoor unit. Neither of the terminals is polarized, so it is not important if connections are crossed.)

2. Fix the lower part.
   • Install the lower part on the control box (field supplied part). (Select as flat a place as possible to install the lower part. Also, be aware of the fact that overtightening the screws (7) may deform the case and possibly make it harder to install the upper part.)

3

3. Attach the upper part of remote controller.
(Install the upper part on the lower part being careful parts are facing in the correct direction. After installation, turn on the power, and test emergency run button.)

Upper part

Emergency run button

Upper part

⚠ **NOTE**

1. The control box and wiring are not included.
2. Do not directly touch the PC-board with your hand.

4-7. Setting the address of wireless remote controller (It is factory set to "1".)
<Setting from the remote controller>

Mode

Address

Multiple setting

(3)

(2)

(4)

(1)

(5)

(1) Hold down the " ⊞ " button and the " /TEST " button for at least 4 seconds to get the FIELD SET MODE. (Indicated in the display area in the figure at top.)

(2) Press the " FAN " button and select a multiple setting (A/b). Each time the button is pressed the display switches between "A" and "b".

(3) Press the " UP " button and " DOWN " button to set the address.

→ 1 → 2 → 3 → 4 → 5 → 6

Address can be set from 1 to 6, but set it from 1 to 3 and to same address as the receiver. (The receiver does not work with address from 4 to 6.)

(4) Press the " RESERVE " button to enter the setting.

(5) Push the " /TEST " button to quit the FIELD SET MODE and return to the normal display.

——————— <Multiple settings A/b> ———————

When the indoor unit is being operating by outside control (central remote controller, etc.), it sometimes does not respond to ON/OFF and temperature setting commands from this remote controller. Check what setting the customer wants and make the multiple setting as shown below.

Remote controller		Indoor unit	
Multiple setting	Remote controller display	To control other air conditions and units	For other than on left
A: Standard	All items displayed.	Commands other than ON/OFF and temperature setting accepted. (1 LONG BEEP or 3 SHORT BEEPS emitted)	
b: Multi System	Operations remain displayed shortly after execution	All commands accepted. (2 SHORT BEEPS)	

4-8. Stick the Unit No. label on the receiver and the back of the wireless remote controller.

Wireless remote controller (2)

Unit No. label (5)

⚠ **CAUTION**

Set the Unit No. of the receiver and the wireless remote controller to be equal. If the settings differ, the signal from the remote controller cannot be transmitted.

5

5.   FIELD SETTING

If optional accessories are mounted on the indoor unit, the indoor unit setting may have to be changed. Refer to the instruction manual (optional hand book) for each optional accessory.

Procedure

(1)   When in the normal mode, press the " [☺/TEST] " button for at least 4 seconds, and the FIELD SET MODE is entered.

(2)   Select the desired MODE NO. with the " [MODE] " button.

(3)   Push the " [△ UP] " button and select the FIRST CODE NO..

(4)   Push the " [▽ DOWN] " button and select the SECOND CODE NO..

(5)   Push the" [RESERVE] "button and the present settings are set.

(6)   Push the " [☺/TEST] " button to quit the FIELD SET MODE and return to the normal display.

(Example) If the time to clean air filter is set to "Filter Contamination-Heavy", set Mode No. to "10", FIRST CODE NO. to "0", and SECOND CODE NO. to "02".

MODE NO.	FIRST CODE NO.	DESCRIPTION OF SETTING	
10	0	Filter Contamination-Heavy/Light (Setting for spacing time of display time to clean air filter) (Setting for when filter contamination is heavy, and spacing time of display time to clean air filter is to be halved)	Long-life type
			Standard type
	3	Spacing time of display time to clean air filter count (Setting for when the filter sign is not to be displayed)	
12 (VRV system)	1	ON/OFF input from outside (Set to enable starting/stopping from remote.)	
	2	Thermostat differential changeover (Set when using remote controller thermostat sensor.)	

MODE NO.	FIRST CODE NO.	SECOND CODE NO.		
		01	02	03
10	0	Light Approx. 2,500 hours	Heavy Approx. 1,250 hours	—
		Approx. 200 hours	Approx. 100 hours	
	3	Display	Do not display	—
12 (VRV system)	1	Forced OFF input	ON/OFF	—
	2	2°F	1°F	—

⚠ NOTE

The SECOND CODE NO. is factory set to "01".
Do not use any settings not listed in the table.
For group control with a wireless remote controller, initial settings for all the indoor units of the group are equal. (For group control, refer to the installation manual attached to the indoor unit for group control.)

6.   TEST OPERATION

- Perform test operation according to the instructions in the installation manual attached to the indoor unit.
- After refrigerant piping, drain piping, and electric wiring, operate according to the table to protect the unit.

⚠ CAUTION

1. Refer to a malfunction code in the installation manual attached to the outdoor unit if it does not operate.
2. Refer to the installation manual attached to the outdoor unit for individual operation system types.

Order	Operation
(1)	Open gas side stop valve.
(2)	Open liquid side stop valve.
(3)	Electrify crank case heater for 6 hours.
(4)	Set to cooling with the remote controller and push " [ON/OFF] " button to start operation.
(5)	Push" [☺/TEST] "button twice and operate in TEST OPERATION MODE for 3 minutes.
(6)	Push" [SWING] "button and confirm its operation.
(7)	Push" [☺/TEST] "button and operate normally.
(8)	Confirm its function according to the operation manual.

3

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8.3 <BRC082A41W>, <BRC082A42W(S)> Wireless Remote Controller for FFQ Series

	1	1	2	3	4	5	6	7
BRC082A41W	1		1	1	1	2	1	2
BRC082A42W		1	1	1	1	2	1	2
BRC082A42S		1	1	1	1	2	1	2

	8	9	10	11	12	13
BRC082A41W	1	1	4	4	1	
BRC082A42W	1	1	3	4	1	1
BRC082A42S	1	1	3	4	1	1

Figure 1

Figure 2

Figure 3

Figure 4

Contents

⚠	READ THIS MANUAL ATTENTIVELY BEFORE STARTING UP THE UNIT. DO NOT THROW IT AWAY. KEEP IT IN YOUR FILES FOR FUTURE REFERENCE. IMPROPER INSTALLATION OR ATTACHMENT OF EQUIPMENT OR ACCESSORIES COULD RESULT IN ELECTRIC SHOCK, SHORTCIRCUIT, LEAKS, FIRE OR OTHER DAMAGE TO THE EQUIPMENT. BE SURE ONLY TO USE ACCESSORIES MADE BY DAIKIN WHICH ARE SPECIFICALLY DESIGNED FOR USE WITH THE EQUIPMENT AND HAVE THEM INSTALLED BY A PROFESSIONAL. IF UNSURE OF INSTALLATION PROCEDURES OR USE, ALWAYS CONTACT YOUR DAIKIN DEALER FOR ADVICE AND INFORMATION.

The English text is the original instruction. Other languages are translations of the original instructions.

Safety considerations

Please read this "Safety considerations" carefully before installing air conditioning equipment and be sure to install it correctly. After completing the installation, make sure at start up operation that the unit operates properly. Please instruct the customer how to operate the unit and how to perform maintenance.

Meaning of caution symbols

⚠	Failure to observe these instructions properly may result in property damage or personal injury.

Information classified as **NOTE** contains instructions to ensure proper use of the equipment.

⚠	■ Refer also to the installation manual supplied with the indoor unit and the installation manual supplied with the decoration panel.
	■ There is only 1 possible installation position of this kit into the decoration panel. It is therefore recommended that installation orientation of the decoration panel is confirmed prior to installation of this kit.
	    • Ensure that nothing interrupts operation of the wireless remote controller.
	    • Ensure that the signal from the remote controller can easily be transmitted.
	    • Ensure that the operation display lamp and other indicator lamps can easily be seen.
	    • Ensure that there is neither a source of light nor a fluorescent lamp near the receiver.
	    • Ensure that the receiver is not exposed to direct sunlight.

Before installation

Accessories

See figure 1. Check if the following accessories are included with your kit.

  1 Receiver

  2 Transmitter board

  3 Wireless remote controller

  4 Remote controller holder

  5 Alkaline battery of type AAA.LR03

  6 Unit number label

  7 Screw for installing remote controller holder

  8 Installation manual

  9 Operation manual

10 Clamp

11 Plastic spacer

12 Plastic band

13 Sealing

Note to the installer

Be sure to instruct the customer how to properly operate the system showing him/her the supplied operation manual.

1

Remote controller installation

Installing the wireless remote controller

- Do not throw the remote controller or subject it to powerful shocks and do not store the remote controller where it may be exposed to moisture or direct sunlight.
- When operating, point the transmitting part of the remote controller in the direction of the receiver.
- The direct transmitting distance of the remote controller is approximately 23ft (7m).
- The signal cannot be transmitted if something such as curtains blocks the receiver and the remote controller.

Installing to a wall or a pillar

1   Turn on all the fluorescent lamps in the room, if any, and find a location where the remote controller signals are properly received by the indoor unit (within 23ft (7m)).

2   Fix the remote controller holder with the supplied screws.

3   Mount the remote controller on to the hook of the remote controller holder and then push it toward the wall.

② Push

① Mount

Remote controller holder

How to insert the batteries

1   Slide the back cover to take it off.

2   Insert 2 dry batteries AAA. LR03 (alkaline).

Position (+) and (−) correctly!

3   Replace the back cover.

Determination of address and MAIN/SUB remote controller

- If setting multiple wireless remote controllers to operate in one room, perform address setting for the receiver and the wireless remote controller.
- If using both a wired remote controller and a wireless remote controller with one indoor unit, change the MAIN/SUB switch of the transmitter board.

Setting procedure

Setting the transmitter board

Set the wireless address switch (SS2) on the transmitter board according to the table below.

	Unit No.		
	1	**2**	**3**
Wireless address switch (SS2)	1 2 3	1 2 3	1 2 3

When using both a wired and a wireless remote controller for 1 indoor unit, the wired controller should be set to MAIN. Therefore, set the MAIN/SUB switch (SS1) of the transmitter board to SUB.

	MAIN	**SUB**
MAIN/SUB switch (SS1)	M S	M S

Setting the address of the wireless remote controller

(See figure 3)
- **A**   Field Set mode
- **B**   Address (is factory set to " ¡ ")
- **C**   Display setting

Setting from the remote controller

1   Hold down the ⊞ button and the 👁/TEST button for at least 4 seconds to enter the Field Set mode. (Indicated in the display area in the figure.)

2   Press the 🍃FAN button and select an appropriate display setting (A/b). Each time the button is pressed the display switches between " A " and " b ". Refer to "Display setting A/b" on page 3 for full comprehension of this feature.

3   Press the △ button and ▽ button to set the address.

    ┌→ 1 ⟶ 2 ⟶ 3 ⟶ 4 ⟶ 5 ⟶ 6 ⟶┐

Address can be set from 1 to 6, but set it to 1-3 and to same address as the receiver. (The receiver does not work with address 4-6.)

4   Press the RESERVE button to confirm the setting.

5   Press the 👁/TEST button to quit the Field Set mode and to return to normal display again.

2

3

Display setting ⅋/ƀ

The wireless remote controller has 2 possible display settings.

The standard setting ⅋ permanently indicates all operational items whereas the multi system display setting ƀ indicates operations for a limited period of time after execution of settings only.

In case the target indoor unit is simultaneously being controlled;

- by another unit in group control,
- by a wired remote controller,
- by a centralized remote controller.

the indoor unit sometimes does not respond to ON/OFF and temperature setting commands from the wireless remote controller.

In order not to confuse the customer with possible discrepancies between the wireless remote controller display and the actual operation state of the indoor unit, it is recommended to set the display on the wireless remote controller to ƀ in such a control configuration.
Check what setting the customer prefers and adjust the display setting accordingly.

Display setting	Remote controller display	**Result of the display setting in case the target indoor unit is simultaneously being controlled by more than 1 device**
⅋: standard	All operational items are permanently displayed.	In the operation mode changeover, temperature setting or the like are carried out from the wireless remote controller, the indoor unit rejects the instruction. (Signal receiving sound, 1 long beep or 3 short beeps) As a result, a display discrepancy between the operation state of the indoor unit and the indication on the wireless remote controller display occurs.
ƀ: multi system	Operations only remain displayed for a short time after execution of the commands.	Since the indications on the wireless remote controller are turned off, a discrepancy such as described above no longer occurs.

Affix the unit number label

Affix corresponding unit number labels onto both air outlet of the decoration panel and onto back of the wireless remote controller.

NOTE ☞ Set the Unit No. of the receiver and the wireless remote controller to be equal. If the settings differ, the signal from the remote controller cannot be transmitted.

Installation of the transmitter board

(See figure 2)

1. Electrical wiring box cover
2. Transmitter board
3. Shorter wire harness
4. Longer wire harness
5. Clamp
6. Electrical wiring box
7. Plastic spacer

1. Cut off the power supply.
2. Remove the electrical wiring box cover as described in the installation manual supplied with the indoor unit.
3. Attach four plastic spacers (7) to the transmitter board (2) and install it in the electrical wiring box (6).
4. Connect the shorter wire harness from the X2A connector on transmitter board (2) to X24A connector on the printed circuit board in the electrical wiring box of indoor unit. Lay down the shorter wire harness as shown in the figure 2.
5. When the receiver is installed bring the longer wire harness to the electrical wiring box of indoor unit and connect it to X1A connector on the transmitter board.
6. Clamp the wire harness by the clamp (5) as shown in the figure 2.

Installation of the decoration panel

Install the decoration panel as described in the installation manual supplied with the decoration panel.

NOTE ☞ Make sure that the wire harness (longer one) from the transmitter board is not caught between the indoor unit and the decoration panel, and between the ceiling and the decoration panel.

Make sure that the wire harness (longer one) from the transmitter board is not caught between the indoor unit and the decoration panel, and between the ceiling and the decoration panel.

The installation process of the receiver depends on used decoration panel.

3

Installation of the receiver in case of BRC082A41W

1 Remove the suction grille as described in the installation manual supplied with the decoration panel.

2 Detach the brand name plate part of the decoration panel piece, before attaching the decoration panel. This part is not needed hereafter.

3 Remove the electrical wiring box cover as described in the installation manual supplied with the indoor unit. (Be sure to turn off power, before removing the electrical wiring box cover.)

Push three hooks to detach them from the holes of the rear side.

Decoration panel

Brand name plate part

4 Pass the wire harness from the receiver through the wiring hole of the decoration panel. Then attach the receiver to the decoration panel. Lead the wire harness to the electrical wiring box on the indoor unit and connect it to X1A connector on the transmitter board.

Remove the screw and input the plastic band. Then screw it back. The wire harness goes through the plastic band.

Clamp the wire harness from the receiver to other cables with the clamp.

Installation of the receiver in case of BRC082A42W/S

1 Remove the suction grille as described in the installation manual supplied with the decoration panel.

2 The receiver (1) should be installed in the corner that is surrounded by 2 square marks on one side and 1 square mark on the other, as shown in the illustration. Then remove the plastic corner cover.

2 square marks   1 square mark

3 Break off the plastic cover from back side of the panel.

4

4 Pass the wire harness through the hole and insert the cover into its position and screw it.

Clamp for positioning

Clamp the wire harness to the hook next to the positioning clamp.

Stick the sealing (supplied with receiver) around the wire harness in the place where the wire harness enter the unit.

Clamp the wire harness to other cables.

1 Remove the screw.

2 Insert the plastic band (supplied with receiver). The wire harness should go through the clamp.

3 Put the screw back.

Field setting

If optional accessories are mounted on the indoor unit, the indoor unit setting may have to be changed. Refer to the instruction manual (option handbook) for each optional accessory.
(See figure 4)

A Mode No.

B Field Set mode

C First code No.

D Second code No.

Procedure

1 When in normal mode, hold down the 👁/TEST button for at least 4 seconds to enter the Field Set mode.

2 Select the desired Mode No. with the MODE button.

3 Press the △ button and select the First code No.

4 Press the ▽ button and select the Second code No.

5 Press the RESERVE button to confirm the settings.

6 Press the 👁/TEST button to quit the Field Set mode and to return to normal display again.

3

5

Example

If the time to clean air filter is set to "Filter Contamination-Heavy", set Mode No. to " *10* ", First code No. to "*0*", and Second code No. to "*02*".

Mode No.	First code No.	Description of setting		Second code No.				
				01		*02*		*03*
10	*0*	Sets operation time until AIR FILTER CLEANING TIME INDICATOR lamp lights up. (When dirt and dust levels are high, change the setting to "Filter Contamination-Heavy".)	Long-life filter	Light	±2,500 hrs.	Heavy	±1,250 hrs.	—
	3	Changes AIR FILTER CLEANING TIME INDICATOR lamp on/off settings.		On		Off		—
13	*0*	Setting air outlet velocity. This setting is to be changed in function of ceiling height (H).		≤8-7/8ft (≤2.7m)		8-7/8<H≤9-13/16ft (2.7<H≤3.0m)		9-13/16<H≤11-1/2ft (3.0<H≤3.5m)
	1	Selection of air flow direction. This setting is to be changed when blocking pad optional kit is used.		4-way flow		3-way flow		2-way flow
	4	Airflow direction range setting. This setting is to be changed when range of swing flap movement needs to be changed.		Upper		Medium		Lower

NOTE

Factory settings of the Second code No. are marked in grey backgrounds.

Do not use any settings not listed in the table.

For group control with a wireless remote controller, initial settings for all the indoor units of the group are equal.

(For group control, refer to the installation manual supplied with the indoor unit for group control.)

6

Part 4
Operation Manual

4

1. RMXS48LVJU

REGARDING USE

POINTS THE CUSTOMER SHOULD BE AWARE OF

■ COMFORT

At startup

- After the power is initially turned on, it will take approx. 10 minutes until startup. Usually the unit will start in 3 minutes.

HEAT operation

- The colder it is outside or the greater the number of indoor units, the longer the time required from the start of operation until the emission of warm air (around 95°F / 35°C). When the outside temperature is 23 to 35°F (−5 to 2°C), the inside temperature is 41 to 50°F (5 to 10°C), and total indoor unit combination is 100% capacity, the first startup of all indoor units in the morning will take approximately 20 to 30 minutes.
- Oil return operation will be performed once every 8 hours to preserve the lubrication of oil to the compressor.
  Since operation is switched to cooling cycle during HEAT operation in order to return the oil, HEAT operation will not be possible for around 5 to 10 minutes.
- When the outside temperature is 82°F (28°C) or higher, the unit will be set to the standby mode for protection.

■ OPERATING NOISE

At startup

- During startup, in order to emit warm or cool air as quickly as possible, the sound of refrigerant flowing will be heard for a short time (1 to 2 minutes) from the outdoor unit.

At shutdown

- In order to ensure smooth startup the next time this unit is operated, the outdoor unit will continue to operate for around 1 minute after shutdown. (The time of continued operation depends on the outside temperature, capacity of connected indoor units, and connection pipe length.)

Cooling at low outside temperatures

- During COOL operation when the outside temperature is 68°F (20°C) or less, the fan of the outdoor unit will operate at low speed to preserve capacity and the outdoor unit valve will be opened depending on the pressure conditions, making it more likely that the sound of refrigerant flowing will be heard.

Defrost

- When the outside unit is performing defrost operation, the fan of the indoor unit will stop temporarily, and the slight sound of refrigerant flowing will be heard.

Excessive heating load

- During HEAT operation when the outside temperature is high (59 to 75°F / 15 to 24°C), the fan of the outdoor unit will be operated at low speed, making it more likely that the sound of refrigerant flowing will be heard from the outdoor unit.

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2. CTXG, CTXS, FTXS, CDXS, FDXS, FVXS Series

2.1 Manual Contents and Reference Page

Model Series	CTXG Series	CTXS07JVJU CTXS09/12HVJU	CTXS07LVJU, FTXS Series
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COMFORT AIRFLOW / INTELLIGENT EYE Operation	314	317	319
POWERFUL Operation ★2	321	321	321
POWERFUL / ECONO / OUTDOOR UNIT QUIET Operation	—	—	—
ECONO / OUTDOOR UNIT QUIET Operation	324	—	—
OUTDOOR UNIT QUIET Operation ★1	—	325	325
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Drawing No.	C: 3P436086-1A	C: 3P232717-3D	3P297290-1F 3P297290-2F

★1: Illustrations are for CTXS07LVJU as representative.

★2: Illustrations are for CTXG Series as representative.

Model Series	CDXS, FDXS Series	FVXS Series
Read Before Operation		
Safety Considerations	273	273
Names of Parts	287	291
Preparation before Operation	297 ★1	295 ★2
Operation		
AUTO · DRY · COOL · HEAT · FAN Operation	300 ★1	300 ★1
Adjusting the Airflow Direction and Rate	310	311
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　　　★1: Illustrations are for CTXS07LVJU as representative.

　　　★2: Illustrations are for CTXG Series as representative.

2.2   Safety Considerations

Safety Considerations

Read these **Safety Considerations for Operations** carefully before operating an air conditioner or heat pump.
Make sure that the unit operates properly during the startup operation. Instruct the user on how to operate and maintain the unit.
Inform users that they should store this operation manual with the installation manual for future reference.
Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

⚠ **DANGER**	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠ **WARNING**	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ **CAUTION**	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
⚠ **NOTE**	Indicates situations that may result in equipment or property-damage accidents only.

⚠ DANGER

- Do not install the unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.

- Any abnormalities in the operation of the air conditioner or heat pump, such as smoke or fire, could result in severe injury or death. Turn off the power and contact your dealer immediately.

- Refrigerant gas may produce toxic gas if it comes into contact with fire, such as from a fan heater, stove, or cooking device. Exposure to this gas could cause severe injury or death.

- For refrigerant leakage, consult your dealer. Refrigerant gas is heavier than air and replaces oxygen. A massive leak could lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.

- If equipment utilizing a burner is used in the same room as the air conditioner or heat pump, there is the danger of oxygen deficiency which could lead to an asphyxiation hazard resulting in serious injury or death. Be sure to ventilate the room sufficiently to avoid this hazard.

- Safely dispose of the packing materials. Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.

- Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death by suffocation.

⚠ WARNING

- Contact your dealer for repair and maintenance. Improper repair and maintenance may result in water leakage, electric shock, and fire. Only use accessories made by Daikin that are specifically designed for use with the equipment and have them installed by a professional.

- Contact your dealer to move and reinstall the air conditioner or heat pump. Incomplete installation may result in water leakage, electric shock, and fire.

- Never let the indoor unit or the remote controller get wet. Water can cause an electric shock or a fire.

- Never use flammable spray such as hair spray, lacquer, or paint near the unit. Flammable spray may cause a fire.

- When a fuse blows out, never replace it with one of incorrect ampere ratings or different wires. Always replace any blown fuse with a fuse of the same specification.

- Never remove the fan guard of the unit. A fan rotating at high speed without the fan guard is very dangerous.

- Never inspect or service the unit by yourself. Contact a qualified service person to perform this work.

- Turn off all electrical power before doing any maintenance to avoid the risk of serious electric shock; never sprinkle or spill water or liquids on the unit.

- Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.

- Do not allow children to play on or around the unit to prevent injury.

- The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.

- Do not put a finger or other objects into the air inlet or air outlet. The fan is rotating at high speed and will cause injury.

- Check the unit foundation for damage on a continuous basis, especially if it has been in use for a long time. If left in a damaged condition the unit may fall and cause injury.

- Placing a flower vase or other containers with water or other liquids on the unit could cause a shock or fire if a spill occurs.

- Do not touch the air outlet or horizontal blades while the swing flap is in operation because fingers could get caught and injured.

- Never touch the internal parts of the controller. Do not remove the front panel because some parts inside are dangerous to touch. To check and adjust internal parts, contact your dealer.

⚠ CAUTION

- Do not use the air conditioner or heat pump for any other purposes other than comfort cooling or heating. Do not use the unit for cooling precision instruments, food, plants, animals or works of art.

4

Read Before Operation

- Do not place items under the indoor unit as they may be damaged by condensates that may form if the humidity is above 80% or if the drain outlet gets blocked.

- Before cleaning, stop the operation of the unit by turning the power off or by pulling the supply cord out from its receptacle. Otherwise, an electric shock and injury may result.

- Do not wash the air conditioner or heat pump with excessive water. An electric shock or fire may result.

- Avoid placing the controller in a spot splashed with water. Water entering the controller may cause an electric shock or damage the internal electronic parts.

- Do not operate the air conditioner or heat pump when using a room-fumigation type of insecticide.
  Failure to observe this could cause the chemicals to be deposited in the unit and can endanger the health of those who are hypersensitive to chemicals.

- Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.

- The appliance is not intended for use by young children or infirm persons without supervision.

- The remote controller should be kept away from children so they cannot play with it.

- Consult with the installation contractor for cleaning.

- Incorrect cleaning of the inside of the air conditioner or heat pump could make the plastics parts break and cause water leakage or electric shock.

- Do not touch the air inlet or aluminum fin of the air conditioner or heat pump as they can cut and cause injury.

- Do not place objects in direct proximity of the outdoor unit. Do not let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once inside the unit, animals can cause the unit to malfunction, and cause smoke or fire when they make contact with electrical parts.

⚠ **NOTE**

- Never press the button of the remote controller with a hard, pointed object. The remote controller may be damaged.

- Never pull or twist the electric wire of the remote controller. It may cause the unit to malfunction.

- Do not place appliances that produce open flames in places that are exposed to the airflow of the unit or under the indoor unit. It may cause incomplete combustion or deformation of the unit due to the heat.

- Do not expose the controller to direct sunlight. The LCD display can become discolored and may fail to display the data.

- Do not wipe the controller operation panel with benzene, thinner, chemical dust cloth, etc. The panel may get discolored or the coating can peel off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. Then wipe it with another dry cloth.

- Dismantling of the unit, disposal of the refrigerant, oil, and additional parts, should be done in accordance with the relevant local, state, and national regulations.

- Operate the air conditioner or heat pump in a sufficiently ventilated area and not surrounded by obstacles. Do not use the air conditioner or heat pump in the following places.
  a. Places with a mist of mineral oil, such as cutting oil.
  b. Locations such as coastal areas where there is a lot of salt in the air.
  c. Locations such as hot springs where there is a lot of sulfur in the air.
  d. Locations such as factories where the power voltage varies a lot.
  e. In cars, boats, and other vehicles.
  f. Locations such as kitchens where oil may splatter or where there is steam in the air.
  g. Locations where equipment produces electromagnetic waves.
  h. Places with an acid or alkaline mist.
  i. Places where fallen leaves can accumulate or where weeds can grow.

- Take snow protection measures. Contact your dealer for the details of snow protection measures, such as the use of a snow protection hood.

- Do not attempt to do electrical work or grounding work unless you are licensed to do so. Consult with your dealer for electrical work and grounding work.

- Pay attention to operating sound. Be sure to use the following places:
  a. Places that can sufficiently withstand the weight of the air conditioner or heat pump yet can suppress the operating sound and vibration.
  b. Places where warm air from the air outlet of the outdoor unit or the operating sound of the outdoor unit does not annoy neighbors.

- Make sure that there are no obstacles close to the outdoor unit. Obstacles close to the outdoor unit may drop the performance of the outdoor unit or increase the operating sound of the outdoor unit.

- Consult your dealer if the air conditioner or heat pump in operation generates unusual noise.

- Make sure that the drainpipe is installed properly to drain water. If no water is discharged from the drainpipe while the air conditioner or heat pump is in the cooling mode, the drainpipe may be clogged with dust or dirt and water leakage from the indoor unit may occur. Stop operating the air conditioner or heat pump and contact your dealer.

2.3   Names of Parts

CTXG Series

Read Before Operation

Names of Parts

Indoor Unit

• Appearance of the indoor unit may differ.

Air inlet

INTELLIGENT EYE sensor

• Detects the movements of people and automatically switches between normal operation and energy saving operation.

Upper front panel

Air outlet

Indoor temperature sensor

• Detects the air temperature around the unit.

Lower front panel

• It is located on the back of the upper front panel during operation.

Flaps (horizontal blades)

Louvers (vertical blades)

• The louvers are inside of the air outlet.

Display

Multi-monitor lamp and TIMER lamp

INTELLIGENT EYE lamp (green)

Multi-monitor lamp

• The lamp color changes according to the operation.

Operation	Multi-monitor lamp
AUTO	Red/Blue
DRY	Green
COOL	Blue
HEAT	Red
FAN	White
TIMER	Orange

Signal receiver and Indoor unit ON/OFF switch

Signal receiver

• Receives signals from the remote controller.
• When the unit receives a signal, you will hear a beep sound.

Case	Sound type
Operation start	beep-beep
Setting changed	beep
Operation stop	long beep

TIMER lamp

• When operation by timer has been set, the multi-monitor lamp periodically changes to orange. After lighting orange for about 5 seconds, it returns to the color of the operation mode. The multi-monitor lamp will turn orange on and off in cyclic manner while the air conditioner is not in operation.

TIMER lamp color: For COOL

2 sec.   2 sec.   2 sec.
5 sec.   3 min.   5 sec.
Orange
Blue

TIMER lamp color

DRY: Green ⟶ Orange
COOL: Blue ⟶ Orange
HEAT: Red ⟶ Orange
FAN: White ⟶ Orange
Stop: Off ⟶ Orange

Indoor unit ON/OFF switch

• Press this switch once to start operation. Press once again to stop it.
• For the operation mode setting, refer to the following table.

Mode	Temperature setting	Airflow rate
AUTO	77°F (25°C)	AUTO

• This switch can be used when the remote controller is missing.

■ Open the upper front panel

Back of the upper front panel

Panel support plate

Lower front panel

Air filter

**Titanium apatite
deodorizing filter**

Outdoor Unit

• The appearance of the outdoor unit may differ between different models.

**Air inlet
(back and side)**

**Outdoor temperature
sensor (back)**

Inter-unit wire

**Ground terminal
(inside)**

Air outlet

Refrigerant pipes

Drain hose

Model name

Read Before Operation

Names of Parts

Remote Controller

Signal transmitter

Receiver

19-11/16"
(50cm)
or more

- To use the remote controller, aim the transmitter at the indoor unit. If there is anything blocking the signals between the unit and the remote controller, such as a curtain, the unit may not operate.
- The maximum transmission distance is about 19-11/16ft (6m).
  Make sure that there are no obstacles within 19-11/16 inch (50cm) under the signal receiver.
  Such obstacles, if any, may have an adverse influence on the reception performance of the receiver and the reception distance may be shortened.

Display (LCD)
- Displays the current settings.
  (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

TEMPERATURE adjustment button
- Changes the temperature setting.

FAN setting button
- Selects the airflow rate setting.

ON/OFF button
- Press this button once to start operation.
  Press once again to stop it.

POWERFUL button
- POWERFUL operation.

Front cover
- Open the front cover.

Model	ARC466A36

Read Before Operation

■ Open the front cover

MODE selector button
- Selects the operation mode. (AUTO/DRY/COOL/HEAT/ FAN)

ECONO/QUIET button
- ECONO/OUTDOOR UNIT QUIET operation.

Lamp brightness setting button

SWING button
- Adjusts the airflow direction.

COMFORT/SENSOR button
- COMFORT AIRFLOW and INTELLIGENT EYE operation.

Weekly
: **WEEKLY button**
: **PROGRAM button**
Copy
: **COPY button**
Back
: **BACK button**
Next
: **NEXT button**
- WEEKLY TIMER operation.

OFF TIMER button (NIGHT SET mode)

TIMER CANCEL button
- Cancels the timer setting.
- Cannot be used for the WEEKLY TIMER operation.

ON TIMER button

SELECT button
- Changes the clock, ON/OFF TIMER and WEEKLY TIMER settings.

CLOCK button

CTXS07JVJU, CTXS09/12HVJU

Name of Parts

Indoor Unit

Air inlet

Front panel

Panel tab

Air outlet

Packaging materials
• If any packaging materials are included, please remove before operating.

Fins (vertical blades)
• The fins are inside of the air outlet.

Louvers (horizontal blades)

Room temperature sensor
• It detects the air temperature around the unit.

INTELLIGENT EYE sensor
• It detects the movements of people and automatically switches between normal operation and energy saving operation.

Display

OPERATION lamp (green)

TIMER lamp (yellow)

HOME LEAVE lamp (red)
• Lights up when you use HOME LEAVE operation.

ON/OFF

Signal receiver
• It receives signals from the remote controller.
• When the unit receives a signal, you will hear a short beep.
  • Operation start .... beep-beep
  • Settings changed ..... beep
  • Operation stop .... beeeeep

Indoor unit ON/OFF switch
• Press this switch once to start operation. Press once again to stop it.
• The operation mode refer to the following table.

Mode	Temperature setting	Airflow rate
AUTO	77°F (25°C)	AUTO

• This switch is useful when the remote controller is missing.

Open the front panel

Air filter

Air-purifying filter
with deodorizing function

Outdoor Unit

• Appearance of the outdoor unit may differ from some models.

Air inlet (back and side)

**Refrigerant piping and
inter-unit wiring**

Air outlet

Ground terminal
• Inside of this cover.

Drain hose

Name of Parts

Remote Controller: ARC452A9

Signal transmitter

Receiver

• To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
• Do not drop the remote controller. Do not get it wet.
• The maximum distance for communication is approximately 23ft. (7m).

FAN setting button

• Selects the airflow rate setting.

POWERFUL button

• POWERFUL operation.

Display (LCD)

• Displays the current settings. (In this illustration, each section is shown with its displays on for the purpose of explanation.)

TEMPERATURE adjustment buttons

• Changes the temperature setting.

ON/OFF button

• Press this button once to start operation.
Press once again to stop it.

Front cover

• Open the front cover.

4

Open the front cover

MODE selector button
• Selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)

HOME LEAVE button
• HOME LEAVE operation.

SWING button
• Adjusting the airflow direction.

QUIET button
• OUTDOOR UNIT QUIET operation.

SENSOR button
• INTELLIGENT EYE operation.

MODE

QUIET

SWING

TIMER

SELECT

OFF TIMER button

OFF

ON

ON TIMER button

CANCEL

TIMER CANCEL button
• Cancels the timer setting.

CLOCK button

SELECT button
• Changes the ON/OFF TIMER settings.

CTXS07LVJU, FTXS Series

Names of Parts

Indoor Unit

Front panel   **Air inlet**

Panel tab

INTELLIGENT EYE sensor
- It detects the movements of people and automatically switches between normal operation and energy saving operation.

Model name plate

Air outlet

Louvers (vertical blades)
- The louvers are inside of the air outlet.

Room temperature sensor
- It detects the air temperature around the unit.

Flaps (horizontal blades)

Display

Signal receiver
- It receives signals from the remote controller.
- When the unit receives a signal, you will hear a beep sound.

Case	Sound type
Operation start	beep-beep
Setting changed	beep
Operation stop	long beep

OPERATION lamp (green)

TIMER lamp (yellow)

INTELLIGENT EYE lamp (green)

ON/OFF

Indoor unit ON/OFF switch
- Press this switch once to start operation. Press once again to stop it.
- The operation mode refer to the following table.

Mode	Temperature setting	Airflow rate
AUTO	77°F (25°C)	AUTO

- This switch is useful when the remote controller is missing.

4

■ Open the front panel

Air filter

Titanium apatite deodorizing filter

Outdoor Unit

• Appearance of the outdoor unit may differ from some models.

Air inlet (back and side)

Outdoor temperature sensor (back)

Drain hose

Ground terminal
• Inside this cover.

Air outlet

Model name plate

Refrigerant piping and inter-unit wiring

Names of Parts

Remote Controller

Signal transmitter

Receiver

- To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
- Do not drop the remote controller. Do not get it wet.
- The maximum distance for communication is approximately 23ft (7m).

Display (LCD)

- Displays the current settings. (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

TEMPERATURE adjustment buttons

- Changes the temperature setting.

FAN setting button

- Selects the airflow rate setting.

ON/OFF button

- Press this button once to start operation. Press once again to stop it.

POWERFUL button

- POWERFUL operation.

Front cover

- Open the front cover.

<ARC452A21>

4

■ **Open the front cover**

MODE selector button
• Selects the operation mode.
  (AUTO/DRY/COOL/HEAT/
  FAN)

ECONO button
• ECONO operation.

SWING button
• Adjusting the airflow direction.

QUIET button
• OUTDOOR UNIT QUIET
  operation.

COMFORT/SENSOR button
• COMFORT AIRFLOW and
  INTELLIGENT EYE operation.

OFF TIMER button

WEEKLY : **WEEKLY button**
◈ : **PROGRAM button**
COPY : **COPY button**
BACK : **BACK button**
NEXT : **NEXT button**
• WEEKLY TIMER operation.

TIMER CANCEL button
• Cancels the timer setting.
• It cannot be used for the
  WEEKLY TIMER operation.

ON TIMER button

SELECT button
• Changes the ON/OFF TIMER
  and WEEKLY TIMER settings.

CLOCK button

CDXS, FDXS Series

Names of Parts

Indoor Unit

Air outlet

Air outlet grille (field supply)
• Appearance of the air outlet grille and air inlet grille may differ from some models.

Air inlet

Suction grille (option)
• Appearance of the suction grille and air inlet grille may differ from some models.

Receiver

Room temperature sensor
• It senses the air temperature around the unit.

OPERATION lamp (green)

TIMER lamp (yellow)

Indoor unit ON/OFF switch
• Press this switch once to start operation. Press once again to stop it.
• The operation mode refers to the following table.

Mode	Temperature setting	Airflow rate
AUTO	77°F (25°C)	AUTO

• This switch is useful when the remote controller is missing.

Outdoor Unit

• Appearance of the outdoor unit may differ from some models.

Air inlet (back and side)

Outdoor temperature sensor (back)

Drain hose

Ground terminal
• Inside this cover.

Air outlet

Model name plate

Refrigerant piping and inter-unit wiring

Names of Parts

Remote Controller

Signal transmitter

Receiver

- To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
- Do not drop the remote controller. Do not get it wet.
- The maximum distance for communication is approximately 13ft (4m).

Display (LCD)

- Displays the current settings.
  (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

TEMPERATURE adjustment buttons

- Changes the temperature setting.

ON/OFF button

- Press this button once to start operation.
  Press once again to stop it.

FAN setting button

- Selects the airflow rate setting.

POWERFUL button

- POWERFUL operation.

Front cover

- Open the front cover.

<ARC452A23>

■ Open the front cover

MODE selector button
• Selects the operation mode.
(AUTO/DRY/COOL/HEAT/
FAN)

QUIET button
• OUTDOOR UNIT QUIET
operation.

ECONO button
• ECONO operation.

OFF TIMER button

ON TIMER button

TIMER CANCEL button
• Cancels the timer setting.

CLOCK button

SELECT button
• Changes the ON/OFF TIMER
settings.

FVXS Series

Read Before Operation

Names of Parts

Indoor Unit

Flap (horizontal blade)

Air outlet

Model name

Front panel

**Louvers
(vertical blade)**
• The louvers are inside of the air outlet.

Air outlet

Air inlet

Display

INVERTER

**OPERATION lamp
(green)**

TIMER lamp (orange)

ON/OFF

Signal receiver
• Receives signals from the remote
controller.
• When the unit receives a signal, you
will hear a beep sound.

Case	Sound type
Operation start	beep-beep
Setting changed	beep
Operation stop	long beep

Indoor unit ON/OFF switch
• Press this switch once to start operation.
Press once again to stop it.
• For the operation mode setting, refer to the following table.

Mode	Temperature setting	Airflow rate
AUTO	77°F (25°C)	AUTO

• This switch can be used when the remote controller is missing.

■ Open the front panel

• How to open the front panel:

Titanium apatite deodorizing filter

Air filter

Air outlet selection switch

• This setting blows air from upper outlet only.

• This setting automatically decides a blow pattern depending on mode and conditions. (Setting at time of purchase)
• This setting is recommended.

Indoor temperature sensor
• Detects the air temperature around the unit.

Outdoor Unit

• The appearance of the outdoor unit may differ between different models.

Air inlet (back and side)

Air outlet

Outdoor temperature sensor (back)

Drain hose

Ground terminal (inside)

Model name

Refrigerant pipes and inter-unit wire

Names of Parts

Remote Controller

Signal transmitter

Receiver

- To use the remote controller, aim the transmitter at the indoor unit. If there is anything blocking the signals between the unit and the remote controller, such as a curtain, the unit may not operate.
- The maximum transmission distance is about 23ft (7m).

Display (LCD)
- Displays the current settings. (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

FAN setting button
- Selects the airflow rate setting.

TEMPERATURE adjustment button
- Changes the temperature setting.

POWERFUL button
- POWERFUL operation.

ON/OFF button
- Press this button once to start operation.
  Press once again to stop it.

Front cover
- Open the front cover.

Model	ARC466A21

■ Open the front cover

MODE selector button
• Selects the operation mode.
(AUTO/DRY/COOL/HEAT/FAN)

ECONO button
• ECONO operation.

QUIET button
• OUTDOOR UNIT QUIET
operation.

SWING button
• Adjusts the airflow direction.

**OFF TIMER button
(NIGHT SET mode)**

**TIMER CANCEL
button**
• Cancels the timer setting.
• Cannot be used for the
WEEKLY TIMER operation.

Weekly [____] : **WEEKLY button**

◈ [____] : **PROGRAM button**

Copy [____] : **COPY button**

Back [____] : **BACK button**

Next [____] : **NEXT button**
• WEEKLY TIMER operation.

SELECT button
• Changes the clock, ON/OFF
TIMER and WEEKLY TIMER
settings.

ON TIMER button

CLOCK button

Mode   Econo   Swing
Quiet
Weekly   ◈   Copy
Back   ▲   Next
Off   Select   On
Cancel   ▼
Timer

2.4 Preparation before Operation

CTXG, FVXS Series

Read Before Operation

Preparation Before Operation

⚠ CAUTION

Incorrect handling of batteries can result in injury from battery leakage, rupturing or heating, or lead to equipment failure. Please observe the following precautions and use safely.
- If the alkaline solution from the batteries should get in the eyes, do not rub the eyes. Instead, immediately flush the eyes with tap water and seek the attention of a medical professional.
- Keep batteries out of reach of children. In the event that batteries are swallowed, seek the immediate attention of a medical professional.
- Do not expose batteries to heat or fire. Do not disassemble or modify batteries. The insulation or gas release vent inside the battery may be damaged, resulting in battery leakage, rupturing, or heating.
- Do not damage or peel off labels on the batteries.

To insert the batteries

1. **Slide the front cover to take it off.**

2. **Insert 2 dry batteries AAA.LR03 (alkaline).**

3. **Replace the front cover.**

To attach the remote controller holder to a wall

1. **Choose a place where the signals reach the unit.**

2. **Attach the holder to a wall, a pillar, or similar location with the screws supplied with the holder.**

3. **Place the remote controller in the remote controller holder.**

Fahrenheit/Celsius display switch

▶ **Press [Temp °F/°C] and ⌷ (TIMER button) simultaneously for about 5 seconds.**
- The temperature will be displayed in Celsius when it is presently displayed in Fahrenheit, and vice versa.
- The switch operation is only possible when the temperature is being displayed.

NOTE

Notes on batteries
- To avoid possible injury or damage from battery leakage or rupturing, remove the batteries when not using the product for long periods of time.
- The standard replacement time is about 1 year. Both batteries should be replaced at the same time. Be sure to replace them with new size AAA.LR03 (alkaline) batteries.
  However, if the remote controller display begins to fade and the possible transmission range becomes shorter within a year, replace both batteries as specified above.
- The batteries supplied with the remote controller are for initial operation. The batteries may run out in less than 1 year.

Note on remote controller
- Do not drop the remote controller. Do not get it wet.

Turn on the circuit breaker

• After the power is turned on, the flaps of the indoor unit open and close once to set the reference position.

To set the luminance of the display

• The luminance of the indoor unit display can be set.

Brightness

▶ **Press** ☼☼ **.**

→ Hi → Low → Off ┐

To set the clock

1. Press ⊕ **.**

" *0:00* " is displayed on the LCD.
" MON " and " ⊕ " blink.

2. Press Select ▲▼ **to set the current day of the week.**

3. Press ⊕ **.**

" ⊕ " blinks.

4. Press Select ▲▼ **to set the clock to the present time.**

• Holding down ▲ or ▼ rapidly increases or decreases the displayed time.

5. Press ⊕ **.**

• Point the remote controller at the indoor unit when pressing the buttons.

" **:** " blinks.

NOTE

Fahrenheit/Celsius display change function of remote controller

• The set temperature may increase when the display is changed to Celsius from Fahrenheit, because a fraction of 0.5°C is rounded up.
• Example: A set temperature of 65°F (equivalent to 18.5°C) will be converted into 19°C.
    When the display is changed to Fahrenheit again, the set temperature will be converted into 66°F (equivalent to 19°C) instead of the original set temperature (65°F) but a set temperature of 66°F (equivalent to 19°C) will be converted into 19°C with no temperature change.
• A reception sound will go off for the transmission of set temperature to the indoor unit at the time of setting the Fahrenheit/Celsius display change function.

Note on setting the clock

• If the indoor unit's internal clock is not set to the correct time, the ON/OFF TIMER and WEEKLY TIMER will not operate punctually.

CTXS, FTXS, CDXS, FDXS Series

Preparation before Operation

■ To set the batteries

1. Slide the front cover to take it off.

2. Set two dry batteries AAA.LR03 (alkaline).

3. Set the front cover as before.

■ To fix the remote controller holder to a wall

1. Choose a place from where the signals reach the unit.

2. Fix the holder to a wall, a pillar, etc. with the screws supplied with the holder.

3. Place the remote controller in the remote controller holder.

■ Celsius/Fahrenheit display switch

• The Celsius or Fahrenheit display is selectable with the following buttons.

Press ▲ and ▼ simultaneously for 5 seconds.

• The temperature will be displayed in Fahrenheit if it is presently displayed in Celsius, and vice versa.

NOTE

■ **Notes on batteries**
 • When replacing the batteries, use batteries of the same type, and replace both batteries at the same time.
 • When the system is not used for a long time, take the batteries out.
 • The batteries will last for approximately 1 year. If the remote controller display begins to fade and the degradation of reception performance occurs within a year, however, replace both batteries with new, size AAA.LR03 (alkaline).
 • The attached batteries are provided for the initial use of the system.
   The usable period of the batteries may be short depending on the manufactured date of the air conditioner.

■ **Notes on remote controller**
 • Never expose the remote controller to direct sunlight.
 • Dust on the signal transmitter or receiver will reduce the sensitivity. Wipe off dust with a soft cloth.
 • Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult the shop if that is the case.
 • If the remote controller signals happen to operate another appliance, move that appliance somewhere else, or consult the service shop.

■ **Celsius/Fahrenheit display change function of remote controller**
 • The set temperature may increase when the display is changed to Celsius from Fahrenheit, because a fraction of 0.5°C is rounded up.
 • Example: A set temperature of 65°F (equivalent to 18.5°C) will be converted into 19°C.
        When the display is changed to Fahrenheit again, the set temperature will be converted into 66°F (equivalent to 19°C) instead of the original set temperature (65°F) but a set temperature of 66°F (equivalent to 19°C) will be converted into 19°C with no temperature change.
 • A reception sound will go off for the transmission of set temperature to the indoor unit at the time of setting the Celsius/Fahrenheit display change function.

■ Turn the breaker on

- After the power is turned on, the flaps of the indoor unit open and close once to set the reference position.

■ To set the clock

1. Press ⏲ .

" *0:00* " is displayed.
" **MON** " and " ⏲ " blink.

2. Press ▲SELECT▼ to set the current day of the week.

3. Press ⏲ .

" ⏲ " blinks.

4. Press ▲SELECT▼ to set the clock to the present time.

- Holding down ▲ or ▼ rapidly increases or decreases the time display.

5. Press ⏲ .

- Point the remote controller at the indoor unit when pressing the buttons.

" **:** " blinks.

2.5   AUTO · DRY · COOL · HEAT · FAN Operation

CTXG Series

Basic Operation

AUTO · DRY · COOL · HEAT · FAN Operation

The air conditioner operates with the operation mode of your choice.
From the next time on, the air conditioner will operate with the same operation mode.

To start operation

1. Press (Mode) and select an operation mode.
- Each pressing of the button changes the mode setting in sequence.

AUTO → DRY → COOL → HEAT → FAN

2. Press (On/Off).
- " ON " is displayed on the LCD.
- The multi-monitor lamp lights up.
  The color of the lamp varies depending on the operation mode.

Display

Operation	Multi-monitor lamp
AUTO	Red/Blue
DRY	Green
COOL	Blue
HEAT	Red
FAN	White

To stop operation

▶ Press (On/Off) again.
- " ON " disappears from the LCD.
- The multi-monitor lamp goes off.

To change the temperature setting

▶ Press (Temp °F/°C) .

- Press ▲ to raise the temperature and press ▼ to lower the temperature.

COOL operation	HEAT operation	AUTO operation	DRY or FAN operation
64-90°F (18-32°C)	50-86°F (10-30°C)	64-86°F (18-30°C)	The temperature setting cannot be changed.

NOTE

Notes on AUTO operation
- In AUTO operation, the system selects an appropriate operation mode (COOL or HEAT) based on the indoor temperature and starts the operation.
- The system automatically reselects setting at a regular interval to bring the indoor temperature to the user-setting level.

Note on DRY operation
- Eliminates humidity while maintaining the indoor temperature as much as possible. It automatically controls temperature and airflow rate, so manual adjustment of these functions is unavailable.

CTXS, FTXS, CDXS, FDXS, FVXS Series

AUTO · DRY · COOL · HEAT · FAN Operation

The air conditioner operates with the operation mode of your choice.
From the next time on, the air conditioner will operate with the same operation mode.

■ To start operation

1. Press [MODE] and select an operation mode.

• Each pressing of the button advances the mode setting in sequence.

AUTO → DRY → COOL → HEAT → FAN

2. Press [ON/OFF].

• "ON" is displayed on the LCD.
• The OPERATION lamp lights green.

Display

■ To stop operation

Press [ON/OFF] again.

• "ON" is no longer displayed on the LCD.
• The OPERATION lamp goes off.

NOTE

MODE	Notes on each operation mode
HEAT	• Since this air conditioner heats the room by taking heat from outdoor air to indoors, the heating capacity becomes smaller in lower outdoor temperatures. If the heating effect is insufficient, it is recommended to use another heating appliance in combination with the air conditioner. • The heat pump system heats the room by circulating hot air around all parts of the room. After the start of HEAT operation, it takes some time before the room gets warmer. • In HEAT operation, frost may occur on the outdoor unit and lower the heating capacity. In that case, the system switches into defrosting operation to take away the frost. • During defrosting operation, hot air does not flow out of indoor unit.
COOL	• This air conditioner cools the room by releasing the heat in the room outside. Therefore, the cooling performance of the air conditioner may be degraded if the outdoor temperature is high.
DRY	• The computer chip works to rid the room of humidity while maintaining the temperature as much as possible. It automatically controls temperature and airflow rate, so manual adjustment of these functions is unavailable.
AUTO	• In AUTO operation, the system selects an appropriate operation mode (COOL or HEAT) based on the room and outside temperatures and starts the operation. • The system automatically reselects setting at a regular interval to bring the room temperature to user-setting level.
FAN	• This mode is valid for fan only.

4

■ To change the temperature setting

Press ▲ TEMP°F/°C **or** ▼ . TEMP°F/°C

- The displayed items on the LCD will change whenever either one of the buttons is pressed.

COOL operation	HEAT operation	AUTO operation	DRY or FAN operation
64-90°F (18-32°C)	50-86°F (10-30°C)	64-86°F (18-30°C)	The temperature setting cannot be changed.
Press ▲ to raise the temperature and press ▼ to lower the temperature.			

■ Operating conditions

■ Recommended temperature setting
- For cooling: 78-82°F (26-28°C)
- For heating: 68-75°F (20-24°C)

■ Tips for saving energy
- Be careful not to cool (heat) the room too much.
  Keeping the temperature setting at a moderate level helps save energy.
- Cover windows with a blind or a curtain.
  Blocking sunlight and air from outdoors increases the cooling (heating) effect.
- Clogged air filters cause inefficient operation and waste energy. Clean them once in about every 2 weeks.

■ Notes on the operating conditions
- The air conditioner always consumes a small amount of electricity even while it is not operating.
- If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn the breaker off.
- Use the air conditioner in the following conditions.

MODE	Operating conditions	If operation is continued out of this range
COOL	Outdoor temperature: 50-115°F (10-46°C) Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.	• A safety device may work to stop the operation. (In multi system, it may work to stop the operation of the outdoor unit only.) • Condensation may occur on the indoor unit and drip.
HEAT	Outdoor temperature: [2/3MXL]: −13-75°F (−25-24°C) [Other models]: 5-75°F (−15-24°C) Indoor temperature: 50-86°F (10-30°C)	• A safety device may work to stop the operation.
DRY	Outdoor temperature: 50-115°F (10-46°C) Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.	• A safety device may work to stop the operation. • Condensation may occur on the indoor unit and drip.

- Operation outside this humidity or temperature range may cause a safety device to disable the system.

2.6 Adjusting the Airflow Direction and Rate

CTXG Series

Adjusting the Airflow Rate

You can adjust the airflow rate to increase your comfort.

To adjust the airflow rate setting

▶ **Press** [Fan] **.**

- Each pressing of [Fan] changes the airflow rate setting in sequence.

AUTO → Indoor unit quiet → Airflow rate 1-5 (Low to High)

- When the airflow is set to " ⚘ ", quiet operation starts and noise from the indoor unit will become quieter.
- In the quiet operation mode, the airflow rate is set to a weak level.
- In DRY operation, the airflow rate setting cannot be changed.

NOTE

Note on airflow rate setting
- At smaller airflow rates, the cooling (heating) effect is also smaller.

Tips for saving energy

Keeping the temperature setting at a moderate level helps save energy.
- Recommended temperature setting
  – For cooling: 78-82°F (26-28°C)
  – For heating: 68-75°F (20-24°C)

Cover windows with a blind or a curtain.
- Blocking sunlight and air from outdoors increases the cooling (heating) effect.

Keep the air filter clean.
- A clogged air filter causes inefficient operation and wastes energy. Clean it once every 2 weeks.

If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn off the circuit breaker.
- The air conditioner always consumes a small amount of electricity even while it is not operating.

Basic Operation

Adjusting the Airflow Direction

You can adjust the airflow direction to increase your comfort.

⚠ CAUTION

• Always use a remote controller to adjust the angles of the flap. Moving the flap forcibly by hand may cause a malfunction.
• Be careful when adjusting the louvers. Inside the air outlet, a fan is rotating at a high speed.

To start auto swing

Up and down airflow direction

▶ **Press ⬚ .**

• " " is displayed on the LCD.
• The flaps (horizontal blades) will begin to swing.

Right and left airflow direction

▶ **Press ⬚ .**

• " " is displayed on the LCD.
• The louvers (vertical blades) will begin to swing.

The 3-D airflow direction

▶ **Press ⬚ and ⬚ .**

• " " and " " are displayed on the LCD.
• The flaps and louvers move in turn.
• To cancel 3-D airflow, press either ⬚ or ⬚ again. The flaps or louvers will stop moving.

To set the flaps or louvers at the desired position

• This function is effective while the flaps or louvers are in auto swing mode.

▶ **Press ⬚ and ⬚ when the flaps or louvers reach the desired position.**

• In the 3-D airflow, the flaps and louvers move in turn.
• " " or " " disappears from the LCD.

NOTE

Notes on airflow direction setting
• The movable range of the flaps varies according to the operation mode.
• The flaps will stop at the upper position when the airflow rate is changed to low during the up and down swing setting.

Note on 3-D airflow
• Using 3-D airflow circulates cold air, which tends to collected at the bottom of the room, and hot air, which tends to collect near the ceiling, throughout the room, preventing areas of cold and hot developing.

Movable range of the flaps

COOL / DRY   FAN

HEAT

CTXS07JVJU, CTXS09/12HVJU

Adjusting the Airflow Direction

You can adjust the airflow direction to increase your comfort.

Adjusting the upper and lower airflow direction

■ To adjust the louvers (horizontal blades)

1. Press ⎡ ⎤.

• " " is displayed on the LCD and the louvers will begin to swing.

2. When the louvers have reached the desired position, press ⎡ ⎤ once more.

• The louvers will stop moving.
• " " is no longer displayed on the LCD.

Adjusting the right and left airflow direction

■ To adjust the fins (vertical blades)

3. Press ⎡ ⎤.

• " " is displayed on the LCD.

4. When the fins have reached the desired position, press ⎡ ⎤ once more.

• The fins will stop moving.

• " " is no longer displayed on the LCD.

■ **To start 3-D airflow**

1. 3. Press the [⟳] and the [⌒] :
the " ⟳ " and " ⌒ " display will light up and the
louvers and fins will move in turn.

■ **To cancel 3-D airflow**

2. 4. Press either the [⟳] or the [⌒].

4

NOTE

■ **Note on the angles of the louvers**
- When [⟳] is selected, the louvers swinging range depends on the operation. (See the figure.)

■ **Note on 3-D airflow**
- Using 3-D airflow circulates cold air, which tends to collected at the bottom of the room, and hot air, which tends to collect near the ceiling, throughout the room, preventing areas of cold and hot developing.

■ **ATTENTION**
- Always use a remote controller to adjust the angles of the louvers and fins. If you attempt to move it forcibly with hand when it is swinging, the mechanism may be broken.
- Always use a remote controller to adjust the fins angles. Inside the air outlet, a fan is rotating at a high speed.

COOL and DRY operation

Stop operation
COOL
approximately 10-40°
DRY
approximately 5-35°

HEAT and FAN operation

Stop operation
HEAT
approximately 15-55°
FAN
approximately 5-55°

CTXS07LVJU, FTXS09/12LVJU

Adjusting the Airflow Direction and Rate

You can adjust the airflow direction to increase your comfort.

■ To start auto swing

Upper and lower airflow direction

Press ⟨ ⟩ .

- "⟨ ⟩" is displayed on the LCD.
- The flaps (horizontal blades) will begin to swing.

Right and left airflow direction

Press ⟨≡⟩ .

- "⟨≡⟩" is displayed on the LCD.
- The louvers (vertical blades) will begin to swing.

The 3-D airflow direction

Press ⟨ ⟩ and ⟨≡⟩ .

- "⟨ ⟩" and "⟨≡⟩" are displayed on the LCD.
- The flaps and louvers move in turn.
- To cancel 3-D airflow, press either ⟨ ⟩ or ⟨≡⟩ again. The flaps or louvers will stop moving.

■ To set the flaps or louvers at the desired position

- This function is effective while flaps or louvers are in auto swing mode.

Press ⟨ ⟩ and ⟨≡⟩ when the flaps or louvers reach the desired position.

- In the 3-D airflow, the flaps and louvers move in turn.
- "⟨ ⟩" or "⟨≡⟩" disappears from the LCD.

4

■ To adjust the airflow rate setting

Press [⚙].

- Each pressing of [⚙] advances the airflow rate setting in sequence.

Auto → Indoor unit quiet → Low → Middle low → Middle → Middle high → High → (back to Auto)

- When the airflow is set to "🌲", indoor unit quiet operation will start and the noise from the unit will become quieter.
- In indoor unit quiet operation, the airflow rate is set to a weak level.
- In DRY operation, the airflow rate setting cannot be changed.

NOTE

■ Notes on the angles of the flaps
- The flaps swinging range depends on the operation. (See the figure.)

COOL and DRY operation

COMFORT AIRFLOW 8°
15°
Upper limit 45°
Lower limit
Stop operation

HEAT operation

Stop operation
30°
Upper limit 70°
Lower limit 80°
COMFORT AIRFLOW

FAN operation

Upper limit 8°
80°
Lower limit   Stop operation

■ Note on 3-D airflow
- Using 3-D airflow circulates cold air, which tends to collected at the bottom of the room, and hot air, which tends to collect near the ceiling, throughout the room, preventing areas of cold and hot developing.

■ Note on airflow rate setting
- At smaller airflow rates, the cooling (heating) effect is also smaller.

⚠ CAUTION

- Always use a remote controller to adjust the angles of the flaps and louvers.
  - If you attempt to move the flaps and louvers forcibly by hand when they are swinging, the mechanism may be damaged.
  - Inside the air outlet, a fan is rotating at a high speed.

FTXS15/18/24LVJU

Adjusting the Airflow Direction and Rate

You can adjust the airflow direction to increase your comfort.

■ To start auto swing

Upper and lower airflow direction

Press [⟲].

- "⟲" is displayed on the LCD.
- The flaps (horizontal blades) will begin to swing.

Right and left airflow direction

Press [⟫].

- "⟫" is displayed on the LCD.
- The louvers (vertical blades) will begin to swing.

The 3-D airflow direction

Press [⟲] **and** [⟫].

- "⟲" and "⟫" are displayed on the LCD.
- The flaps and louvers move in turn.
- To cancel 3-D airflow, press either [⟲] or [⟫] again. The flaps or louvers will stop moving.

■ To set the flaps or louvers at the desired position

- This function is effective while flaps or louvers are in auto swing mode.

Press [⟲] **and** [⟫] **when the flaps or louvers reach the desired position.**

- In the 3-D airflow, the flaps and louvers move in turn.
- "⟲" or "⟫" disappears from the LCD.

■ To adjust the airflow rate setting

Press [⚙].

- Each pressing of [⚙] advances the airflow rate setting in sequence.

Auto → Indoor unit quiet → Low → Middle low

High ← Middle high ← Middle

- When the airflow is set to "🌲", indoor unit quiet operation will start and the noise from the unit will become quieter.
- In indoor unit quiet operation, the airflow rate is set to a weak level.
- In DRY operation, the airflow rate setting cannot be changed.

NOTE

■ Notes on the angles of the flaps
- The flaps swinging range depends on the operation. (See the figure.)

COOL and DRY operation

COMFORT AIRFLOW 10°
Upper limit 15°
50°
Lower limit
Stop operation

HEAT operation

Stop operation
30°
Upper limit 70°
Lower limit 75°
COMFORT AIRFLOW

FAN operation

15°
Upper limit
70°
Lower limit
Stop operation

■ Note on 3-D airflow
- Using 3-D airflow circulates cold air, which tends to collected at the bottom of the room, and hot air, which tends to collect near the ceiling, throughout the room, preventing areas of cold and hot developing.

■ Note on airflow rate setting
- At smaller airflow rates, the cooling (heating) effect is also smaller.

⚠ CAUTION

- Always use a remote controller to adjust the angles of the flaps and louvers.
  - If you attempt to move the flaps and louvers forcibly by hand when they are swinging, the mechanism may be damaged.
  - Inside the air outlet, a fan is rotating at a high speed.

CDXS, FDXS Series

Adjusting the Airflow Rate

■ To adjust the airflow rate setting

Press ❄.

• Each pressing of ❄ advances the airflow rate setting in sequence.

Auto	Indoor unit quiet	Low	Middle low

High	Middle high	Middle

• When the airflow is set to " 🌲 ", indoor unit quiet operation will start and the noise from the unit will become quieter.
• In indoor unit quiet operation, the airflow rate is set to a weak level.
• In DRY operation, the airflow rate setting cannot be changed.

NOTE

■ **Note on airflow rate setting**
 • At smaller airflow rates, the cooling (heating) effect is also smaller.

FVXS Series

Adjusting the Airflow Rate

You can adjust the airflow rate to increase your comfort.

To adjust the airflow rate setting

▶ **Press** [Fan] **.**

- Each pressing of [Fan] changes the airflow rate setting in sequence.

AUTO → Indoor unit quiet → Airflow rate 1-5 (Low to High)

- When the airflow is set to "🌲", quiet operation starts and noise from the indoor unit will become quieter.
- In the quiet operation mode, the airflow rate is set to a weak level.

AUTO, COOL, HEAT and FAN operation	DRY operation
	The airflow rate setting cannot be changed.

4

NOTE

Note on airflow rate setting
- At smaller airflow rates, the cooling (heating) effect is also smaller.

Tips for saving energy

Keeping the temperature setting at a moderate level helps save energy.
- Recommended temperature setting
  – For cooling: 78-82°F (26-28°C)
  – For heating: 68-75°F (20-24°C)

Cover windows with a blind or a curtain.
- Blocking sunlight and air from outdoors increases the cooling (heating) effect.

Keep the air filter clean.
- A clogged air filter causes inefficient operation and wastes energy. Clean it once every 2 weeks.

If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn off the circuit breaker.
- The air conditioner always consumes a small amount of electricity even while it is not operating.

Adjusting the Airflow Direction

You can adjust the airflow direction to increase your comfort.

⚠ CAUTION

• Always use a remote controller to adjust the angles of the flap. Moving the flap forcibly by hand may cause a malfunction.
• Be careful when adjusting the louvers. Inside the air outlet, a fan is rotating at a high speed.

To start auto swing

Up and down airflow direction

▶ **Press Swing .**

• " " is displayed on the LCD.
• The flaps (horizontal blades) will begin to swing.

To set the flap at the desired position

• This function is effective while the flap is in auto swing mode.

▶ **Press Swing when the flap reaches the desired position.**

• " " disappears from the LCD.

To adjust the louvers at desired position

▶ **Hold the knobs and move the louvers (vertical blades).**

NOTE

Note on airflow direction setting

• The movable range of the flap varies according to the operation mode.
• Unless "Swing" is selected, you should set the flap at a near-horizontal angle in FAN or HEAT operation and at a upward position in COOL or DRY operation to obtain the best performance.

Movable range of the flap

FAN/
HEAT

COOL/
DRY

Air outlet selection

• Make air outlet selection according to what suits you.

When setting the air outlet selection switch to

• Air conditioner automatically decides the appropriate blowing pattern depending on the operating mode/situation.

Mode	Situation		Blowing pattern
COOL (❄)	When the operation is activated or when the room is not fully cooled.		Air is emitted from the upper and lower air outlets in order to reach the set temperature quickly.
	When the room has become fully cool, or when 1 hour has passed since turning on the air conditioner.		Air is emitted only from the upper air outlet so that air does not come into direct contact with people and indoor temperature is equalized.
HEAT (☀)	When the operation is activated or when air emitted is of low temperature.		Air is emitted only from the upper air outlet so that air does not come into direct contact with people.
	At times other than the above situations.		Air is emitted from the upper and lower air outlets so that warm air is spread throughout the whole room.
DRY (💧)	Whenever in DRY mode.		Air is emitted only from the upper air outlet so that air does not come into direct contact with people.
FAN (❁)	Whenever in FAN mode.		
AUTO (Ⓐ)	Operates in the actual operation mode of the air conditioner according to the descriptions in this table. (COOL or HEAT)		

When setting the air outlet selection switch to

• Regardless of the operating mode or situation, air is emitted from the upper air outlet.
• Use this switch when you do not want air coming out of the lower air outlet. (While sleeping, etc.)

2.7   COMFORT AIRFLOW / INTELLIGENT EYE Operation

CTXG Series

COMFORT AIRFLOW / INTELLIGENT EYE Operation

COMFORT AIRFLOW operation: The airflow direction is upward while in COOL operation, and downward while in HEAT operation. This function prevents cold or warm air from blowing directly on the occupants in the room.

INTELLIGENT EYE operation: The INTELLIGENT EYE sensor detects human movement and adjusts the right and left airflow direction to avoid blowing air directly on the person. If no one is in the room for more than 20 minutes, the operation automatically changes to energy saving operation. The INTELLIGENT EYE sensor works differently depending on the situation.

INTELLIGENT EYE operation is useful for energy saving

■ **A person is detected in area 1.**

Area 1   Area 2

■ **A person is detected in area 2.**

Area 1   Area 2

■ **People are detected in both areas.**

Area 1   Area 2

■ **No people are detected in the areas.**

Use the INTELLIGENT EYE operation in combination with the COMFORT AIRFLOW operation.

The air conditioner will switch to energy saving mode after 20 minutes.

*The airflow direction may differ from the illustrated direction depending on the actions and movements of the people in the areas.
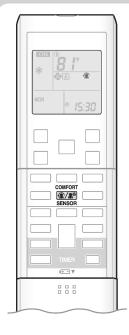
Energy saving operation
• If no presence is detected in the room for 20 minutes, the energy saving operation will start, and the INTELLIGENT EYE lamp goes off.
• This operation changes the temperature by –3.6°F (–2°C) in HEAT / +3.6°F (+2°C) in COOL / +3.6°F (+2°C) in DRY operation from the set temperature.
   When the room temperature exceeds 86°F (30°C), the operation changes the temperature by +1.8°F (+1°C) in COOL / +1.8°F (+1°C) in DRY operation from the set temperature.
• This operation decreases the airflow rate slightly in FAN operation only.

COMFORT AIRFLOW / INTELLIGENT EYE Operation

⚠ CAUTION

- Do not place large objects near the INTELLIGENT EYE sensor. Also keep heating units and humidifiers outside the sensor's detection area. This sensor can detect undesirable objects.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.

To start operation

❚ **Press** ^{Comfort / Sensor} **and select the desired mode.**

- Each time ^{Comfort / Sensor} is pressed, a different setting option is displayed on the LCD.
- When INTELLIGENT EYE is selected, the INTELLIGENT EYE lamp lights green.

Display

- By selecting " 👤 👤 " from the following icons, the air conditioner will switch to COMFORT AIRFLOW operation combined with INTELLIGENT EYE operation.

| COMFORT AIRFLOW | → | INTELLIGENT EYE | → | Combination | → | blank No Setting |

- When the flaps (horizontal blades) are swinging, selecting any of the modes above will cause the flaps (horizontal blades) to stop.
- The lamp lights when human movement is detected.

COMFORT AIRFLOW / INTELLIGENT EYE operation settings

Display	Operation mode	Explanation
👤	COMFORT AIRFLOW	The flaps adjust the airflow direction upward while cooling, downward while heating.
👤	INTELLIGENT EYE	The sensor detects the movement of people in the sensing areas and the louvers adjust the airflow direction to an area where people are not present. When there are no people in the sensing areas, the air conditioner switches to the energy saving mode.
👤·👤	COMFORT AIRFLOW and INTELLIGENT EYE	The air conditioner will be in COMFORT AIRFLOW operation combined with INTELLIGENT EYE operation.
Blank	No function	–

To cancel operation

❚ **Press** ^{Comfort / Sensor} **until no icon is displayed.**

- If the INTELLIGENT EYE operation was being used, the INTELLIGENT EYE lamp goes off.
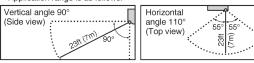
Useful Functions

NOTE

■ **Notes on COMFORT AIRFLOW operation**
- The position of the flaps will change, preventing air from blowing directly on the occupants of the room.
- POWERFUL operation and COMFORT AIRFLOW operation cannot be used at the same time.
  Priority is given to the function of whichever button is pressed last.
- The airflow rate will be set to AUTO. If the up and down airflow direction is selected, COMFORT AIRFLOW operation will be canceled.

■ **Notes on INTELLIGENT EYE operation**
- Application range is as follows.

Vertical angle 90°
(Side view)

Horizontal angle 110°
(Top view)

23ft (7m) 90°

55° 55°

23ft
(7m)

- While the air conditioner is in INTELLIGENT EYE operation, the louvers adjust the airflow direction if there are people in the sensing areas of the INTELLIGENT EYE so that the leftward or rightward airflow will not be directed to the people.
  If no people are detected in either area 1 or 2 for 20 minutes, the air conditioner switches to the energy saving mode with the set temperature shifted by 3.6°F (2°C).
  The air conditioner may switch to the energy saving operation even if there are people in the areas.
  This may occur depending on the clothes the people are wearing, if there is no movement of the people in the areas.
- The airflow direction from the louvers will be leftward if there are people in both areas 1 and 2. The air will also flow left if there is a person right in front of the sensor as the sensor judges that there are people in both areas.
- Due to the position of the sensor, people might be exposed to the airflow of the indoor unit if they are close to the front side of the indoor unit. If there are people close to the front side of the indoor unit or in both areas, it is recommended to use the COMFORT AIRFLOW and INTELLIGENT EYE operations simultaneously. Using both modes together, the air conditioner will not direct the airflow towards the people.
- The sensor may not detect moving objects further than 23ft (7m) away. (Please see the application range.)
- Sensor detection sensitivity changes according to the indoor unit location, the speed of passers-by, temperature range, etc.
- The sensor could also mistakenly detect pets, sunlight, fluttering curtains and light reflected off of mirrors as passers-by.
- INTELLIGENT EYE operation will not switch on during POWERFUL operation.
- NIGHT SET mode will not switch on during use of INTELLIGENT EYE operation.

■ **Notes on combining COMFORT AIRFLOW operation and INTELLIGENT EYE operation**
- The airflow rate will be set to AUTO. If the up and down airflow direction is selected, COMFORT AIRFLOW operation will be canceled.
  Priority is given to the function of whichever button is pressed last.
- When the INTELLIGENT EYE sensor detects the movement of people, it adjusts the airflow direction upward (while in COOL operation) and downward (while in HEAT operation), by adjusting the flaps. When the sensor detects people, the louvers will direct the airflow in such a way that it will not be blown directly on them. If there are no people, the air conditioner will switch to energy saving operation after 20 minutes.

CTXS07JVJU, CTXS09/12HVJU

INTELLIGENT EYE Operation

"INTELLIGENT EYE" is the infrared sensor which detects the human movement.

■ To start INTELLIGENT EYE operation

1. Press [🏃] .

- " 🏃 " is displayed on the LCD.

■ To cancel INTELLIGENT EYE operation

2. Press [🏃] again.

- " 🏃 " is no longer displayed on the LCD.

[Example]

When somebody in the room

- **Normal operation**

The air conditioner is in normal operation while the sensor is detecting the movement of people.

When nobody in the room

- **20 minutes after, start energy saving operation.**

The set temperature is shifted in ±3.6ºF (±2ºC) steps.

Somebody back in the room

- **Back to normal operation.**

The air conditioner will return to normal operation when the sensor detects the movement of people again.

"INTELLIGENT EYE" is useful for energy saving

■ **Energy saving operation**
- Change the temperature –3.6°F (–2°C) in HEAT / +3.6°F (+2°C) in COOL / +1.8°F (+1°C) in DRY operation from set temperature.
- Decrease the airflow rate slightly in FAN operation only.
- If no presence detected in the room for 20 minutes.

NOTE

■ **Notes on INTELLIGENT EYE operation**
- Application range is as follows.

Vertical angle 90°   Horizontal angle 110°
(Side view)   (Top view)

23ft. (7m) 90°   55° 55°   23ft. (7m)

- Sensor may not detect moving objects further than 23ft. (7m) away. (Check the application range.)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during POWERFUL operation.
- NIGHT SET mode will not go on during use of INTELLIGENT EYE operation.

⚠ CAUTION

- Do not place large objects near the sensor.
  Also keep heating units or humidifiers outside the sensor's detection area. This sensor can detect undesirable objects.
- Do not hit or forcefully push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.

CTXS07LVJU, FTXS Series

COMFORT AIRFLOW / INTELLIGENT EYE Operation

■ COMFORT AIRFLOW operation

The flow of air will be in the upward direction while in COOL operation and in the downward direction while in HEAT operation, which will provide a comfortable wind that will not come in direct contact with people.

COOL operation   HEAT operation

■ INTELLIGENT EYE operation

"INTELLIGENT EYE" is the infrared sensor which detects the human movement.
If no one is in the room for more than 20 minutes, the operation automatically changes to energy saving operation.

[Example]

When someone is in the room	When no one is in the room	Someone is back in the room
■ **Normal operation**	■ **20 minutes after, start energy saving operation.**	■ **Back to normal operation.**
• The air conditioner is in normal operation while the sensor is detecting the movement of people.	• The set temperature is shifted in ±3.6°F (±2°C) steps.	• The air conditioner will return to normal operation when the sensor detects the movement of people again.

INTELLIGENT EYE operation is useful for energy saving

■ **Energy saving operation**
• If no presence is detected in the room for 20 minutes, the energy saving operation will start, and the INTELLIGENT EYE lamp goes off. If human movement is detected again, the INTELLIGENT EYE lamp lights up and energy saving operation terminates.
• This operation changes the temperature –3.6°F (–2°C) in HEAT / +3.6°F (+2°C) in COOL / +3.6°F (+2°C) in DRY operation from set temperature. When the room temperature exceeds 86°F (30°C), the operation changes the temperature +1.8°F (+1°C) in COOL / +1.8°F (+1°C) in DRY operation from set temperature.
• This operation decreases the airflow rate slightly in FAN mode only.

■ Combination COMFORT AIRFLOW and INTELLIGENT EYE operation

The air conditioner can go into operation with the COMFORT AIRFLOW and INTELLIGENT EYE functions combined.

■ To start operation

Press [icon]/[icon] and select the desired mode.

- Each time the [icon]/[icon] is pressed a different setting option is displayed on the LCD.
- When INTELLIGENT EYE is selected, the INTELLIGENT EYE lamp lights green.

Display

- By selecting "[icon] [icon]" from the following icons, the air conditioner will be in COMFORT AIRFLOW operation combined with INTELLIGENT EYE operation.

COMFORT AIRFLOW → INTELLIGENT EYE → Combination → blank No Setting

- When the flaps (horizontal blades) are swinging, selecting any of the modes above will cause the flaps (horizontal blades) to stop.

■ To cancel operation

Press [icon]/[icon] and select "blank" on the LCD.

- If the INTELLIGENT EYE operation was being used, the INTELLIGENT EYE lamp goes off.

NOTE

■ Notes on COMFORT AIRFLOW operation
- The position of the flaps will change, preventing air from blowing directly on the occupants of the room.
- POWERFUL operation and COMFORT AIRFLOW operation cannot be used at the same time.
  Priority is given to the function of whichever button is pressed last.
- The airflow rate will be set to AUTO. If the upper and lower airflow direction is selected, the COMFORT AIRFLOW function will be canceled.

■ Notes on INTELLIGENT EYE operation
- Application range is as follows.

Vertical angle 90° (Side view)   23ft (7m)   90°

Horizontal angle 110° (Top view)   55° 55°   23ft (7m)

- Sensor may not detect moving objects further than 23ft (7m) away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during POWERFUL operation.
- NIGHT SET mode will not go on during use of INTELLIGENT EYE operation.

■ Notes on combination of COMFORT AIRFLOW operation and INTELLIGENT EYE operation
- The airflow rate will be set to AUTO. If the upper and lower airflow direction is selected, the COMFORT AIRFLOW operation will be canceled.
  Priority is given to the function of whichever button is pressed last.

⚠ CAUTION

- Do not place large objects near the sensor.
  Also keep heating units or humidifiers outside the sensor's detection area. This sensor can detect undesirable objects.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.

2.8   POWERFUL Operation

POWERFUL Operation

POWERFUL operation quickly maximizes the cooling (heating) effect in any operation mode. In this mode, the air conditioner operates at maximum capacity.

To start POWERFUL operation

▌**Press ▯ during operation.**

- " ▯ " is displayed on the LCD.
- POWERFUL operation ends in 20 minutes. Then the system automatically operates again with the previous settings which were used before POWERFUL operation.

To cancel POWERFUL operation

▌**Press ▯ again.**

- " ▯ " disappears from the LCD.

NOTE

Notes on POWERFUL operation

- Pressing ▯ causes the settings to be canceled, and " ▯ " disappears from the LCD.
- POWERFUL operation will not increase the capacity of the air conditioner if the air conditioner is already in operation with its maximum capacity demonstrated.

    – **In COOL, HEAT and AUTO operation**
      To maximize the cooling (heating) effect, the capacity of outdoor unit increases and the airflow rate becomes fixed at the maximum setting. The temperature and airflow settings cannot be changed.

    – **In DRY operation**
      The temperature setting is lowered by 4.5°F (2.5°C) and the airflow rate is slightly increased.

    – **In FAN operation**
      The airflow rate is fixed at the maximum setting.

    – **When using priority room setting**
      Refer to **"Note for Multi System"**.

Regarding the combination of POWERFUL and other operations

POWERFUL + COMFORT AIRFLOW	
POWERFUL + ECONO	Not available*
POWERFUL + OUTDOOR UNIT QUIET	

*Priority is given to the function of whichever button is pressed last.

2.9 POWERFUL / ECONO / OUTDOOR UNIT QUIET Operation

POWERFUL Operation

POWERFUL operation quickly maximizes the cooling (heating) effect in any operation mode. In this mode, the air conditioner operates at maximum capacity.

To start POWERFUL operation

▶ **Press [Powerful] during operation.**

- " ⚡ " is displayed on the LCD.
- POWERFUL operation ends in 20 minutes. Then the system automatically operates again with the previous settings which were used before POWERFUL operation.

To cancel POWERFUL operation

▶ **Press [Powerful] again.**

- " ⚡ " disappears from the LCD.

ECONO Operation

ECONO operation enables efficient operation by limiting the maximum power consumption.
This function is useful to prevent the circuit breaker from tripping when the unit operates alongside other appliances on the same circuit.

To start ECONO operation

▶ **Press [Econo] during operation.**

- " ⌄ " is displayed on the LCD.
- Not available in FAN ONLY mode.

To cancel ECONO operation

▶ **Press [Econo] again.**

- " ⌄ " disappears from the LCD.

OUTDOOR UNIT QUIET Operation

OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit by changing the frequency and fan speed of the outdoor unit.
This function is convenient during the night-time operation.

To start OUTDOOR UNIT QUIET operation

Press ⬛ .

Quiet

- " 🏠 " is displayed on the LCD.

To cancel OUTDOOR UNIT QUIET operation

Press ⬛ again.

Quiet

- " 🏠 " disappears from the LCD.

NOTE

Notes on POWERFUL operation

- Pressing ⬛ causes the settings to be canceled, and " 💪 " disappears from the LCD.
- POWERFUL operation will not increase the capacity of the air conditioner if the air conditioner is already in operation with its maximum capacity demonstrated.
  - **In COOL, HEAT and AUTO operation**
    To maximize the cooling (heating) effect, the capacity of outdoor unit increases and the airflow rate becomes fixed at the maximum setting.
    The temperature setting cannot be changed.
  - **In DRY operation**
    The temperature setting is lowered by 4.5°F (2.5°C) and the airflow rate is slightly increased.
  - **In FAN ONLY operation**
    The airflow rate is fixed at the maximum setting.
  - **When using priority room setting**
    Refer to "**Note for Multi System**".

Notes on ECONO operation

- Pressing ⬛ causes the settings to be canceled, and " 🔽 " disappears from the LCD.
- If the power consumption level is already low, switching to ECONO operation will not reduce the power consumption.

Notes on OUTDOOR UNIT QUIET operation

- If using a multi system, the OUTDOOR UNIT QUIET operation will work only when this function is set on all operated indoor units. However, if using priority room setting, refer to "**Note for Multi System**".
- Even if the operation is stopped by using the remote controller or the indoor unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, " 🏠 " will remain displayed on the remote controller.
- OUTDOOR UNIT QUIET operation will not reduce the frequency nor fan speed if they already are operating at reduced levels.
- This operation is performed with lower power and therefore may not provide a sufficient cooling (heating) effect.

Possible combinations of ECONO / OUTDOOR UNIT QUIET operation and basic operations

	Operation mode				
	AUTO	DRY	COOL	HEAT	FAN
ECONO	✓	✓	✓	✓	–
OUTDOOR UNIT QUIET	✓	–	✓	✓	–

Some useful functions can be used together.

OUTDOOR UNIT QUIET + ECONO	Available
POWERFUL + OUTDOOR UNIT QUIET	Not available*
POWERFUL + ECONO	Not available*

*Priority is given to the function of whichever button is pressed last.

2.10   ECONO / OUTDOOR UNIT QUIET Operation

ECONO / OUTDOOR UNIT QUIET Operation

ECONO operation enables efficient operation by limiting the maximum power consumption.
This function is useful to prevent the circuit breaker from tripping when the unit operates alongside other appliances on the same circuit.

OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit by changing the frequency and fan speed of the outdoor unit. This function is convenient during the night-time operation.

To start operation

▶ **Press** [Econo/Quiet] **and select the desired mode.**

• Each time [Econo/Quiet] is pressed, a different setting option is displayed on the LCD.

ECONO → OUTDOOR UNIT QUIET → Combination → blank No Setting

To cancel operation

▶ **Press** [Econo/Quiet] **until no icon is displayed.**

NOTE

Notes on ECONO operation

• Pressing [On/Off] causes the settings to be canceled, and " 🖫 " disappears from the LCD.

• If the power consumption level is already low, switching to ECONO operation will not reduce the power consumption.

Notes on OUTDOOR UNIT QUIET operation

• If using a multi system, the OUTDOOR UNIT QUIET operation will work only when this function is set on all operated indoor units. However, if using priority room setting, refer to **"Note for Multi System"**.

• Even if the operation is stopped by using the remote controller or the indoor unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, " 🏠 " will remain displayed on the remote controller.

• OUTDOOR UNIT QUIET operation will not reduce the frequency nor fan speed if they already are operating at reduced levels.

• This operation is performed with lower power and therefore may not provide a sufficient cooling (heating) effect.

Possible combinations of ECONO / OUTDOOR UNIT QUIET operation and basic operations

	Operation mode				
	AUTO	DRY	COOL	HEAT	FAN
ECONO	✓	✓	✓	✓	–
OUTDOOR UNIT QUIET	✓	–	✓	✓	–

2.11   OUTDOOR UNIT QUIET Operation

OUTDOOR UNIT QUIET Operation

OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit by changing the frequency and fan speed on the outdoor unit. This function is convenient during the night.

■ To start OUTDOOR UNIT QUIET operation

Press ⌂.

- "⌂" is displayed on the LCD.

■ To cancel OUTDOOR UNIT QUIET operation

Press ⌂ again.

- "⌂" is no longer displayed on the LCD.

[Example] Using the **OUTDOOR UNIT QUIET** operation during the night.

- The noise level of the outdoor unit will be lower.
  This is convenient in consideration of your neighbors.

NOTE

■ Notes on OUTDOOR UNIT QUIET operation

- If using a multi system, the OUTDOOR UNIT QUIET operation will work only when this function is set on all operated indoor units. However, if using priority room setting, refer to "Note for multi system".
- This function is available in COOL, HEAT, and AUTO operation.
  This is not available in FAN and DRY operation.
- POWERFUL operation and OUTDOOR UNIT QUIET operation cannot be used at the same time.
  Priority is given to the function of whichever button is pressed last.
- Even the operation is stopped using the remote controller or the indoor unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, "⌂" will remain on the remote controller display.
- OUTDOOR UNIT QUIET operation will drop neither the frequency nor fan speed if they have been already dropped low enough.

2.12   ECONO Operation

ECONO Operation

ECONO operation is a function which enables efficient operation by limiting the maximum power consumption value.
This function is useful for cases in which attention should be paid to ensure a circuit breaker will not trip when the product runs alongside other appliances.

■ To start ECONO operation

Press [ECONO] during operation.

• "⟍" is displayed on the LCD.

■ To cancel ECONO operation

Press [ECONO] again.

• "⟍" is no longer displayed on the LCD.

[Example]

Normal operation

• In case the air conditioner and other appliances which require high power consumption are used at same time, a circuit breaker may trip if the air conditioner operate with its maximum capacity.

ECONO operation

• The maximum power consumption of the air conditioner is limited by using ECONO operation. The circuit breaker is unlikely to trip even if the air conditioner and other appliances are used at same time.

• This diagram is a representation for illustrative purposes only.
The maximum running current and power consumption of the air conditioner in ECONO operation vary with the connecting outdoor unit.

Running current and power consumption

Normal operation

Maximum during normal operation

Maximum during ECONO operation

ECONO operation

Time

From start up until set temperature is reached

NOTE

■ Notes on ECONO operation

• ECONO operation can only be set when the unit is running. Pressing [ON/OFF] causes the settings to be canceled, and "⟍" is no longer displayed on the LCD.
• ECONO operation functions in AUTO, COOL, DRY, and HEAT operation.
• POWERFUL and ECONO operation cannot be used at the same time.
Priority is given to the function of whichever button is pressed last.
• If the level of power consumption is already low, ECONO operation will not drop the power consumption.

2.13　HOME LEAVE Operation

HOME LEAVE Operation

HOME LEAVE operation is a function which allows you to record your preferred temperature and airflow rate settings.

■ To start HOME LEAVE operation

1. Press 〔 🏠 〕 .

- " 🏠 " is displayed on the LCD.
- The HOME LEAVE lamp lights up.

Display

■ To cancel HOME LEAVE operation

2. Press 〔 🏠 〕 again.

- " 🏠 " is no longer displayed on the LCD.
- The HOME LEAVE lamp goes off.

Before using HOME LEAVE operation.

■ **To set the temperature and airflow rate for HOME LEAVE operation**

When using HOME LEAVE operation for the first time, please set the temperature and airflow rate for HOME LEAVE operation. Record your preferred temperature and airflow rate.

	Initial setting		Selectable range	
	Temperature	Airflow rate	Temperature	Airflow rate
Cooling	77°F (25°C)	AUTO	64-90°F (18-32°C)	5 step, " 🅰 " and " 🌲 "
Heating	77°F (25°C)	AUTO	50-86°F (10-30°C)	5 step, " 🅰 " and " 🌲 "

1. Press " 🏠 " . Make sure " 🏠 " is displayed in the remote controller display.
2. Adjust the set temperature with ▲ or ▼ as you like.
3. Adjust the airflow rate with FAN setting button as you like.

HOME LEAVE operation will run with these settings the next time you use the unit. To change the recorded information, repeat steps 1 – 3.

■ What's the HOME LEAVE operation?

Is there a set temperature and airflow rate which is most comfortable, a set temperature and airflow rate which you use the most? HOME LEAVE operation is a function that allows you to record your favorite set temperature and airflow rate. You can start your favorite operation mode simply by pressing [🏠] on the remote controller. This function is convenient in the following situations.

■ Useful in these cases

1. Use as an energy-saving mode.

Set the temperature 3-5°F(2-3°C) higher (COOL) or lower (HEAT) than normal. Setting the fan speed to the lowest setting allows the unit to be used in energy-saving mode. Also convenient for use while you are out or sleeping.

· Every day before you leave the house...

When you go out, press [🏠] and the air conditioner will adjust capacity to reach the preset temperature for HOME LEAVE operation.

When you return, you will be welcomed by a comfortably air conditioned room.

Press [🏠] again, and the air conditioner will adjust capacity to the set temperature for normal operation.

· Before bed...

Set the unit to HOME LEAVE operation before leaving the living room when going to bed.

The unit will maintain the temperature in the room at a comfortable level while you sleep.

When you enter the living room in the morning, the temperature will be just right. Disengaging HOME LEAVE operation will return the temperature to that set for normal operation. Even the coldest winters will pose no problem!

2. Use as a favorite mode.

Once you record the temperature and airflow rate settings you most often use, you can retrieve them by pressing [🏠]. You do not have to make all the selections again.

NOTE

- Once the temperature and airflow rate for HOME LEAVE operation are set, those settings will be used whenever HOME LEAVE operation is used in the future. To change these settings, please refer to the before using HOME LEAVE operation section above.
- HOME LEAVE operation is only available in COOL and HEAT operation. It cannot be used in AUTO, DRY, and FAN operation.
- HOME LEAVE operation runs in accordance with the previous operation mode (COOL or HEAT) before using HOME LEAVE operation.
- HOME LEAVE operation and POWERFUL operation cannot be used at the same time. Last button that was pressed has priority.
- The operation mode cannot be changed while HOME LEAVE operation is being used.
- When operation is shut off during HOME LEAVE operation, using the remote controller or the indoor unit ON/OFF switch, " 🏠 " will remain on the remote controller display.

2.14   TIMER Operation

CTXG Series

TIMER Operation

ON/OFF TIMER Operation

Timer functions are useful for automatically switching the air conditioner on or off at night or in the morning. You can also use the ON TIMER and OFF TIMER together.

To use ON TIMER operation

• Check that the clock is correct.
  If not, set the clock to the present time.

1. Press ⬚ᴼⁿ .

" *6:00* " is displayed on the LCD.
" ON " blinks.

• " ☻ " and day of the week disappear from the LCD.

2. Press ⬚ˢᵉˡᵉᶜᵗ until the time setting reaches the point you like.

• Each pressing of either button increases or decreases the time setting by 10 minutes.
  Holding down either button changes the setting rapidly.

3. Press ⬚ᴼⁿ again.

• The multi-monitor lamp blinks twice.
• " ON " and setting time are displayed on the LCD.
• The TIMER lamp periodically lights orange.

Display

To cancel ON TIMER operation

▶ Press ⬚ᶜᵃⁿᶜᵉˡ .

• " ON " and setting time disappear from the LCD.
• " ☻ " and day of the week are displayed on the LCD.

NOTE

Notes on TIMER operation
• When TIMER is set, the present time is not displayed.
• When using the ON/OFF TIMER to start/stop operation, the actual operation start/stop time may differ from the time set. (Maximum of about 10 minutes)

In the following cases, set the timer again.
• After the circuit breaker has turned off.
• After a power failure.
• After replacing the batteries in the remote controller.

TIMER Operation

To use OFF TIMER operation

• Check that the clock is correct.
  If not, set the clock to the present time.

1. **Press** [Off] **.**

" *0:00* " is displayed on the LCD.
" OFF " blinks.

• " ⏱ " and day of the week disappear from the LCD.

2. **Press** [Select] **until the time setting reaches the point you like.**

• Each pressing of either button increases or decreases the time setting by 10 minutes.
  Holding down either button changes the time setting rapidly.

3. **Press** [Off] **again.**

• The multi-monitor lamp blinks twice.
• " OFF " and setting time are displayed on the LCD.
• The TIMER lamp periodically lights orange.

Display

To cancel OFF TIMER operation

▶ **Press** [Cancel] **.**

• " OFF " and setting time disappear from the LCD.
• " ⏱ " and day of the week are displayed on the LCD.

To combine ON TIMER and OFF TIMER operation

• A sample setting for combining the 2 timers is shown below.

(Example)
Present time: 23:00 (The unit is operating)
OFF TIMER at 0:00 ⎫
ON TIMER at 14:00 ⎬ Combined

→ OFF *0:00*
   ON *14:00*

NOTE

NIGHT SET mode
• When the OFF TIMER is set, the air conditioner automatically adjusts the temperature setting (0.9°F (0.5°C) up in COOL, 3.6°F (2.0°C) down in HEAT) to prevent excessive cooling (heating) during sleeping hours.

CTXS, FTXS, CDXS, FDXS, FVXS Series

OFF TIMER Operation

Timer functions are useful for automatically switching the air conditioner on or off at night or in the morning. You can also use OFF TIMER and ON TIMER in combination.

■ To use OFF TIMER operation

- Check that the clock is correct.
  If not, set the clock to the present time.

1. Press [OFF].

- " **0:00** " is displayed on the LCD.
- " **OFF** " blinks.
- " ⊕ " is no longer displayed on the LCD.

2. Press [SELECT] until the time setting reaches the point you like.

- Each pressing of either button increases or decreases the time setting by 10 minutes. Holding down either button changes the time setting rapidly.

3. Press [OFF] again.

- " **OFF** " and setting time are displayed on the LCD.
- The TIMER lamp lights yellow.

Display

■ To cancel OFF TIMER operation

Press [CANCEL].

- " **OFF** " and setting time are no longer displayed on the LCD.
- " ⊕ " and day of the week are displayed on the LCD.
- The TIMER lamp goes off.

NOTE

■ **Notes on TIMER operation**
- When TIMER is set, the present time is not displayed.
- Once you set ON/OFF TIMER, the time setting is kept in the memory. The memory is canceled when remote controller batteries are replaced.
- When using the ON/OFF TIMER to start/stop operation, the actual operation start/stop time may differ from the time set. (Maximum of about 10 minutes)

■ **NIGHT SET mode**
- When the OFF TIMER is set, the air conditioner automatically adjusts the temperature setting (0.9°F (0.5°C) up in COOL, 3.6°F (2.0°C) down in HEAT) to prevent excessive cooling (heating) for your pleasant sleep.

ON TIMER Operation

■ To use ON TIMER operation

- Check that the clock is correct.
  If not, set the clock to the present time.

1. Press ON .

- " 6:00 " is displayed on the LCD.
- " ON " blinks.

- " 🕐 " and day of the week are no longer displayed on the LCD.

2. Press SELECT until the time setting reaches the point you like.

- Each pressing of either button increases or decreases the time setting by 10 minutes.
  Holding down either button changes the setting rapidly.

3. Press ON again.

- " ON " and setting time are displayed on the LCD.
- The TIMER lamp lights yellow.

Display

■ To cancel ON TIMER operation

Press CANCEL .

- " ON " and setting time are no longer displayed on the LCD.
- " 🕐 " and day of the week are displayed on the LCD.
- The TIMER lamp goes off.

■ To combine ON TIMER and OFF TIMER

- A sample setting for combining the 2 timers is shown below.

(Example)
Present time: 23:00 (The unit operating)
OFF TIMER at 0:00 ⎫
ON TIMER at 14:00 ⎭ Combined

→ OFF 0:00
  ON 14:00

NOTE

■ **In the following cases, set the timer again.**
- After a breaker has turned off.
- After a power failure.
- After replacing batteries in the remote controller.

2.15　WEEKLY TIMER Operation

CTXG Series

TIMER Operation

⏰ WEEKLY TIMER Operation

Up to 4 timer settings can be saved for each day of the week. This is convenient to adapt the WEEKLY TIMER to your family's life style.

Setting example of the WEEKLY TIMER

The same timer settings are used from Monday through Friday, while different timer settings are used for the weekend.

[Monday]	Make timer settings for programs 1-4.
	program 1 ON — 77°F (25°C) — 6:00　ON program 2 OFF — 8:30　OFF program 3 ON — 81°F (27°C) — 17:30　ON program 4 OFF — 22:00　OFF
[Tuesday] to [Friday]	Use the copy mode to make settings for Tuesday to Friday, because these settings are the same as those for Monday.
	program 1 ON — 77°F (25°C) — 6:00 program 2 OFF — 8:30 program 3 ON — 81°F (27°C) — 17:30 program 4 OFF — 22:00
[Saturday]	No timer settings
[Sunday]	Make timer settings for programs 1-4.
	program 1 ON — 77°F (25°C) — 8:00　ON program 2 OFF — 81°F (27°C) — 10:00　OFF program 3 OFF — 19:00　OFF program 4 ON — 81°F (27°C) — 21:00　ON

- Up to 4 reservations per day and 28 reservations per week can be set using the WEEKLY TIMER. The effective use of the copy mode simplifies timer programming.
- The use of ON-ON-ON-ON settings, for example, makes it possible to schedule operating mode and set temperature changes. Furthermore, by using OFF-OFF-OFF-OFF settings, only the turn off time of each day can be set. This will turn off the air conditioner automatically if you forget to turn it off.

To use **WEEKLY TIMER** operation

Setting mode

• Make sure the day of the week and time are set.
  If not, set the day of the week and time.

	program 1	program 2	program 3	program 4
	ON	OFF	ON	OFF

[Monday]   **77°F (25°C)**   **81°F (27°C)**

6:00   8:30   17:30   22:00

Setting Displays

MON	⊕ WEEKLY ON	⊕ WEEKLY ON 6:00	⊕ WEEKLY 6:00 77°F
Day and number	ON/OFF	Time	Temperature

1. Press ⬡ .

• The day of the week and the reservation number of the current day will be displayed.
• 1 to 4 settings can be made per day.

2. Press ⬒Select to select the desired day of the week and reservation number.

• Pressing ⬒Select changes the reservation number and the day of the week.

3. Press ⬓Next .

• The day of the week and reservation number will be set.
• " ⊕ WEEKLY " and " ON " blink.

4. Press ⬒Select to select the desired mode.

• Pressing ⬒Select changes the " ON " or " OFF " setting in sequence.

ON → OFF → blank

ON TIMER   OFF TIMER   No Setting   Pressing ⬓Select puts the sequence in reverse.

• In case the reservation has already been set, selecting " blank " deletes the reservation.
• Proceed to **STEP 9** if " blank " is selected.
• To return to the day of the week and reservation number setting, press ⬓Back .

5. Press ⬓Next .

• The ON/OFF TIMER mode will be set.
• " ⊕ WEEKLY " and the time blink.

TIMER Operation

WEEKLY TIMER Operation

6. Press ⊟ to select the desired time.

- The time can be set between 0:00 and 23:50 in 10-minute intervals.
- To return to the ON/OFF TIMER mode setting, press [Back] .
- Proceed to **STEP 9** when setting the OFF TIMER.

7. Press [Next] .

- The time will be set.
- " ⊙ WEEKLY " and the temperature blink.

8. Press ⊟ to select the desired temperature.

- The temperature can be set between 50°F (10°C) and 90°F (32°C).
  COOL or AUTO: The unit operates at 64°F (18°C) even if it is set at 50°F (10°C) to 63°F (17°C).
  HEAT or AUTO : The unit operates at 86°F (30°C) even if it is set at 87°F (31°C) to 90°F (32°C).
- To return to the time setting, press [Back] .
- The set temperature is only displayed when the mode setting is on.

9. Press [Next] .

- Be sure to direct the remote controller toward the indoor unit and check for a receiving tone and blinking of the multi-monitor lamp.
- The multi-monitor lamp blinks twice.
- Temperature and time are set in the case of ON TIMER operation, and the time is set in the case of OFF TIMER operation.
- The next reservation screen will appear.
- To continue further settings, repeat the procedure from **STEP 4**.

10. Press ⬦ to complete the setting.

- " ⊙ WEEKLY " is displayed on the LCD and WEEKLY TIMER operation is activated.
- The TIMER lamp periodically lights orange.
  The multi-monitor lamp will not light orange if all the reservation settings are deleted.

Display

- A reservation made once can be easily copied and the same settings used for another day of the week. Refer to **Copy mode** .

NOTE

Notes on WEEKLY TIMER operation
- Do not forget to set the clock on the remote controller first.
- The day of the week, ON/OFF TIMER mode, time and set temperature (only for ON TIMER mode) can be set with the WEEKLY TIMER. Other settings for the ON TIMER are based on the settings just before the operation.
- WEEKLY TIMER and ON/OFF TIMER operation cannot be used at the same time. The ON/OFF TIMER operation has priority if it is set while WEEKLY TIMER is still active. The WEEKLY TIMER will enter the standby state, and " ⊙ WEEKLY " will disappear from the LCD. When the ON/OFF TIMER is up, the WEEKLY TIMER will automatically become active.
- Only the time and set temperature with the WEEKLY TIMER are sent with the ⬦ . Set the WEEKLY TIMER only after setting the operation mode, the airflow rate and the airflow direction ahead of time.
- Turning off the circuit breaker, power failure, and other similar events will render operation of the indoor unit's internal clock inaccurate. Reset the clock.
- [Back] can be used only for the time and temperature settings. It cannot be used to go back to the reservation number.

TIMER Operation

Copy mode

- A reservation made once can be copied to another day of the week. The whole reservation of the selected day of the week will be copied.

program 1   program 2   program 3   program 4
ON   OFF   ON   OFF

[Monday]   77°F (25°C)   81°F (27°C)
6:00   8:30   17:30   22:00

COPY

program 1   program 2   program 3   program 4
ON   OFF   ON   OFF

[Tuesday]
to   77°F (25°C)   81°F (27°C)
[Friday]   6:00   8:30   17:30   22:00

Setting Displays

Confirmation   Copy   Paste   Normal

1. **Press   .**

2. **Press Select to confirm the day of the week to be copied.**

3. **Press   .**
   - The whole reservation of the selected day of the week will be copied.

4. **Press Select to select the destination day of the week.**

5. **Press   .**
   - The multi-monitor lamp blinks twice.
   - The reservation will be copied to the selected day of the week. The whole reservation of the selected day of the week will be copied.
   - To continue copying the settings to other days of the week, repeat **STEP 4** and **STEP 5**.

6. **Press   to complete the setting.**
   - " ⊕ WEEKLY " is displayed on the LCD and WEEKLY TIMER operation is activated.
   - The TIMER lamp periodically lights orange.

NOTE

Note on COPY MODE
- The entire reservation of the source day of the week is copied in the copy mode.
  In the case of making a reservation change for any day of the week individually after copying the content of weekly reservations, press   and change the settings in the steps of Setting mode .

TIMER Operation

WEEKLY TIMER Operation

Confirming a reservation

• The reservation can be confirmed.

Setting Displays

Normal   Confirmation

1. Press ◇ .

• The day of the week and the reservation number of the current day will be displayed.

2. Press Select to select the day of the week and the reservation number to be confirmed.

• Pressing Select displays the reservation details.

• To change the confirmed reserved settings, select the reservation number and press Next .
  The mode is switched to setting mode. Proceed to Setting mode STEP *4*.

3. Press ◇ to exit the confirmation mode.

• " WEEKLY " is displayed on the LCD and WEEKLY TIMER operation is activated.
• The TIMER lamp periodically lights orange.
  The multi-monitor lamp will not light orange if all the reservation settings are deleted.

Display

To deactivate WEEKLY TIMER operation

▶ Press Weekly while " WEEKLY " is displayed on the LCD.

• " WEEKLY " disappears from the LCD.
• To reactivate the WEEKLY TIMER operation, press Weekly again.
• If a reservation deactivated with Weekly is activated once again, the last reservation mode will be used.

NOTE

• If not all the reservation settings are reflected, deactivate the WEEKLY TIMER operation once. Then press Weekly again to reactivate the WEEKLY TIMER operation.

To delete reservations

An individual reservation

1. Press [ ] .
   • The day of the week and the reservation number will be displayed.

2. Press [Select] to select the day of the week and the reservation number to be deleted.

3. Press [Next] .
   • " ⊕ WEEKLY " and " ON " or " OFF " blink.

4. Press [Select] until no icon is displayed.

   • Pressing [Select] changes the ON/OFF TIMER mode in sequence.

   • Selecting "blank" will cancel any reservation you may have.

   | ON | → | OFF | → | blank |

   ON TIMER   OFF TIMER   No Setting   Pressing [Select] puts the sequence in reverse.

5. Press [Next] .
   • The selected reservation will be deleted.

6. Press [ ] .
   • If there are still other reservations, WEEKLY TIMER operation will be activated.

Reservations for each day of the week

• This function can be used for deleting reservations for each day of the week.
• It can be used while confirming or setting reservations.

1. Press [ ] .
   • The day of the week and the reservation number will be displayed.

2. Press [Select] to select the day of the week to be deleted.

3. Hold [Weekly] for about 5 seconds.
   • The reservation of the selected day of the week will be deleted.

4. Press [ ] .
   • If there are still other reservations, WEEKLY TIMER operation will be activated.

All reservations

▶ **Hold [Weekly] for about 5 seconds with the normal display.**
   • Be sure to direct the remote controller toward the indoor unit and check for a receiving tone.
   • This operation cannot be used for the WEEKLY TIMER setting display.
   • All reservations will be deleted.

CTXS07LVJU, FTXS, FVXS Series

 WEEKLY TIMER Operation

4

Up to 4 timer settings can be saved for each day of the week. It is convenient if the WEEKLY TIMER is set according to the family's life style.

■ Using in these cases of WEEKLY TIMER

Example: The same timer settings are made for the week from Monday through Friday while different timer settings are made for the weekend.

[Monday]	Make timer settings up to programs 1-4.
[Tuesday] to [Friday]	Use the copy mode to make settings for Tuesday to Friday, because these settings are the same as those for Monday.
[Saturday]	No timer settings
[Sunday]	Make timer settings up to programs 1-4.

• Up to 4 reservations per day and 28 reservations per week can be set in the WEEKLY TIMER. The effective use of the copy mode ensures ease of making reservations.
• The use of ON-ON-ON-ON settings, for example, makes it possible to schedule operating mode and set temperature changes. Furthermore, by using OFF-OFF-OFF-OFF settings, only the turn off time of each day can be set. This will turn off the air conditioner automatically if the user forgets to turn it off.

⏱ WEEKLY TIMER Operation

■ To use WEEKLY TIMER operation

Setting mode

• Make sure the day of the week and time are set. If not, set the day of the week and time.

	Program 1	Program 2	Program 3		Program 4
	ON	OFF	ON		OFF

[Monday] ▶ 77°F (25°C) ▶   ▶ 81°F (27°C) ▶

6:00   8:30   17:30   22:00

Setting Displays

MON	ON/OFF settings	Time settings	Temperature settings
Day and number settings			

1. Press ⟐ .

• The day of the week and the reservation number of the current day will be displayed.
• 1 to 4 settings can be made per day.

2. Press SELECT to select the desired day of the week and reservation number.

• Pressing SELECT changes the reservation number and the day of the week.

3. Press NEXT .

• The day of the week and reservation number will be set.
• "⏱ WEEKLY" and "ON" blink.

4. Press SELECT to select the desired mode.

• Pressing SELECT changes "ON" or "OFF" setting in sequence.

ON → OFF → blank
ON TIMER   OFF TIMER   blank

Pressing SELECT puts the sequence in reverse.

• In case the reservation has already been set, selecting "blank" deletes the reservation.
• Go to **STEP** *9* if "blank" is selected.

5. Press NEXT .

• The ON/OFF TIMER mode will be set.
• "⏱ WEEKLY" and the time blink.

6. Press ▲SELECT▼ **to select the desired time.**

- The time can be set between 0:00 and 23:50 in 10 minute intervals.
- To return to the ON/OFF TIMER mode setting, press BACK .
- Go to **STEP 9** when setting the OFF TIMER.

7. Press NEXT .

- The time will be set.
- "🕐 WEEKLY" and the temperature blink.

8. Press ▲SELECT▼ **to select the desired temperature.**

- The temperature can be set between 50°F (10°C) and 90°F (32°C).
  Cooling: The unit operates at 64°F (18°C) even if it is set at 50°F (10°C) to 63°F (17°C).
  Heating: The unit operates at 86°F (30°C) even if it is set at 87°F (31°C) to 90°F (32°C).
- To return to the time setting, press BACK .
- The set temperature is only displayed when the mode setting is on.

9. Press NEXT .

- The temperature will be set and go to the next reservation setting.
- To continue further settings, repeat the procedure from **STEP 4**.

10. Press ◈ **to complete the setting.**

- Be sure to direct the remote controller toward the indoor unit and check for a receiving tone and flashing the OPERATION lamp.
- "🕐 WEEKLY" is displayed on the LCD and WEEKLY TIMER operation is activated.
- The TIMER lamp lights yellow.

Display

- A reservation made once can be easily copied and the same settings used for another day of the week. Refer to Copy mode .

NOTE

■ **Notes on WEEKLY TIMER operation**
- Do not forget to set the clock on the remote controller first.
- The day of the week, ON/OFF TIMER mode, time and set temperature (only for ON TIMER mode) can be set with WEEKLY TIMER. Other settings for ON TIMER are based on the settings just before the operation.
- Both WEEKLY TIMER and ON/OFF TIMER operation cannot be used at the same time. The ON/OFF TIMER operation has priority if it is set while WEEKLY TIMER is still active. The WEEKLY TIMER will go into standby state, and "🕐 WEEKLY" will be no longer displayed on the LCD. When ON/OFF TIMER is up, the WEEKLY TIMER will automatically become active.
- Only the time and set temperature with the WEEKLY TIMER are sent with the ◈ . Set the WEEKLY TIMER only after setting the operation mode, the airflow rate and the airflow direction ahead of time.
- Shutting the breaker off, power failure, and other similar events will render operation of the indoor unit's internal clock inaccurate. Reset the clock.
- The BACK can be used only for the time and temperature settings. It cannot be used to go back to the reservation number.

⏱ ON OFF WEEKLY WEEKLY TIMER Operation

Copy mode

- A reservation made once can be copied to another day of the week. The whole reservation of the selected day of the week will be copied.

	Program 1	Program 2	Program 3	Program 4
	ON	OFF	ON	OFF

[Monday] 77°F (25°C)   81°F (27°C)

6:00   8:30   17:30   22:00

▽ COPY

	Program 1	Program 2	Program 3	Program 4
	ON	OFF	ON	OFF

[Tuesday] to [Friday] 77°F (25°C)   81°F (27°C)

6:00   8:30   17:30   22:00

Setting Displays

Confirmation display → Copy display → Paste display → Normal display

1. Press ◈ .

2. Press ▲SELECT▼ to confirm the day of the week to be copied.

3. Press COPY .
- The whole reservation of the selected day of the week will be copied.

4. Press ▲SELECT▼ to select the destination day of the week.

5. Press COPY .
- The reservation will be copied to the selected day of the week. The whole reservation of the selected day of the week will be copied.
- To continue copying the settings to other days of the week, repeat **STEP 4** and **STEP 5**.

6. Press ◈ to complete the setting.
- " ⏱ WEEKLY " is displayed on the LCD and WEEKLY TIMER operation is activated.

NOTE

■ **Note on COPY MODE**
- The entire reservation of the source day of the week is copied in the copy mode.
  In the case of making a reservation change for any day of the week individually after copying the content of weekly reservations, press ◈ and change the settings in the steps of Setting mode .

4

■ Confirming a reservation

• The reservation can be confirmed.

Setting Displays

Normal display	Confirmation display

1. **Press [⬦].**

• The day of the week and the reservation number of current day will be displayed.

2. **Press [▲SELECT▼] to select the day of the week and the reservation number to be confirmed.**

• Pressing [▲SELECT▼] displays the reservation details.

• To change the confirmed reserved settings, select the reservation number and press [NEXT].
The mode is switched to setting mode. Go to Setting mode STEP *4*.

3. **Press [⬦] to exit confirming mode.**

• "🕒WEEKLY" is displayed on the LCD and WEEKLY TIMER operation is activated.
• The TIMER lamp lights yellow.

Display

■ To deactivate WEEKLY TIMER operation

Press [WEEKLY] while "🕒WEEKLY" is displayed on the LCD.

• "🕒WEEKLY" will be no longer displayed on the LCD.
• The TIMER lamp goes off.
• To reactivate the WEEKLY TIMER operation, press [WEEKLY] again.
• If a reservation deactivated with [WEEKLY] is activated once again, the last reservation mode will be used.

⏲ WEEKLY TIMER Operation

■ To delete reservations

The individual reservation

1. Press [⟐].
 • The day of the week and the reservation number will be displayed.

2. Press [SELECT ▲▼] to select the day of the week and the reservation number to be deleted.

3. Press [NEXT].
 • " ⏲ WEEKLY " and "ON" or "OFF" blink.

4. Press [SELECT ▲▼] and select "blank".

 • Pressing [SELECT ▲▼] changes ON/OFF TIMER mode.

 • The reservation will be no setting with selecting "blank".

 [ON] → [OFF] → [ ] → Pressing [SELECT ▼] puts the sequence in reverse.
 ON TIMER   OFF TIMER   blank

5. Press [NEXT].
 • The selected reservation will be deleted.

6. Press [⟐].
 • If there are still other reservations, WEEKLY TIMER operation will be activated.

The reservations for each day of the week

 • This function can be used for deleting reservations for each day of the week.
 • It can be used while confirming or setting reservations.

1. Press [⟐].
 • The day of the week and the reservation number will be displayed.

2. Press [SELECT ▲▼] to select the day of the week to be deleted.

3. Hold [WEEKLY] for 5 seconds.
 • The reservation of the selected day of the week will be deleted.

4. Press [⟐].
 • If there are still other reservations, WEEKLY TIMER operation will be activated.

All reservations

Hold [WEEKLY] for 5 seconds while normal display.
 • Be sure to direct the remote controller toward the indoor unit and check for a receiving tone.
 • This operation is not effective on the setting display of WEEKLY TIMER.
 • All reservations will be deleted.

2.16   Note for Multi System

Multi Connection

Note for Multi System

A multi system has one outdoor unit connected to multiple indoor units.

Selecting the operation mode

When the priority room setting is active but the set unit is not operating or when the priority room setting is inactive

When more than one indoor unit is operating, priority is given to the first unit that was turned on.
In this case, set the units that are turned on later to the same operation mode as the first unit.
Otherwise, they will enter the standby state, and the multi-monitor lamp will blink; this does not indicate malfunction.

Room A   Room B

Room C   Room D

Outdoor unit

NOTE

Notes on operation mode for a multi system
- COOL, DRY and FAN operation may be used at the same time.
- AUTO operation automatically selects COOL operation or HEAT operation based on the indoor temperature.
  Therefore, AUTO operation is available when selecting the same operation mode as that of the room with the first unit to be turned on.

⚠ CAUTION

- Normally, the operation mode in the room where the unit is first started is given priority, but the following situations are exceptions to this rule.
  If the operation mode of the first room is FAN operation, then using HEAT operation in any room after this will give priority to HEAT operation.
  In this situation, the indoor unit operating in FAN mode will switch to standby, and the multi-monitor lamp will blink.

With the priority room setting active

Refer to "**Priority room setting**" on the next page.

NIGHT QUIET mode (Available only for COOL operation)

NIGHT QUIET mode requires initial programming during installation. Please consult your retailer or dealer for assistance.
NIGHT QUIET mode reduces the operation noise of the outdoor unit during the night-time hours to prevent annoyance to neighbors.
- NIGHT QUIET mode is activated when the temperature drops 10.8°F (6°C) or more below the highest temperature recorded that day.
  When the temperature difference between the current outdoor temperature and the maximum outdoor temperature becomes less than 7.2°F (4°C), this function will be canceled.
- NIGHT QUIET mode slightly reduces the cooling efficiency of the unit.

OUTDOOR UNIT QUIET operation

Refer to "**OUTDOOR UNIT QUIET Operation**".

When the priority room setting is active but the set unit is not operating or when the priority room setting is inactive

When using the OUTDOOR UNIT QUIET operation feature with a multi system, set all indoor units to OUTDOOR UNIT QUIET operation using their remote controllers.
When canceling OUTDOOR UNIT QUIET operation, simply cancel the mode on one of the operating indoor units using their remote controller.
However OUTDOOR UNIT QUIET operation will remain displayed on the remote controllers for the other rooms.
We recommend you cancel operation in all rooms using their remote controllers.

With the priority room setting active

Refer to "**Priority room setting**" on the next page.

COOL/HEAT mode lock

The COOL/HEAT mode lock requires initial programming during installation. Please consult your authorized dealer for assistance. The COOL/HEAT mode lock sets the unit forcibly to either COOL or HEAT operation. This function is convenient when you wish to set all indoor units connected to the multi system to the same operation mode.

NOTE
• The COOL/HEAT mode lock cannot be activated together with the priority room setting.

Priority room setting (Not available on some models)

The priority room setting requires initial programming during installation. Please consult your authorized dealer for assistance. The room designated as the priority room takes priority in the following situations.

Operation mode priority

• As the operation mode of the priority room takes precedence, you can select a different operation mode from other rooms.

[Example]
• Room A is the priority room in this examples.
  When COOL operation is selected in room A while operating the following modes in room B, C and D:

Operation mode in room B, C and D	Status of room B, C and D when the unit in room A is in COOL operation
COOL or DRY or FAN	The current operation mode is maintained.
HEAT	The unit enters the standby mode. Operation resumes when the room A unit stops operating.
AUTO	If the unit is set to COOL operation, it continues. If the unit is set to HEAT operation, it enters the standby mode. Operation resumes when the room A unit stops operating.

Priority when POWERFUL operation is used

[Example]
• Room A is the priority room in this examples.
  The indoor units in rooms A, B, C and D are all operating. If the unit in room A enters POWERFUL operation, operation capacity will be concentrated in room A. In such a case, the cooling (heating) efficiency of the units in room B, C and D may be slightly reduced.

Priority when OUTDOOR UNIT QUIET operation is used

[Example]
• Room A is the priority room in this examples.
  Just by setting the unit in room A to QUIET operation, the air conditioner starts OUTDOOR UNIT QUIET operation.
  You do not have to set all the indoor units in operation to OUTDOOR UNIT QUIET operation.

2.17   Care and Cleaning

CTXG Series

Care

Care and Cleaning

⚠ CAUTION

- Before cleaning, be sure to stop the operation and turn off the circuit breaker.
- Do not touch the aluminum fins of the indoor unit. If you touch those parts, this may cause an injury.

■ Quick reference

How to open the upper front panel	How to close the upper front panel
1) Hold the upper front panel by the sides and open it.	1) Return the panel support plate to its previous position.
2) Fix the panel with the panel support plate.	2) Turn the unit on and then off to close the panel properly.
	• See instructions in **"Reattach the filters and close the upper front panel."** for a more detailed description.

Cleaning parts

Upper and lower front panels
- With the panels closed, wipe them with a soft damp cloth.

If dirty

Air filter
- Vacuum dust or wash the filter.

Once every 2 weeks

Titanium apatite deodorizing filter
- Vacuum dust or replace the filter.

[Cleaning]
Once every 6 months

[Replacement]
Once every 3 years

Indoor unit and remote controller
- Wipe them with a soft cloth.

If dirty

Notes on cleaning

For cleaning, do not use any of the following:
- Water hotter than 104°F (40°C)
- Volatile liquid such as benzene, gasoline and thinner
- Polishing compounds
- Rough materials such as a scrubbing brush

■ Air filter

1. Pull out the air filters.

1) Open the upper front panel.
2) Set the panel support plate between the ribs on the unit to fix the upper front panel.
3) Push the filter tab at the center of each air filter a little upwards, then pull it down.

3)-2 Pull down

Back of the upper front panel
Panel support plate
Ribs
2) Pull

Filter tab
3)-1 Push

2. Wash the air filters with water or clean them with a vacuum cleaner.

• It is recommended to clean the air filters every 2 weeks.

If the dust does not come off easily

• Wash the air filters with neutral detergent thinned with lukewarm water, then let them dry in the shade.
• Be sure to remove the titanium apatite deodorizing filter. Refer to "**Titanium apatite deodorizing filter**" on the next page.

3. Reattach the filters and close the upper front panel.

1) Return the panel support plate to its previous position and close the upper front panel slowly.

2) Do not push on the panel to close it.

3) Turn on the unit using the remote controller. Wait till the upper and lower front panels are completely open. Then, turn off the unit using the remote controller again.

ON/OFF

4) Once the both panels close completely, gently push the upper front panel to hook it into position.

"click" "click" "click"

Care

Care and Cleaning

■ Titanium apatite deodorizing filter

1. Take off the titanium apatite deodorizing filters.

1) Open the upper front panel and pull out the air filters.
2) Hold the recessed parts of the frame and unhook the 4 claws.

Claw

2. Clean or replace the titanium apatite deodorizing filters.

[Cleaning]

1) **Vacuum dust, and soak in lukewarm water or water for about 10 to 15 minutes if very dirty.**
   - Do not remove the filter from the frame when washing with water.

2) **After washing, shake off remaining water and let them dry in the shade.**
   - Do not wring out the filter to remove water from it.

[Replacement]

Remove the filter from the filter frame and attach a new one.
- Do not throw away the filter frame. Reuse the filter frame when replacing the titanium apatite deodorizing filter.
- When attaching the filter, check that the filter is properly set in the tabs.

Tabs

- Dispose of the old filter as non-flammable waste.

3. Reattach the filters and close the upper front panel.

1) Return the panel support plate to its previous position and close the upper front panel slowly.

2) Do not push on the panel to close it.

3) Turn on the unit using the remote controller. Wait till the upper and lower front panels are completely open. Then, turn off the unit using the remote controller again.

ON/OFF

4) Once the both panels close completely, gently push the upper front panel to hook it into position.

"click"   "click"
                "click"

NOTE

- Operation with dirty filters:
  - cannot deodorize the air,
  - cannot clean the air,
  - results in poor heating or cooling,
  - may cause odor.
- Dispose of old filters as non-flammable waste.
- To order a titanium apatite deodorizing filter, contact the dealer where you bought the air conditioner.

Item	Titanium apatite deodorizing filter (set of 2)
Part No.	KAF970A46 (without frame)

Care

■ Prior to a long period of non-use

1. Operate the FAN mode for several hours to dry out the inside.

1) Press (Mode) and select " 🌀 ".
   • When a multi outdoor unit is connected, make sure the HEAT operation is not being used in other rooms before you use the FAN operation.

2) Press ⏻ and start the operation.

2. After operation stops, turn off the circuit breaker for the room air conditioner.

3. Clean the air filters and reattach them.

4. To prevent battery leakage, take out the batteries from the remote controller.

■ We recommend periodical maintenance

• In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a qualified contractor in addition to regular cleaning by the user.
• For qualified contractor maintenance, please contact the dealer where you bought the air conditioner.

CTXS07JVJU, CTXS09/12HVJU

Care and Cleaning

⚠ **CAUTION** Before cleaning, be sure to stop the operation and turn the breaker off.

Units

■ **Indoor unit, outdoor unit and remote controller**
 Wipe them with a soft cloth when dirty.

Front panel

1. Open the front panel.

- Hold the front panel by the panel tabs on the both sides and open it.

2. Remove the front panel.

- Slide the front panel to either the left or right and pulling it toward you.
 This will disconnect the rotation dowel on one side.
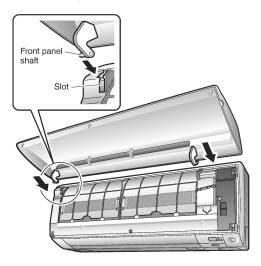- Disconnect the front panel shaft on the other side in the same manner.

3. Clean the front panel.

- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- If you wash the panel with water, wipe it with a dry soft cloth, and allow to dry in the shade.

4. Attach the front panel.

- Align the front panel shaft on the left and right of the front panel with the slots, then push them all the way in.
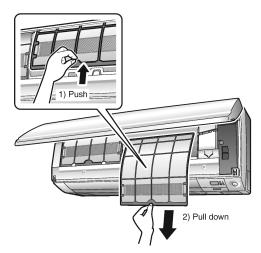- Close the front panel slowly. (Press the panel at both sides and the center.)

⚠ **CAUTION**

- When the packaging materials are attached to the front panel, please remove them.
- Do not touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 104°F (40°C), benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

4

Filters

1. Open the front panel.

2. Pull out the air filters.

• Push a little upwards the tab at the center of each air filter,
  then pull it down.

3. Take off the air-purifying filter with deodorizing function.

• Press the top of the air-cleaning filter onto the tabs
  (3 at top). Then press the bottom of the filter up slightly,
  and press it onto the tabs (2 at bottom).

Tabs (3 at top)

Tabs (2 at bottom)

4. Clean or replace each filter.

See figure.

5. Set the air filter and the air-purifying filter with deodorizing function as they were and close the front panel.
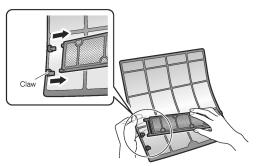
• Press the front panel at both sides and the center.

⚠ **CAUTION**

• Do not touch the aluminum fins by bare hand at the time of dismounting or mounting the filter.

Care and Cleaning

Air filter

Wash the air filters with water or clean them with vacuum cleaner.

- If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
- It is recommended to clean the air filters every 2 weeks.

Air-purifying filter with deodorizing function

The air-purifying filter with deodorizing function can be renewed by washing it with water once every 6 months.
We recommend replacing it once every 3 years.

[Maintenance]

1. Vacuum dust, and soak in warm water or water for about 10 to 15 minutes if dirt is heavy.

- Do not remove filter from frame when washing with water.

2. After washing, shake off remaining water and dry in the shade.

- Since the material is made out of paper, do not wring out the filter when removing water from it.
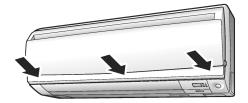
[Replacement]

1. Remove the tabs on the filter frame and replace with a new filter.

- Dispose of the old filters as flammable waste.

4

NOTE

• Operation with dirty filters:

   1) cannot deodorize the air,

   2) cannot clean the air,

   3) results in poor heating or cooling,

   4) may cause odor.

• To order air-purifying filter with deodorizing function contact to the service shop there you purchased the air conditioner.

• Dispose of the old filters as flammable waste.

Item	Part No.
Air-purifying filter with deodorizing function (without frame) 1 set	KAF952A42

ATTENTION

• Do not throw away the filter frame. Reuse the filter frame when replacing the air-purifying filter with deodorizing function.

CHECK

■ Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

■ Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

■ Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

   • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

Before a long idle period

1. **Operate the FAN only for several hours on a nice day to dry out the inside.**

   • Press MODE and select " " operation.
   • Press ⏻ON/OFF and start operation.

2. **After operation stops, turn off the breaker for the room air conditioner.**

3. **Clean the air filters and set them again.**

4. **Take out batteries from the remote controller.**

CTXS07LVJU, FTXS Series

Care and Cleaning

■ Quick reference

How to open / close the front panel

- Hold the front panel by the panel tabs on the both sides and open it.
- Press the front panel at both sides and the center to close it.

Cleaning parts

Panel tab

Air filter

- Vacuum dust or wash the filter.

Once every 2 weeks

Front panel

- Wipe it with a soft damp cloth.

If bothered by dirt

Titanium apatite deodorizing filter

- Vacuum dust or replace the filter.

[Cleaning]
Once every 6 months

[Replacement]
Once every 3 years

Indoor unit, Outdoor unit and Remote controller

- Wipe them with a soft cloth.

If bothered by dirt

Notes on cleaning

- -

■ **For cleaning, do not use the materials as follows.**
- Hot water above 104°F (40°C).
- Benzine, gasoline, thinner, other volatile oils.
- Polishing compound.
- Scrubbing brushes, other hard stuff.

- -

⚠ CAUTION

- Before cleaning, be sure to stop the operation and turn the breaker off.
- Do not touch the aluminum fins of the indoor unit. If you touch those parts, this may cause an injury.

Care and Cleaning

■ Front panel

1. Remove the front panel.

- Open the front panel.
- Slide the front panel to either the left or right and pull it toward you.
  This will disconnect the front panel shaft on one side.

2) Pull

Front panel shaft

1) Slide

2) Pull

1) Slide

- Disconnect the front panel shaft on the other side in the same manner.

2. Clean the front panel.

- Wipe it with a soft damp cloth.
- Only neutral detergent may be used.
- In case of washing the panel with water, wipe it with a dry soft cloth, and let it dry in the shade after washing.

3. Attach the front panel.

- Align the front panel shaft on the left and right of the front panel with the slots, then push them all the way in.

Front panel shaft

Slot

- Close the front panel slowly. (Press the panel at both sides and the central area.)

⚠ CAUTION

- When removing or attaching the front panel, stand on a solid, stable base and take care not to fall.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- After cleaning, make sure that the front panel is securely fixed.

■ Air filter

1. Pull out the air filters.

- Open the front panel.
- Push the filter tab at the center of each air filter slightly upward, then pull it down.

1) Push

2) Pull down

2. Wash the air filters with water or clean them with vacuum cleaner.

- It is recommended to clean the air filters every 2 weeks.

If the dust does not come off easily

- Wash the air filters with neutral detergent thinned with lukewarm water, then let them dry in the shade.
- Be sure to remove the titanium apatite deodorizing filter. Refer to "Titanium apatite deodorizing filter" on the next page.

3. Set the filters as they were and close the front panel.

- Press the front panel at both sides and the central area.

⚠ CAUTION
- Do not touch the aluminum fins by bare hand at the time of dismounting or mounting the filter.

4

Care and Cleaning

■ Titanium apatite deodorizing filter

1. Take off the titanium apatite deodorizing filter.

- Open the front panel and pull out the air filters.
- Hold the recessed parts of the frame and unhook the 4 claws.

Claw

2. Clean or replace the titanium apatite deodorizing filter.

[Maintenance]

2-1 Vacuum dust, and soak in lukewarm water or water for about 10 to 15 minutes if dirt is heavy.

- Do not remove the filter from frame when washing with water.

2-2 After washing, shake off remaining water and dry in the shade.

- Since the material is made out of polyester, do not wring out the filter when removing water from it.

[Replacement]

Remove the tabs on the filter frame and replace with a new filter.

- Do not throw away the filter frame. Reuse the filter frame when replacing the titanium apatite deodorizing filter.
- Dispose of the old filter as non-flammable waste.

3. Set the filters as they were and close the front panel.

- Press the front panel at both sides and the central area.

NOTE

- Operation with dirty filters:
  − cannot deodorize the air,
  − cannot clean the air,
  − results in poor heating or cooling,
  − may cause odor.
- Dispose of old filters as non-flammable waste.
- To order a titanium apatite deodorizing filter, contact the dealer where you bought the air conditioner.

Item	Titanium apatite deodorizing filter (without frame) 1 set
Part No.	KAF970A46

■ Check the units
■ Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
■ Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
■ Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.
  • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.
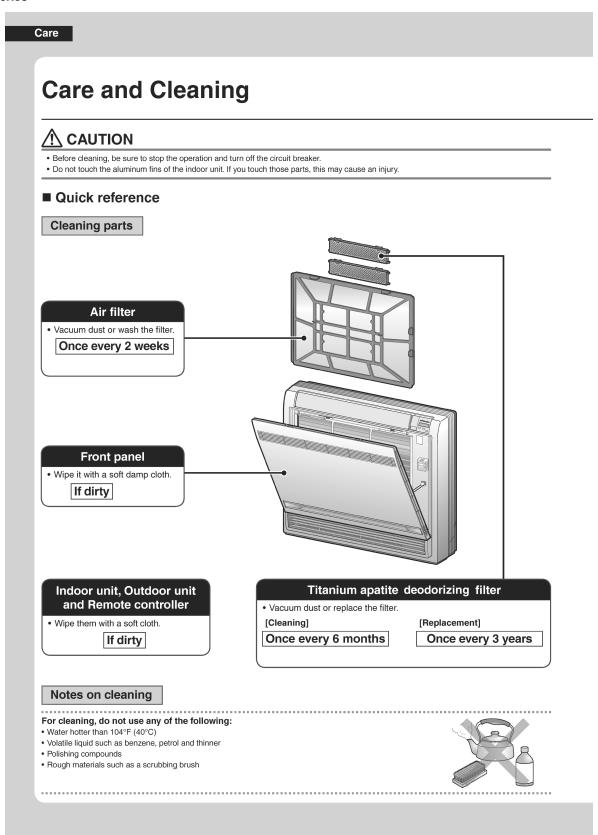
■ Before a long idle period

1. **Operate the FAN only for several hours on a nice day to dry out the inside.**
  • Press MODE and select "❀" operation.
  • Press [ON/OFF] and start the operation.

2. **After operation stops, turn off the circuit breaker for the room air conditioner.**

3. **Clean the air filters and set them again.**

4. **Take out batteries from the remote controller.**
  • When a multi outdoor unit is connected, make sure the HEAT operation is not being used in other rooms before you use the FAN operation.

■ We recommend periodical maintenance
  • In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist aside from regular cleaning by the user.
  • For specialist maintenance, contact the service shop where you purchased the air conditioner.
  • The maintenance cost must be borne by the user.

4

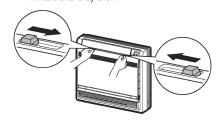**CDXS, FDXS Series**

Care and Cleaning

⚠ CAUTION	• Only a qualified service person is allowed to perform maintenance. • Before cleaning, be sure to stop the operation and turn the breaker off.

■ Air filter

1. Removing the air filter.

- Rear suction
  Pull the bottom side of the air filter backwards, over the bends.
- Bottom suction
  Pull the filter over the bends situated at the backside of the unit.

2. Cleaning the air filter.

- Remove dust from the air filter using a vacuum cleaner and gently rinse them in cool water. Do not use detergent or hot water to avoid filter shrinking or deformation. After cleaning dry them in the shade.

3. Replacing the air filter.

- Rear suction
  Hook the filter behind the flap situated at the top of the unit and push the other side gently over the bends.
- Bottom suction
  Hook the filter behind the flap situated at the middle of the unit and push the other side gently over the bends.

Main unit

Force

Filter

Force

Attach the filter to the main unit while pushing down on the bends.

In case of back side   In case of bottom side

FDXS09/12, CDXS15/18 : 2 bends CDXS24 : 3 bends

■ **Drain pan**
- Clean the drain pan periodically, or drain piping may be clogged with dust and may result in water leakage.
  Ask your DAIKIN dealer to clean them.
- Prepare a cover locally to prevent any dust in the air around the indoor unit from getting in the drain pan, if there is a great deal of dust present.

⚠ CAUTION

- Do not operate the air conditioner without filters, this to avoid dust accumulation inside the unit.
- Do not remove the air filter except when cleaning.
  Unnecessary handling may damage the filter.
- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide, It may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Operation with dusty air filters lowers the cooling and heating capacity and wastes energy.
- The suction grille is option.
- Do not use water or air of 122°F (50°C) or higher for cleaning air filters and outside panels.
- Ask your DAIKIN dealer how to clean it.

■ **Check the units**

■ Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

■ Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

■ Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.
- If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ **Before a long idle period**

1. **Operate the FAN only for several hours on a nice day to dry out the inside.**
- Press MODE and select " ❄ " operation.
- Press ⏻ON/OFF and start the operation.

2. **After operation stops, turn off the circuit breaker for the room air conditioner.**

3. **Clean the air filters and set them again.**

4. **Take out batteries from the remote controller.**
- When a multi outdoor unit is connected, make sure the HEAT operation is not being used in other rooms before you use the FAN operation.

■ **We recommend periodic maintenance**
- In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodic maintenance by a specialist aside from regular cleaning by the user.
- For specialist maintenance, contact the service shop where you purchased the air conditioner.
- The maintenance cost must be borne by the user.

FVXS Series

> **Care**

Care and Cleaning

⚠ **CAUTION**

- Before cleaning, be sure to stop the operation and turn off the circuit breaker.
- Do not touch the aluminum fins of the indoor unit. If you touch those parts, this may cause an injury.

■ Quick reference

> **Cleaning parts**

> **Air filter**
> - Vacuum dust or wash the filter.
>   **Once every 2 weeks**

> **Front panel**
> - Wipe it with a soft damp cloth.
>   **If dirty**

> **Indoor unit, Outdoor unit and Remote controller**
> - Wipe them with a soft cloth.
>   **If dirty**

> **Titanium apatite deodorizing filter**
> - Vacuum dust or replace the filter.
>   [Cleaning]　　　　　　　　　　　[Replacement]
>   **Once every 6 months**　　　**Once every 3 years**

> **Notes on cleaning**

For cleaning, do not use any of the following:
- Water hotter than 104°F (40°C)
- Volatile liquid such as benzene, petrol and thinner
- Polishing compounds
- Rough materials such as a scrubbing brush

⚠ CAUTION

- When removing or attaching the front panel, stand on solid ground and use caution.
- When removing or attaching the front panel, support the panel securely with your hand to prevent it from falling.

■ Front panel

1. Open the front panel.

- Slide the 2 stoppers on the left and right sides inward until they click.

2. Remove the front panel.

- Remove the string.
- Allowing the front panel to fall forward will enable you to remove it.
- Disconnect the front panel hooks from the grooves.

Grooves

String

Hooks

3. Clean the front panel.

- Wipe it with a soft damp cloth.
- Only neutral detergent may be used.
- Wash the panel with water, wipe it with a dry soft cloth, and let it dry in the shade after washing.

4. Reattach the front panel.

- Insert the front panel hooks into the grooves of the unit (3 places).
- Attach the string to the right, inner-side of the front grille.
- Close the panel slowly.

Grooves

String

Hooks

5. Close the front panel slowly.

- Slide the 2 stoppers on the left and right sides outward until they click.

- Make sure that the front panel is securely fixed.

4

Care

Care and Cleaning

■ Air filter

1. Open the front panel.

2. Pull out the air filter.

- Press the claws on the right and left of the air filter down slightly, then pull upward.

3. Take off the titanium apatite deodorizing filters.

- Hold the recessed parts of the frame and unhook the 4 claws.

Claw

4. Wash the air filter with water or clean it with a vacuum cleaner.

- It is recommended to clean the air filter every 2 weeks.

If the dust does not come off easily

- Wash the air filter with neutral detergent thinned with lukewarm water, then let it dry in the shade.
- Be sure to remove the titanium apatite deodorizing filter. Refer to "**Titanium apatite deodorizing filter**" on the next page.

5. Insert the titanium apatite deodorizing filters as they were.

6. Reattach the filters.

7. Close the front panel slowly.

Care

4

■ Titanium apatite deodorizing filter

1. Open the front panel and pull out the air filter.

2. Take off the titanium apatite deodorizing filters.

- Hold the recessed parts of the frame and unhook the 4 claws.

Claw

3. Clean or replace the titanium apatite deodorizing filters.

[Cleaning]

3-1 Vacuum dust, and soak in lukewarm water or water for about 10 to 15 minutes if very dirty.

- Do not remove the filter from the frame when washing with water.

3-2 After washing, shake off remaining water and let them dry in the shade.

- Do not wring out the filter to remove water from it.

[Replacement]

Remove the filter from the filter frame and prepare a new one.

- Do not throw away the filter frame. Reuse the filter frame when replacing the titanium apatite deodorizing filter.

- Dispose of the old filter as non-flammable waste.

4. Insert the titanium apatite deodorizing filters as they were.

- When attaching the filter, check that the filter is properly set in the tabs.

5. Reattach the filters.

6. Close the front panel slowly.

NOTE

- Operation with dirty filters:
  - cannot deodorize the air,
  - cannot clean the air,
  - results in poor heating or cooling,
  - may cause odor.
- Dispose of old filters as non-flammable waste.
- To order a titanium apatite deodorizing filter, contact the dealer where you bought the air conditioner.

Item	Titanium apatite deodorizing filter (without frame) 1 set
Part No.	KAF968B42

Care

Care and Cleaning

■ **Prior to a long period of non-use**

1. Operate the FAN mode for several hours to dry out the inside.

1) Press ⬚Mode⬚ and select " 🌀 " .
 • When a multi outdoor unit is connected, make sure the HEAT operation is not being used in other rooms before you use the FAN operation.
2) Press ⏻ and start the operation.

2. After operation stops, turn off the circuit breaker for the room air conditioner.

3. Take out the batteries from the remote controller.

■ **We recommend periodical maintenance**

 • In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a qualified contractor in addition to regular cleaning by the user.
 • For qualified contractor maintenance, please contact the dealer where you bought the air conditioner.

2.18 Troubleshooting

CTXG Series

When the Need Arises

FAQ

Indoor unit

The flaps do not start swinging immediately.

- The air conditioner is adjusting the position of the flaps. The flaps will start moving soon.

The air conditioner stops generating airflow during HEAT operation.

- Once the set temperature is reached, the airflow rate is reduced and operation stopped in order to avoid generating a cool airflow. Operation will resume automatically when the indoor temperature falls.

HEAT operation stops suddenly and a flowing sound is heard.

- The outdoor unit is defrosting. HEAT operation starts after the frost on the outdoor unit has been removed. This can take about 4 to 12 minutes.

Operation does not start soon.

- **When the unit is turned on again soon after being turned off.**
- **When the mode was reselected.**
  - This is to protect the air conditioner. You should wait for about 3 minutes.

Different sounds are heard.

- **A sound like flowing water**
  - This sound is generated because the refrigerant in the air conditioner is flowing.
  - This is a pumping sound of the water in the air conditioner and can be heard when the water is pumped out from the air conditioner during COOL or DRY operation.
  - The refrigerant flows in the air conditioner even if the air conditioner is not working when the indoor units in other rooms are in operation.
- **Blowing sound**
  - This sound is generated when the flow of the refrigerant in the air conditioner is switched over.
- **Ticking sound**
  - This sound is generated when the cabinet and frame of the air conditioner slightly expand or shrink as a result of temperature changes.
- **Whistling sound**
  - This sound is generated when refrigerant flows during defrosting operation.
- **Clicking sound during operation or idle time**
  - This sound is generated when the refrigerant control valves or the electrical parts operate.
- **Clopping sound**
  - This sound is heard from the inside of the air conditioner when the exhaust fan is activated while the room doors are closed. Open the window or turn off the exhaust fan.

Outdoor unit

Operating sound is loud.

- When frost forms on the heat exchanger of the outdoor unit, the operating sound level increases slightly.

The outdoor unit emits water or steam.

- **In HEAT operation**
  - The frost on the outdoor unit melts into water or steam when the air conditioner is in defrosting operation.
- **In COOL or DRY operation**
  - Moisture in the air condenses into water on the cool surface of the outdoor unit piping and drips.

When the Need Arises

Troubleshooting

Before making an inquiry or a request for repair, please check the following.
If the problem persists, consult your dealer.

✔	**Not a problem**	❓	**Check**
	This case is not a problem.		Please check again before requesting repairs.

The air conditioner does not operate

Case		Description / what to check
Multi-monitor lamp is off.	❓	• Has the circuit breaker been tripped or the fuse blown? • Is there a power failure? • Are batteries set in the remote controller? • Is the timer setting correct?
Multi-monitor lamp is blinking.	❓	• Turn off the power with the circuit breaker and restart operation with the remote controller. If the multi-monitor lamp is still blinking, check the error code and consult your dealer.

The air conditioner suddenly stops operating

Case		Description / what to check
Multi-monitor lamp is on.	✔	• To protect the system, the air conditioner may stop operating after sudden large voltage fluctuations. It automatically resumes operation in about 3 minutes.

Multi-monitor lamp is blinking.	❓	• Are the air filters dirty?
		  Clean the air filters.
		• Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit?
		  Stop operation and after turning off the circuit breaker, remove the obstruction. Then restart operation with the remote controller. If the multi-monitor lamp is still blinking, check the error code and consult your dealer.
		• Are operation modes all the same for indoor units connected to outdoor units in the multi system? If not, set all indoor units to the same operation mode and confirm that the lamps. Moreover, when the operation mode is in AUTO, set all indoor unit operation modes to COOL or HEAT for a moment and check again that the lamps are normal. If the lamps stop blinking after the above steps, there is no malfunction.

The air conditioner does not stop operating

Case		Description / what to check
The air conditioner continues operating even after operation is stopped.	✔	■ **Immediately after the air conditioner is stopped** • The outdoor unit fan continues rotating for about another 1 minute to protect the system. ■ **While the air conditioner is not in operation** • When the outdoor temperature is high, the outdoor unit fan may start rotating to protect the system.

The room does not cool down / warm up

Case		Description / what to check
Air does not come out.	✔	■ **In HEAT operation** • The air conditioner is warming up. Wait for about 1 to 4 minutes. • During defrosting operation, hot air does not flow out of the indoor unit. ■ **When the air conditioner operates immediately after the circuit breaker is turned on** • The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.

Troubleshooting

The room does not cool down / warm up

Case	Description / what to check
Air does not come out / Air comes out.	■ **Is the airflow rate setting appropriate?** 　• Is the airflow rate setting low, such as "Indoor unit quiet" or "Airflow rate 1"? Increase the airflow rate setting. ■ **Is the set temperature appropriate?** ■ **Is the adjustment of the airflow direction appropriate?**
Air comes out.	• Is there any furniture directly under or beside the indoor unit? • Is the air conditioner in ECONO operation or OUTDOOR UNIT QUIET operation? • Is the air filter dirty? • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? • Is a window or door open? • Is an exhaust fan turning?

Mist comes out

Case	Description / what to check
Mist comes out of the indoor unit.	• This happens when the air in the room is cooled into mist by the cold airflow during COOL or other operation.

Remote controller

Case	Description / what to check
The unit does not receive signals from the remote controller or has a limited operating range.	• The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to **"Preparation Before Operation"**. • Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult your dealer if that is the case. • The remote controller may not function correctly if the transmitter is exposed to direct sunlight.
LCD is faint, is not working, or the display is erratic.	• The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to **"Preparation Before Operation"**.
Other electric devices start operating.	• If the remote controller activates other electric devices, move them away or consult your dealer.

Air has an odor

Case	Description / what to check
The air conditioner gives off an odor.	• The room odor absorbed in the unit is discharged with the airflow. We recommend you to have the indoor unit cleaned. Please consult your dealer.

Upper and lower front panels

Case	Description / what to check
Upper and lower front panels do not open. (Multi-monitor lamp is blinking.)	• Is there something caught in the upper and lower front panels? Remove the object and attempt operation again using the remote controller. If the upper and lower front panels still do not open and the multi-monitor lamp is still blinking, consult your dealer where you bought the air conditioner.
Upper front panel does not close completely.	• Are the upper front panel locks set appropriately?
If the upper and lower front panels are closed while the air conditioner is in operation, the air conditioner will stop operating and the multi-monitor lamp will blink.	• Restart the air conditioner after stopping the operation of the air conditioner with the remote controller.

4

Others

Case	Description / what to check
The air conditioner suddenly starts behaving strangely during operation.	? • The air conditioner may malfunction due to lightning or radio. If the air conditioner malfunctions, turn off the power with the circuit breaker and restart the operation with the remote controller.
HEAT operation cannot be selected, even though the unit is heat pump model.	? • Check that the jumper (J8) has not been cut. If it has been cut, contact your dealer. Jumper (J8)
The ON/OFF TIMER does not operate according to the settings.	✓ • Check if the ON/OFF TIMER and the WEEKLY TIMER are set to the same time. Change or deactivate the settings in the WEEKLY TIMER.

Notes on the operating conditions
- If operation continues under any conditions other than those listed in the table,
  - A safety device may activate to stop the operation. (With a multi connection in COOL operation, the safety device may work to stop the operation of the outdoor unit only.)
  - Dew may form on the indoor unit and drip from it when COOL or DRY operation is selected.

Mode	Operating conditions
COOL / DRY	Outdoor temperature: [2/3/4MXS]: 14-115°F (−10-46°C) [2/3MXL]: 14-115°F (−10-46°C) Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.
HEAT	Outdoor temperature: [2/3/4MXS]: 5-75°F (−15-24°C) [2/3MXL]: −13-75°F (−25-24°C) Indoor temperature: 50-86°F (10-30°C)

Troubleshooting

■ Call your dealer immediately

⚠ WARNING

When an abnormality (such as a burning smell) occurs, stop operation and turn off the circuit breaker.
• Continued operation in an abnormal condition may result in problems, electric shock or fire.
• Consult the dealer where you bought the air conditioner.

Do not attempt to repair or modify the air conditioner by yourself.
• Incorrect work may result in electric shock or fire.
• Consult the dealer where you bought the air conditioner.

If one of the following symptoms takes place, call your dealer immediately.

• **The power cord is abnormally hot or damaged.** • **An abnormal sound is heard during operation.** • **The circuit breaker, a fuse, or the ground fault circuit interrupter cuts off the operation frequently.** • **A switch or a button often fails to work properly.** • **There is a burning smell.** • **Water leaks from the indoor unit.**

Turn off the circuit breaker and call your dealer.

■ After a power failure
• The air conditioner automatically resumes operation in about 3 minutes. Please wait for a while.

■ Lightning
• If there is a risk lightning could strike in the neighborhood, stop operation and turn off the circuit breaker to protect the system.

■ Disposal requirements
• Dismantling of the unit, handling of the refrigerant, oil and other parts, should be done in accordance with the relevant local and national regulations.

■ Fault diagnosis by remote controller

• The remote controller can receive relevant error codes from the indoor unit.

1. When [Cancel] is held down for about 5 seconds, "00" blinks in the temperature display section.

2. Press [Cancel] repeatedly until a continuous beep is produced.

• The code indication changes as shown below, and notifies you with a long beep.

	CODE	MEANING
SYSTEM	00	NORMAL
	U0	REFRIGERANT SHORTAGE
	U2	OVER-VOLTAGE DETECTION
	U4	SIGNAL TRANSMISSION ERROR (BETWEEN INDOOR AND OUTDOOR UNIT)
INDOOR UNIT	A1	INDOOR UNIT PCB ABNORMALITY
	A5	FREEZE-UP PROTECTION OR HEATING PEAK-CUT CONTROL
	A6	FAN MOTOR (DC MOTOR) ABNORMALITY
	C4	INDOOR HEAT EXCHANGER THERMISTOR ABNORMALITY
	C7	FRONT PANEL OPEN /CLOSE FAULT
	C9	ROOM TEMPERATURE THERMISTOR ABNORMALITY
OUTDOOR UNIT	EA	FOUR WAY VALVE ABNORMALITY
	E1	OUTDOOR UNIT PCB ABNORMALITY
	E5	OL ACTIVATION (COMPRESSOR OVERLOAD)
	E6	COMPRESSOR LOCK
	E7	DC FAN LOCK
	F3	DISCHARGE PIPE TEMPERATURE CONTROL
	H0	COMPRESSOR SYSTEM SENSOR ABNORMALITY
	H6	POSITION SENSOR ABNORMALITY
	H8	DC VOLTAGE / CURRENT SENSOR ABNORMALITY
	H9	OUTDOOR TEMPERATURE THERMISTOR ABNORMALITY
	J3	DISCHARGE PIPE THERMISTOR ABNORMALITY
	J6	OUTDOOR HEAT EXCHANGER THERMISTOR ABNORMALITY
	L4	RADIATION FIN TEMPERATURE RISE
	L5	OUTPUT OVERCURRENT DETECTION
	P4	RADIATION FIN THERMISTOR ABNORMALITY

NOTE

• A short beep and 2 consecutive beeps indicate non-corresponding codes.

• To cancel the code display, hold [Cancel] down for about 5 seconds. The code display also clears if no button is pressed for 1 minute.

CTXS, FTXS, CDXS, FDXS Series

Troubleshooting

■ These incidents are not malfunctions.

• The following incidents do not indicate a malfunctioning air conditioner and have explanations. The air conditioner can continue to operate.

Indoor unit

Possible sounds.

■ **Flowing water**
• Generated because the refrigerant in the air conditioner is flowing.
• This is a pumping sound of the water in the air conditioner it is heard when the water is pumped out from the air conditioner in cooling or drying operation.
• The refrigerant flows in the air conditioner even if the air conditioner is not working when the indoor units in other rooms are in operation.

■ **Blowing**
• Generated when the flow of the refrigerant in the air conditioner is switched over.

■ **Ticking**
• Generated when the size of the air conditioner slightly expands or shrinks as a result of temperature changes.

■ **Whistling sound**
• Generated when refrigerant flows during defrosting operation.

■ **Clicking sound during operation or idle time**
• Generated when the refrigerant control valves or the electrical parts operate.

■ **Clopping sound**
• Heard from the inside of the air conditioner when the exhaust fan is activated while the room doors are closed. Open the window or turn off the exhaust fan.

The flaps do not start swinging immediately. The flaps move soon after startup.

• The air conditioner is adjusting the position of the flaps. The flaps will start moving soon.

The HEAT operation stops suddenly and a flowing sound is heard.

• The outdoor unit is taking away the frost. The HEAT operation starts after the frost on the outdoor unit is removed. You should wait for about 4 to 12 minutes.

Operation does not start soon.

■ **When "ON/OFF" button was pressed soon after operation was stopped.**
■ **When the mode was reselected.**
• This is to protect the air conditioner. You should wait for about 3 minutes.

Outdoor unit

Operating sound is loud.

• When frost forms on the heat exchanger of the outdoor unit, the operating sound level increases slightly.

The outdoor unit emits water or steam.

■ **In HEAT operation**
• The frost on the outdoor unit melts into water or steam when the air conditioner is in defrost operation.

■ **In COOL or DRY operation**
• Moisture in the air condenses into water on the cool surface of outdoor unit piping and drips.

• Troubleshooting measures are classified into the following two types on a remedial basis.
Take an appropriate measure according to the symptom.

Not malfunction
• The following conditions do not indicate a problem with the system.

Check
• Please check again before calling a repair person.

The air conditioner does not operate. (OPERATION lamp is off.)

• Is a breaker off or a fuse blown?
• Is there a power failure?
• Are batteries set in the remote controller?
• Is the timer setting correct?

Air does not come out.

■ **In HEAT operation**
• The air conditioner is warming up. Wait for about 1 to 4 minutes.
• During defrosting operation, hot air does not flow out of the indoor unit.

■ **When the air conditioner operates immediately after the circuit breaker is turned on**
• The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.

Operation stopped suddenly. (OPERATION lamp is on.)

• For system protection, the air conditioner may stop operating on a sudden large voltage fluctuation. It automatically resumes operation in about 3 minutes.

Operation stopped suddenly. (OPERATION lamp flashes.)

• Are the air filters clean?
Clean the air filters.
• Is there anything to block the air inlet or the outlet of the indoor and the outdoor units?
• Turn the bleaker off and take all obstacles away. Then turn it on again and try operating the air conditioner with the remote controller. If the lamp still flashes, call the service shop where you purchased the air conditioner.
• Are operation modes all the same for indoor units connected to outdoor units in the **multi system**?
If not, set all indoor units to the same operation mode and confirm that the lamps flash.
When the operation mode is in "AUTO", set all indoor unit operation modes to "COOL" or "HEAT" for a moment and check again that the lamps are normal. If the lamps stop flashing after the above steps, there is no malfunction.

Mist comes out of the indoor unit.

• This happens when the air in the room is cooled into mist by the cold airflow during COOL operation.
• This is because the air in the room is cooled by the heat exchanger and becomes mist during defrosting operation.

Troubleshooting

Cooling (Heating) effect is poor.

- Are the air filters clean?
- Is there anything to block the air inlet or the outlet of the indoor and the outdoor units?
- Is the temperature setting appropriate?
- Are the windows and doors closed?
- Are the airflow rate and the airflow direction set appropriately?

Remote controller does not work properly.

- ■ **No remote controller signals are displayed.**
- ■ **Remote controller sensitivity is low.**
- ■ **Display is low in contrast or blacked out.**
- ■ **Display runs out of control.**
- The batteries are dying and the remote controller is malfunctioning. Replace all the batteries with new, size AAA.LR03 (alkaline). For details, refer to "To set the batteries" of this manual.

HEAT operation cannot be selected, even though the unit is heat pump model.

- Slide the DIP switch to the left as shown in the illustration so that the HEAT operation can be selected with the "MODE" button.

DIP switch

The ON/OFF TIMER does not operate according to the settings.

- Check if the ON/OFF TIMER and the WEEKLY TIMER are set to the same time.
  Change or deactivate the settings in the WEEKLY TIMER.

The indoor unit gives out odor.

- This happens when smells of the room, furniture, or cigarettes are absorbed into the unit and discharged with the airflow.
  (If this happens, have the indoor unit washed by a technician from the service shop where you purchased the air conditioner.)

The outdoor fan rotates while the air conditioner is not in operation.

- ■ **After operation is stopped**
- The outdoor fan continues rotating for another 60 seconds for system protection.
- ■ **While the air conditioner is not in operation**
- When the outdoor temperature is very high, the outdoor fan starts rotating for system protection.

An abnormal functioning happens during operation.

- The air conditioner may malfunction with lightning or radio waves. Turn the breaker off, turn it on again and try operating the air conditioner with the remote controller.

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■ Call the service shop immediately

⚠ WARNING

■ **When an abnormality (such as a burning smell) occurs, stop operation and turn the breaker off.**
- Continued operation in an abnormal condition may result in malfunctioning, electric shocks or fire.
- Consult the service shop where you purchased the air conditioner.

■ **Do not attempt to repair or modify the air conditioner by yourself.**
- Incorrect work may result in electric shocks or fire.
- Consult the service shop where you purchased the air conditioner.

If one of the following symptoms occurs, call the service shop immediately.

- **The power cord is abnormally hot or damaged.**
- **An abnormal sound is heard during operation.**
- **The safety breaker, a fuse, or the ground leakage breaker cuts off the operation frequently.**
- **A switch or a button often fails to work properly.**
- **There is a burning smell.**
- **Water leaks from the indoor unit.**

Turn the breaker off and call the service shop.

■ **After a power failure**
- The air conditioner automatically resumes operation in about 3 minutes. Wait for it to restart.

■ **Lightning**
- If lightning may strike the neighboring area, stop operation and turn the breaker off for system protection.

■ Disposal requirements
- Dismantling the unit, and treatment of refrigerant, oil, and other parts, should be done in accordance with the relevant local and national regulations.

Troubleshooting

■ Fault diagnosis by remote controller

• The remote controller can receive a corresponding error code from the indoor unit.

1. When CANCEL is held down for about 5 seconds, "**00**" blinks in the temperature display section.

2. Press CANCEL repeatedly until a continuous beep is produced.

• The code indication changes as displayed in the following table, and notifies with a long beep.

	CODE	MEANING
SYSTEM	00	NORMAL
	UA	INDOOR-OUTDOOR UNIT COMBINATION FAULT
	U0	REFRIGERANT SHORTAGE
	U2	DROP VOLTAGE OR MAIN CIRCUIT OVERVOLTAGE
	U4	FAILURE OF TRANSMISSION (BETWEEN INDOOR UNIT AND OUTDOOR UNIT)
INDOOR UNIT	A1	INDOOR PCB DEFECTIVENESS
	A5	HIGH PRESSURE CONTROL OR FREEZE-UP PROTECTOR
	A6	FAN MOTOR FAULT
	C4	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	C9	FAULTY SUCTION AIR TEMPERATURE SENSOR
OUTDOOR UNIT	EA	COOLING-HEATING SWITCHING ERROR
	E1	CIRCUIT BOARD FAULT
	E5	OL STARTED
	E6	FAULTY COMPRESSOR START UP
	E7	DC FAN MOTOR FAULT
	E8	OVERCURRENT INPUT
	F3	HIGH TEMPERATURE DISCHARGE PIPE CONTROL
	F6	HIGH PRESSURE CONTROL (IN COOLING)
	H0	SENSOR FAULT
	H6	OPERATION HALT DUE TO FAULTY POSITION DETECTION SENSOR
	H8	DC CURRENT SENSOR FAULT
	H9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	J3	FAULTY DISCHARGE PIPE TEMPERATURE SENSOR
	J6	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	L3	ELECTRICAL PARTS HEAT FAULT
	L4	HIGH TEMPERATURE AT INVERTER CIRCUIT HEATSINK
	L5	OUTPUT OVERCURRENT
	P4	FAULTY INVERTER CIRCUIT HEATSINK TEMPERATURE SENSOR

NOTE

• A short beep and two consecutive beeps indicate non-corresponding codes.
• To cancel the code display, hold CANCEL for 5 seconds. The code display also cancel itself if the button is not pressed for 1 minute.

FVXS Series

FAQ

Indoor unit

The flap does not start swinging immediately.

- The air conditioner is adjusting the position of the flap. The flap will start moving soon.

Different sounds are heard.

- **A sound like flowing water**
  - This sound is generated because the refrigerant in the air conditioner is flowing.
  - This is a pumping sound of the water in the air conditioner and can be heard when the water is pumped out from the air conditioner during COOL or DRY operation.
  - The refrigerant flows in the air conditioner even if the air conditioner is not working when the indoor units in other rooms are in operation.
- **Blowing sound**
  - This sound is generated when the flow of the refrigerant in the air conditioner is switched over.
- **Ticking sound**
  - This sound is generated when the cabinet and frame of the air conditioner slightly expand or shrink as a result of temperature changes.
- **Whistling sound**
  - This sound is generated when refrigerant flows during defrosting operation.
- **Clicking sound during operation or idle time**
  - This sound is generated when the refrigerant control valves or the electrical parts operate.
- **Clopping sound**
  - This sound is heard from the inside of the air conditioner when the exhaust fan is activated while the room doors are closed. Open the window or turn off the exhaust fan.

The air conditioner stops generating airflow during HEAT operation.

- Once the set temperature is reached, the airflow rate is reduced and operation stopped in order to avoid generating a cool airflow. Operation will resume automatically when the indoor temperature falls.

HEAT operation stops suddenly and a flowing sound is heard.

- The outdoor unit is defrosting. HEAT operation starts after the frost on the outdoor unit has been removed. This can take about 4 to 12 minutes.

Operation does not start soon.

- **When ⏻ was pressed soon after operation was stopped.**
- **When the mode was reselected.**
  - This is to protect the air conditioner. You should wait for about 3 minutes.

Outdoor unit

Operating sound is loud.

- When frost forms on the heat exchanger of the outdoor unit, the operating sound level increases slightly.

The outdoor unit emits water or steam.

- **In HEAT operation**
  - The frost on the outdoor unit melts into water or steam when the air conditioner is in defrosting operation.
- **In COOL or DRY operation**
  - Moisture in the air condenses into water on the cool surface of the outdoor unit piping and drips.

When the Need Arises

Troubleshooting

Before making an inquiry or a request for repair, please check the following.
If the problem persists, consult your dealer.

✔ **Not a problem**	? **Check**
This case is not a problem.	Please check again before requesting repairs.

The air conditioner does not operate

Case	Description / what to check
OPERATION lamp is off.	? • Has the circuit breaker been tripped or the fuse blown? • Is there a power failure? • Are batteries set in the remote controller?
OPERATION lamp is blinking.	? • Turn off the power with the circuit breaker and restart operation with the remote controller. If the OPERATION lamp is still blinking, check the error code and consult your dealer.

The air conditioner suddenly stops operating

Case	Description / what to check
OPERATION lamp is on.	✔ • To protect the system, the air conditioner may stop operating after sudden large voltage fluctuations. It automatically resumes operation in about 3 minutes.
OPERATION lamp is blinking.	? • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? Stop operation and after turning off the circuit breaker, remove the obstruction. Then restart operation with the remote controller. If the OPERATION lamp is still blinking, check the error code and consult your dealer. • Are operation modes all the same for indoor units connected to outdoor units in the multi system? If not, set all indoor units to the same operation mode and confirm that the lamps. Moreover, when the operation mode is in AUTO, set all indoor unit operation modes to COOL or HEAT for a moment and check again that the lamps are normal. If the lamps stop blinking after the above steps, there is no malfunction.

The air conditioner does not stop operating

Case	Description / what to check
The air conditioner continues operating even after operation is stopped.	✔ ■ **Immediately after the air conditioner is stopped** • The outdoor unit fan continues rotating for about another 1 minute to protect the system. ■ **While the air conditioner is not in operation** • When the outdoor temperature is high, the outdoor unit fan may start rotating to protect the system.

The room does not cool down / warm up

Case	Description / what to check
Air does not come out.	✔ ■ **In HEAT operation** • The air conditioner is warming up. Wait for about 1 to 4 minutes. • During defrosting operation, hot air does not flow out of the indoor unit. ■ **When the air conditioner operates immediately after the circuit breaker is turned on** • The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.
Air does not come out / Air comes out.	? ■ **Is the airflow rate setting appropriate?** • Is the airflow rate setting low, such as "Indoor unit quiet" or "Airflow rate 1"? Increase the airflow rate setting. ■ **Is the set temperature appropriate?** ■ **Is the adjustment of the airflow direction appropriate?**

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The room does not cool down / warm up

Case	Description / what to check
Air comes out.	[?] • Is there any furniture directly under or beside the indoor unit? • Is the air conditioner in ECONO operation or OUTDOOR UNIT QUIET operation? • Is the air filter dirty? • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? • Is a window or door open? • Is an exhaust fan turning?

Mist comes out

Case	Description / what to check
Mist comes out of the indoor unit.	[✓] • This happens when the air in the room is cooled into mist by the cold airflow during COOL or other operation.

Remote controller

Case	Description / what to check
The unit does not receive signals from the remote controller or has a limited operating range.	[✓] • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to **"Preparation Before Operation"**. • Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult your dealer if that is the case. • The remote controller may not function correctly if the transmitter is exposed to direct sunlight.
LCD is faint, is not working, or the display is erratic.	[✓] • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to **"Preparation Before Operation"**.
Other electric devices start operating.	[✓] • If the remote controller activates other electric devices, move them away or consult your dealer.

Air has an odor

Case	Description / what to check
The air conditioner gives off an odor.	[✓] • The room odor absorbed in the unit is discharged with the airflow. We recommend you to have the indoor unit cleaned. Please consult your dealer.

Others

Case	Description / what to check
The air conditioner suddenly starts behaving strangely during operation.	[?] • The air conditioner may malfunction due to lightning or radio. If the air conditioner malfunctions, turn off the power with the circuit breaker and restart the operation with the remote controller.
HEAT operation cannot be selected, even though the unit is heat pump model.	[?] • Check that the jumper (J8) has not been cut. If it has been cut, contact your dealer. Jumper (J8)
The ON/OFF TIMER does not operate according to the settings.	[✓] • Check if the ON/OFF TIMER and the WEEKLY TIMER are set to the same time. Change or deactivate the settings in the WEEKLY TIMER.

Notes on the operating conditions
• If operation continues under any conditions other than those listed in the table,
  – A safety device may activate to stop the operation.
    (With a multi connection in COOL operation, the safety device may work to stop the operation of the outdoor unit only.)
  – Dew may form on the indoor unit and drip from it when COOL or DRY operation is selected.

Mode	Operating conditions
COOL / DRY	Outdoor temperature: 14-115°F (−10-46°C) Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.
HEAT	Outdoor temperature: [2/3/4MXS]: 5-75°F (−15-24°C) [2/3MXL, RXL]: −13-75°F (−25-24°C) Indoor temperature: 50-86°F (10-30°C)

Troubleshooting

■ Call your dealer immediately

⚠ WARNING

When an abnormality (such as a burning smell) occurs, stop operation and turn off the circuit breaker.
• Continued operation in an abnormal condition may result in problems, electric shock or fire.
• Consult the dealer where you bought the air conditioner.

Do not attempt to repair or modify the air conditioner by yourself.
• Incorrect work may result in electric shock or fire.
• Consult the dealer where you bought the air conditioner.

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If one of the following symptoms takes place, call your dealer immediately.

• **The power cord is abnormally hot or damaged.**
• **An abnormal sound is heard during operation.**
• **The circuit breaker, a fuse, or the ground fault circuit interrupter cuts off the operation frequently.**
• **A switch or a button often fails to work properly.**
• **There is a burning smell.**
• **Water leaks from the indoor unit.**

Turn off the circuit breaker and call your dealer.

■ After a power failure
• The air conditioner automatically resumes operation in about 3 minutes. You should just wait for a while.

■ Lightning
• If there is a risk lightning could strike in the neighborhood, stop operation and turn off the circuit breaker to protect the system.

■ Disposal requirements
• Dismantling of the unit, handling of the refrigerant, oil and other parts, should be done in accordance with the relevant local and national regulations.

■ Fault diagnosis by remote controller

• The remote controller can receive relevant error codes from the indoor unit.

1. When [Cancel] is held down for about 5 seconds, "**00**" blinks in the temperature display section.

2. Press [Cancel] repeatedly until a continuous beep is produced.

• The code indication changes as shown below, and notifies you with a long beep.

	CODE	MEANING
SYSTEM	00	NORMAL
	UA	INDOOR-OUTDOOR UNIT COMBINATION FAULT
	U0	REFRIGERANT SHORTAGE
	U2	DROP VOLTAGE OR MAIN CIRCUIT OVERVOLTAGE
	U4	FAILURE OF TRANSMISSION (BETWEEN INDOOR UNIT AND OUTDOOR UNIT)
INDOOR UNIT	A1	INDOOR PCB DEFECTIVENESS
	A5	HIGH PRESSURE CONTROL OR FREEZE-UP PROTECTOR
	A6	FAN MOTOR FAULT
	C4	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	C7	FRONT PANEL OPEN/CLOSE FAULT
	C9	FAULTY SUCTION AIR TEMPERATURE SENSOR
OUTDOOR UNIT	EA	COOLING-HEATING SWITCHING ERROR
	E1	CIRCUIT BOARD FAULT
	E5	OL STARTED
	E6	FAULTY COMPRESSOR START UP
	E7	DC FAN MOTOR FAULT
	E8	OVERCURRENT INPUT
	F3	HIGH TEMPERATURE DISCHARGE PIPE CONTROL
	F6	HIGH PRESSURE CONTROL (IN COOLING)
	H0	SENSOR FAULT
	H6	OPERATION HALT DUE TO FAULTY POSITION DETECTION SENSOR
	H8	DC CURRENT SENSOR FAULT
	H9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	J3	FAULTY DISCHARGE PIPE TEMPERATURE SENSOR
	J6	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	L3	ELECTRICAL PARTS HEAT FAULT
	L4	HIGH TEMPERATURE AT INVERTER CIRCUIT HEATSINK
	L5	OUTPUT OVERCURRENT
	P4	FAULTY INVERTER CIRCUIT HEATSINK TEMPERATURE SENSOR

NOTE

• A short beep and 2 consecutive beeps indicate non-corresponding codes.

• To cancel the code display, hold [Cancel] down for about 5 seconds. The code display also clears if no button is pressed for 1 minute.

2.19   Quick Reference

Quick Reference

3. FDMQ Series

Contents

Safety Considerations

Read these **Safety Considerations for Operations** carefully before operating an air conditioner or heat pump.
Make sure that the unit operates properly during the startup operation. Instruct the user on how to operate and maintain the unit.
Inform users that they should store this operation manual with the installation manual for future reference.
Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

⚠ **DANGER** ·········· Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** ········· Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ········· Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** ·············· Indicates situations that may result in equipment or property-damage accidents only.

───── ⚠ **DANGER** ─────────────

• Do not install the unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.

• Any abnormalities in the operation of the air conditioner or heat pump, such as smoke or fire, could result in severe injury or death. Turn off the power and contact your dealer immediately.

• Refrigerant gas may produce toxic gas if it comes into contact with fire, such as from a fan heater, stove, or cooking device. Exposure to this gas could cause severe injury or death.

• For refrigerant leakage, consult your dealer. Refrigerant gas is heavier than air and replaces oxygen. A massive leak could lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.

• If equipment utilizing a burner is used in the same room as the air conditioner or heat pump, there is the danger of oxygen deficiency which could lead to an asphyxiation hazard resulting in serious injury or death. Be sure to ventilate the room sufficiently to avoid this hazard.

• Safely dispose of the packing materials. Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.

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• Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death by suffocation.

⚠ **WARNING**

• Contact your dealer for repair and maintenance. Improper repair and maintenance may result in water leakage, electric shock, and fire. Only use accessories made by Daikin that are specifically designed for use with the equipment and have them installed by a professional.

• Contact your dealer to move and reinstall the air conditioner or heat pump. Incomplete installation may result in water leakage, electric shock, and fire.

• Never let the indoor unit or the remote controller get wet. Water can cause an electric shock or a fire.

• Never use flammable spray such as hair spray, lacquer, or paint near the unit. Flammable spray may cause a fire.

• When a fuse blows out, never replace it with one of incorrect ampere ratings or different wires. Always replace any blown fuse with a fuse of the same specification.

• Never inspect or service the unit by yourself. Contact a qualified service person to perform this work.

• Turn off all electrical power before doing any maintenance to avoid the risk of serious electric shock; never sprinkle or spill water or liquids on the unit.

• Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.

• Do not allow children to play on or around the unit to prevent injury.

• The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.

• Do not put a finger or other objects into the air inlet or air outlet. The fan is rotating at high speed and will cause injury.

• Check the unit foundation for damage on a continuous basis, especially if it has been in use for a long time. If left in a damaged condition the unit may fall and cause injury.

• Never touch the internal parts of the controller. To check and adjust internal parts, contact your dealer.

• Be sure to establish a ground.
Do not ground the unit to a utility pipe, arrester, or telephone ground. Incomplete grounding may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.

• Be sure to install a ground fault circuit interrupter.
Failure to install a ground fault circuit interrupter may result in electric shock or fire.

⚠ **CAUTION**

• Do not use the air conditioner or heat pump for any other purposes other than comfort cooling or heating.
Do not use the unit for cooling precision instruments, food, plants, animals or works of art.

• Do not place items under the indoor unit as they may be damaged by condensates that may form if the humidity is above 80% or if the drain outlet gets blocked.

• Before cleaning, stop the operation of the unit by turning the power off or by pulling the supply cord out from its receptacle. Otherwise, an electric shock and injury may result.

• Do not wash the air conditioner or heat pump with excessive water. An electric shock or fire may result.

• Avoid placing the controller in a spot splashed with water. Water entering the controller may cause an electric shock or damage the internal electronic parts.

• Do not operate the air conditioner or heat pump when using a room-fumigation type of insecticide.
Failure to observe this could cause the chemicals to be deposited in the unit and can endanger the health of those who are hypersensitive to chemicals.

• Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.

• The appliance is not intended for use by young children or infirm persons without supervision.

• The remote controller should be kept away from children so they cannot play with it.

• Consult with the installation contractor for cleaning.

• Incorrect cleaning of the inside of the air conditioner or heat pump could make the plastics parts break and cause water leakage or electric shock.

• Do not touch the air inlet or aluminum fin of the air conditioner or heat pump as they can cut and cause injury.

• Do not place objects in direct proximity of the outdoor unit. Do not let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once inside the unit, animals can cause the unit to malfunction, and cause smoke or fire when they make contact with electrical parts.

• For care and cleaning, call service personnel.

2

Safety Considerations

<div style="border: note">

⚠ **NOTE**

- Never press the button of the remote controller with a hard, pointed object. The remote controller may be damaged.

- Never pull or twist the electric wire of the remote controller. It may cause the unit to malfunction.

- Do not place appliances that produce open flames in places that are exposed to the airflow of the unit or under the indoor unit. It may cause incomplete combustion or deformation of the unit due to the heat.

- Do not expose the controller to direct sunlight. The LCD display can become discolored and may fail to display the data.

- Do not wipe the controller operation panel with benzene, thinner, chemical dust cloth, etc. The panel may get discolored or the coating can peel off. If it is heavily dirty, soak a cloth in a water-diluted neutral detergent, squeeze it well and wipe the panel clean. Then wipe it with another dry cloth.

- Dismantling of the unit, disposal of the refrigerant, oil, and additional parts, should be done in accordance with the relevant local, state, and national regulations.

- Operate the air conditioner or heat pump in a sufficiently ventilated area and not surrounded by obstacles. Do not use the air conditioner or heat pump in the following places.
    a. Places with a mist of mineral oil, such as cutting oil.
    b. Locations such as coastal areas where there is a lot of salt in the air.
    c. Locations such as hot springs where there is a lot of sulfur in the air.
    d. Locations such as factories where the power voltage varies a lot.
    e. In cars, boats, and other vehicles.
    f. Locations such as kitchens where oil may splatter or where there is steam in the air.
    g. Locations where equipment produces electromagnetic waves.
    h. Places with an acid or alkaline mist.
    i. Places where fallen leaves can accumulate or where weeds can grow.

- Take snow protection measures. Contact your dealer for the details of snow protection measures, such as the use of a snow protection hood.

- Do not attempt to do electrical work or grounding work unless you are licensed to do so. Consult with your dealer for electrical work and grounding work.

- Pay attention to operating sound. Be sure to use the following places:
    a. Places that can sufficiently withstand the weight of the air conditioner or heat pump yet can suppress the operating sound and vibration.
    b. Places where warm air from the air outlet of the outdoor unit or the operating sound of the outdoor unit does not annoy neighbors.

- Make sure that there are no obstacles close to the outdoor unit. Obstacles close to the outdoor unit may drop the performance of the outdoor unit or increase the operating sound of the outdoor unit.

- Consult your dealer if the air conditioner or heat pump in operation generates unusual noise.

- Make sure that the drainpipe is installed properly to drain water. If no water is discharged from the drainpipe while the air conditioner or heat pump is in the cooling mode, the drainpipe may be clogged with dust or dirt and water leakage from the indoor unit may occur. Stop operating the air conditioner or heat pump and contact your dealer.

FFP001-U

</div>

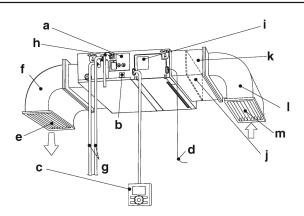This is an appliance that is not accessible to the general public.

Precautions relating to area surrounding the indoor and outdoor units

■ Be sure to follow the instructions below.
- The indoor unit is at least 3.3ft (1m) away from any television or radio set (unit may cause interference with the picture or sound).
- Refrain from using the units in areas prone to high levels of oily smoke, such as a kitchen. Water leakage may result.

3

Names of Parts

Indoor Unit

a	Drain discharge device (built-in)	**g**	Refrigerant piping
b	Drain pan inspection window	**h**	Drain piping
c	Remote controller (Wired type) The appearance of the remote controller may differ between different models.	**i**	Model name (Model name plate)
		j	Air filter (Sold separately)
		k	Suction filter chamber (Sold separately)
d	Wiring between the indoor and outdoor units	**l**	Suction duct (Field supply)
e	Air outlet grille (Field supply)	**m**	Suction grille (Field supply)
f	Exhaust duct (Field supply)		

Remote controller

Wired type   **Wireless type**

• For details on remote controller operation, refer to the operation manual included with the remote controller.

Outdoor Unit

• The appearance of the outdoor unit may differ between different models.

Air inlet (back and side)

Air outlet

Outdoor temperature sensor (back)

Drain hose

Ground terminal (inside)

Model name

Refrigerant pipes and inter-unit wire

4

Note for Multi System

A multi system has one outdoor unit connected to multiple indoor units.

Selecting the operation mode

When the priority room setting is active but the set unit is not operating or when the priority room setting is inactive

When more than one indoor unit is operating, priority is given to the first unit that was turned on.
In this case, set the units that are turned on later to the same operation mode as the first unit.
Otherwise, they will enter the standby state, and when using the wired remote controller the centralized control icon "CENTRAL CONTROL" will light up; this does not indicate malfunction.

| Room A | Room B |
| Room C | Room D |

Outdoor unit

NOTE

Notes on operation mode for a multi system
• COOL, DRY and FAN operation may be used at the same time.
• AUTO operation automatically selects COOL operation or HEAT operation based on the indoor temperature.
  Therefore, AUTO operation is available when selecting the same operation mode as that of the room with the first unit to be turned on.

⚠ CAUTION

• Normally, the operation mode in the room where the unit is first started is given priority, but the following situations are exceptions to this rule.
  If the operation mode of the first room is FAN operation, then using HEAT operation in any room after this will give priority to HEAT operation. In this situation, the indoor unit operating in FAN mode will switch to standby, and when using the wired remote controller the centralized control icon "CENTRAL CONTROL" will light up.

With the priority room setting active

Refer to "**Priority room setting**" on the next page.

NIGHT QUIET mode (Available only for COOL operation)

NIGHT QUIET mode requires initial programing during installation. Please consult your retailer or dealer for assistance.
NIGHT QUIET mode reduces the operation noise of the outdoor unit during the night-time hours to prevent annoyance to neighbours.
  • NIGHT QUIET mode is activated when the temperature drops 43°F (6°C) or more below the highest temperature recorded that day.
    When the temperature difference between the current outdoor temperature and the maximum outdoor temperature becomes less than 39°F (4°C), this function will be canceled.
  • NIGHT QUIET mode slightly reduces the cooling efficiency of the unit.

OUTDOOR UNIT QUIET operation (Function unavailable in the FDMQ series)

For details on OUTDOOR UNIT QUIET operation, refer to the operation manual included with the remote controller.

When the priority room setting is active but the set unit is not operating or when the priority room setting is inactive

When using the OUTDOOR UNIT QUIET operation feature with a multi system, set all indoor units to OUTDOOR UNIT QUIET operation using their remote controllers.
When canceling OUTDOOR UNIT QUIET operation, simply cancel the mode on one of the operating indoor units using their remote controller. However OUTDOOR UNIT QUIET operation will remain displayed on the remote controllers for the other rooms.
We recommend you cancel operation in all rooms using their remote controllers.

With the priority room setting active

Refer to "**Priority room setting**" on the next page.

5

COOL/HEAT mode lock

The COOL/HEAT mode lock requires initial programing during installation. Please consult your authorized dealer for assistance. The COOL/HEAT mode lock sets the unit forcibly to either COOL or HEAT operation. This function is convenient when you wish to set all indoor units connected to the multi system to the same operation mode.

NOTE

• The COOL/HEAT mode lock cannot be activated together with the priority room setting.

Priority room setting

The priority room setting requires initial programing during installation. Please consult your authorized dealer for assistance. The room designated as the priority room takes priority in the following situations.

Operation mode priority

• As the operation mode of the priority room takes precedence, you can select a different operation mode from other rooms.

[Example]
• Room A is the priority room in this example.
  When COOL operation is selected in room A while operating the following modes in room B, C and D:

Operation mode in room B, C and D	Status of room B, C and D when the unit in room A is in COOL operation
COOL or DRY or FAN	The current operation mode is maintained.
HEAT	The unit enters the standby mode. Operation resumes when the room A unit stops operating.
AUTO	If the unit is set to COOL operation, it continues. If the unit is set to HEAT operation, it enters the standby mode. Operation resumes when the room A unit stops operating.

Priority when OUTDOOR UNIT QUIET operation is used (Function unavailable in the FDMQ series)

[Example]
• Room A is the priority room in this example.
  Just by setting the unit in room A to QUIET operation, the air conditioner starts OUTDOOR UNIT QUIET operation.
  You do not have to set all the indoor units in operation to OUTDOOR UNIT QUIET operation.

6

Care and Cleaning

⚠ CAUTION

- Only a qualified service person is allowed to perform maintenance.
- Before cleaning, be sure to stop the operation and turn off the circuit breaker.
- Do not touch the aluminium fins of the indoor unit. If you touch those parts, this may cause an injury.

■ How to clean the air filter

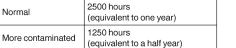When the remote controller indicates "Time to clean filter", clean the air filter.
- It indicates after running for a certain time.

NOTE

For cleaning, do not use any of the following:
- Volatile liquid such as benzene, gasoline and thinner
- Polishing compounds
- Rough materials such as a scrubbing brush
- You may change the time of indication "Time to clean filter".
  If the indoor unit is used in a space where the air is too contaminated, ask your local dealer for solution.

Contamination	Time until indication is displayed
Normal	2500 hours (equivalent to one year)
More contaminated	1250 hours (equivalent to a half year)

- If it becomes difficult to remove contamination from the air filter, replace the air filter.
  (Air filter for replacement is a separately sold accessory.)
- Do not remove the air filter except when cleaning. Unnecessary handling may damage the filter.
  (This product is not provided with an air filter as a standard accessory.)
- Do not attach objects other than the genuine air filter (e.g., kitchen paper) to the air inlet.
  Otherwise, the performance of the air conditioner will be degraded, and icing or water leakage may result.
- This product is a ceiling mounted duct type air conditioner.
  Installing under roof
  If the air filter (sold separately) is used, request a special contractor for the cleaning of the air filter.
  Not installing under roof
  Always use the long-life filter chamber (sold separately). Be sure to request your dealer for the installation of the long-life chamber. For the methods of mounting, dismounting, and cleaning the air filter, refer to the manual provided with the air filter.
- **Be sure to use the separately sold filter chamber.**
  Request your dealer for the installation of the filter chamber.
- Be sure to clean the air filter at the beginning of the cooling or heating season.
  (A decrease in the airflow volume of the air conditioner will result and the performance of the air conditioner will be degraded if the air filter is clogged with dust or dirt.)

Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated.

After completing cleaning and installing an air filter, turn off the indication of "Time to clean filter" on the remote controller.
- Press the FILTER SIGN RESET button.
- The indication can be turned off while the unit is either operating or stopped.

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■ **How to clean air outlet, outside panels and remote controller**

1. Clean with soft cloth.

2. When it is difficult to remove stains, use water or neutral detergent.

NOTE

• Do not wash the suction grille with water of 122°F (50°C) or higher.
  It may cause discoloration and deformation.
• When drying the suction grille, do not heat it with fire. It may cause burning.
• Do not use substances such as gasoline, benzene, thinner, polishing powder and liquid insecticide sold in the market.
  It may cause discoloration and deformation.

■ **Prior to a long period of non-use**

1. Operate the FAN mode for several hours on a fine day to dry out the inside.

1) Press the "MODE" selector button and select "FAN" operation.

• When a multi outdoor unit is connected, make sure the HEAT operation is not being used in other rooms before you use the FAN operation. ▶Page 5

2) Press the "ON/OFF" button and start operation.

2. After operation stops, turn off the circuit breaker for the room air conditioner.

3. Clean the air filters and reattach them. ▶Page 7

4. To prevent battery leakage, take out the batteries from the remote controller. (Only for the wireless remote controller)

■ **We recommend periodical maintenance**

• In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist.
• For specialist maintenance, please contact the dealer where you bought the air conditioner.
• The maintenance cost must be borne by the user.

4

8

Troubleshooting

Before making an inquiry or a request for repair, please check the following.
If the problem persists, consult your dealer.

| ✔ | **Not a problem**
This case is not a problem. | ❓ | **Check**
Please check again before requesting repairs. |

Case	Description / what to check
Operation does not start soon. • When ON/OFF button was pressed soon after operation was stopped. • When the mode was reselected.	✔ • This is to protect the air conditioner. You should wait for about 3 minutes.

Air does not come out.	✔ ■ **In HEAT operation**
	   • The air conditioner is warming up. Wait for about 1 to 4 minutes.
	   • During defrosting operation, hot air does not flow out of the indoor unit.
	■ **When the air conditioner operates immediately after the circuit breaker is turned on**
	   • The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.

The HEAT operation stops suddenly and a flowing sound is heard.	✔ • The system is taking away the frost on the outdoor unit. You should wait for about 4 to 12 minutes.

The outdoor unit emits water or steam.	✔ ■ In HEAT mode
	   • The frost on the outdoor unit melts into water or steam when the air conditioner is in defrost operation.
	■ In COOL or DRY mode
	   • Moisture in the air condenses into water on the cool surface of outdoor unit piping and drips.

Mist comes out of the indoor unit.	✔ ■ This happens when the air in the room is cooled into mist by the cold airflow during cooling operation.
The indoor unit gives out odor.	✔ ■ This happens when smells of the room, furniture, or cigarettes are absorbed into the unit and discharged with the airflow. (If this happens, we recommend you to have the indoor unit washed by a technician. Consult your dealer where you bought the air conditioner.)

The outdoor fan rotates while the air conditioner is not in operation.	✔ ■ After operation is stopped:
	   • The outdoor fan continues rotating for another 1 minute for system protection.
	■ While the air conditioner is not in operation:
	   • When the outdoor temperature is very high, the outdoor fan starts rotating for system protection.

The operation stopped suddenly. (OPERATION lamp is on.)	✔ ■ For system protection, the air conditioner may stop operating on a sudden large voltage fluctuation. It automatically resumes operation in about 3 minutes.
The air conditioner does not operate. (OPERATION lamp is off.)	❓ • Hasn't the circuit breaker turned OFF or a fuse blown? • Isn't it a power failure? • Are batteries set in the remote controller? • Is the timer setting correct?
Cooling (Heating) effect is poor.	❓ • Are the air filters clean? • Is there anything blocking the air inlet or the outlet of the indoor and the outdoor units? • Is the temperature setting appropriate? • Are the windows and doors closed? • Are the airflow rate and the air direction set appropriately?
Operation stops suddenly. (OPERATION lamp flashes.)	❓ • Are the air filters clean? • Is there anything blocking the air inlet or the outlet of the indoor and the outdoor units? Clean the air filters or take all obstacles away and turn the circuit breaker OFF. Then turn it ON again and try operating the air conditioner with the remote controller. If the lamp still blinks, call your dealer where you bought the air conditioner. • Are operation modes all the same for indoor units connected to outdoor units in the **multi system?** If not, set all indoor units to the same operation mode and confirm that the lamps blink. Moreover, when the operation mode is in "AUTO", set all indoor unit operation modes to "COOL" or "HEAT" for a moment and check again that the lamps are normal. If the lamps stop blinking after the above steps, there is no malfunction.

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Case	Description / what to check
An abnormal functioning happens during operation.	⍰ • The air conditioner may malfunction with lightning or radio waves. Turn the breaker OFF, turn it ON again and try operating the air conditioner with the remote controller.

Notes on the operating conditions
• If operation continues under any conditions other than those listed in the table,
  – A safety device may activate to stop the operation.
  – Dew may form on the indoor unit and drip from it when COOL or DRY operation is selected.

Mode	Operating conditions
COOL / DRY	Outdoor temperature: 50-115°F (10-46°C) Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.
HEAT	Outdoor temperature: [RX]: 5-75°F (−15-24°C) [RXL]: −13-75°F (−25-24°C) Indoor temperature: 50-86°F (10-30°C)

■ Call your dealer immediately

⚠ WARNING

When an abnormality (such as a burning smell) occurs, stop operation and turn off the circuit breaker.
• Continued operation in an abnormal condition may result in problems, electric shock or fire.
• Consult the dealer where you bought the air conditioner.

Do not attempt to repair or modify the air conditioner by yourself.
• Incorrect work may result in electric shock or fire.
• Consult the dealer where you bought the air conditioner.

If one of the following symptoms takes place, call your dealer immediately.

| • **The power cord is abnormally hot or damaged.**
• **An abnormal sound is heard during operation.**
• **The circuit breaker cuts off the operation frequently.**
• **A switch or a button often fails to work properly.**
• **There is a burning smell.**
• **Water leaks from the indoor unit.** | Turn off the circuit breaker and call your dealer. ❗ |

■ After a power failure
• The air conditioner automatically resumes operation in about 3 minutes. You should just wait for a while.

■ Lightning
• If there is a risk lightning could strike in the neighborhood, stop operation and turn off the circuit breaker to protect the system.

■ Disposal requirements
• Dismantling of the unit, handling of the refrigerant, oil and other parts, should be done in accordance with the relevant local and national regulations.

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3P500431-1

4. FFQ Series

Contents

■ Read Before Operation

■ Care

Safety Considerations

Read these **Safety Considerations for Operations** carefully before operating an air conditioner or heat pump.
Make sure that the unit operates properly during the startup operation. Instruct the user on how to operate and maintain the unit.
Inform users that they should store this operation manual with the installation manual for future reference.
Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

⚠ **DANGER** ·········· Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** ········ Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ········· Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** ·············· Indicates situations that may result in equipment or property-damage accidents only.

───── ⚠ **DANGER** ─────

• Do not install the unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.

• Any abnormalities in the operation of the air conditioner or heat pump, such as smoke or fire, could result in severe injury or death. Turn off the power and contact your dealer immediately.

• Refrigerant gas may produce toxic gas if it comes into contact with fire, such as from a fan heater, stove, or cooking device. Exposure to this gas could cause severe injury or death.

• For refrigerant leakage, consult your dealer. Refrigerant gas is heavier than air and replaces oxygen. A massive leak could lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.

• If equipment utilizing a burner is used in the same room as the air conditioner or heat pump, there is the danger of oxygen deficiency which could lead to an asphyxiation hazard resulting in serious injury or death. Be sure to ventilate the room sufficiently to avoid this hazard.

• Safely dispose of the packing materials. Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.

1

Read Before Operation

• Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death by suffocation.

⚠ **WARNING**

• Contact your dealer for repair and maintenance. Improper repair and maintenance may result in water leakage, electric shock, and fire. Only use accessories made by Daikin that are specifically designed for use with the equipment and have them installed by a professional.

• Contact your dealer to move and reinstall the air conditioner or heat pump. Incomplete installation may result in water leakage, electric shock, and fire.

• Never let the indoor unit or the remote controller get wet. Water can cause an electric shock or a fire.

• Never use flammable spray such as hair spray, lacquer, or paint near the unit. Flammable spray may cause a fire.

• When a fuse blows out, never replace it with one of incorrect ampere ratings or different wires. Always replace any blown fuse with a fuse of the same specification.

• Never inspect or service the unit by yourself. Contact a qualified service person to perform this work.

• Turn off all electrical power before doing any maintenance to avoid the risk of serious electric shock; never sprinkle or spill water or liquids on the unit.

• Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.

• Do not allow children to play on or around the unit to prevent injury.

• The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.

• Do not put a finger or other objects into the air inlet or air outlet. The fan is rotating at high speed and will cause injury.

• Check the unit foundation for damage on a continuous basis, especially if it has been in use for a long time. If left in a damaged condition the unit may fall and cause injury.

• Never touch the internal parts of the controller. To check and adjust internal parts, contact your dealer.

• Be sure to establish a ground.
Do not ground the unit to a utility pipe, arrester, or telephone ground. Incomplete grounding may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.

• Be sure to install a ground fault circuit interrupter. Failure to install a ground fault circuit interrupter may result in electric shock or fire.

⚠ **CAUTION**

• Do not use the air conditioner or heat pump for any other purposes other than comfort cooling or heating.
Do not use the unit for cooling precision instruments, food, plants, animals or works of art.

• Do not place items under the indoor unit as they may be damaged by condensates that may form if the humidity is above 80% or if the drain outlet gets blocked.

• Before cleaning, stop the operation of the unit by turning the power off or by pulling the supply cord out from its receptacle. Otherwise, an electric shock and injury may result.

• Do not wash the air conditioner or heat pump with excessive water. An electric shock or fire may result.

• Avoid placing the controller in a spot splashed with water. Water entering the controller may cause an electric shock or damage the internal electronic parts.

• Do not operate the air conditioner or heat pump when using a room-fumigation type of insecticide.
Failure to observe this could cause the chemicals to be deposited in the unit and can endanger the health of those who are hypersensitive to chemicals.

• Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.

• The appliance is not intended for use by young children or infirm persons without supervision.

• The remote controller should be kept away from children so they cannot play with it.

• Consult with the installation contractor for cleaning.

• Incorrect cleaning of the inside of the air conditioner or heat pump could make the plastics parts break and cause water leakage or electric shock.

• Do not touch the air inlet or aluminum fin of the air conditioner or heat pump as they can cut and cause injury.

• Do not place objects in direct proximity of the outdoor unit. Do not let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once inside the unit, animals can cause the unit to malfunction, and cause smoke or fire when they make contact with electrical parts.

• For care and cleaning, call service personnel.

2

Safety Considerations

⚠ NOTE

- Never press the button of the remote controller with a hard, pointed object. The remote controller may be damaged.

- Never pull or twist the electric wire of the remote controller. It may cause the unit to malfunction.

- Do not place appliances that produce open flames in places that are exposed to the airflow of the unit or under the indoor unit. It may cause incomplete combustion or deformation of the unit due to the heat.

- Do not expose the controller to direct sunlight. The LCD display can become discolored and may fail to display the data.

- Do not wipe the controller operation panel with benzene, thinner, chemical dust cloth, etc. The panel may get discolored or the coating can peel off. If it is heavily dirty, soak a cloth in a water-diluted neutral detergent, squeeze it well and wipe the panel clean. Then wipe it with another dry cloth.

- Dismantling of the unit, disposal of the refrigerant, oil, and additional parts, should be done in accordance with the relevant local, state, and national regulations.

- Operate the air conditioner or heat pump in a sufficiently ventilated area and not surrounded by obstacles. Do not use the air conditioner or heat pump in the following places.
  a. Places with a mist of mineral oil, such as cutting oil.
  b. Locations such as coastal areas where there is a lot of salt in the air.
  c. Locations such as hot springs where there is a lot of sulfur in the air.
  d. Locations such as factories where the power voltage varies a lot.
  e. In cars, boats, and other vehicles.
  f. Locations such as kitchens where oil may splatter or where there is steam in the air.
  g. Locations where equipment produces electromagnetic waves.
  h. Places with an acid or alkaline mist.
  i. Places where fallen leaves can accumulate or where weeds can grow.

- Take snow protection measures. Contact your dealer for the details of snow protection measures, such as the use of a snow protection hood.

- Do not attempt to do electrical work or grounding work unless you are licensed to do so. Consult with your dealer for electrical work and grounding work.
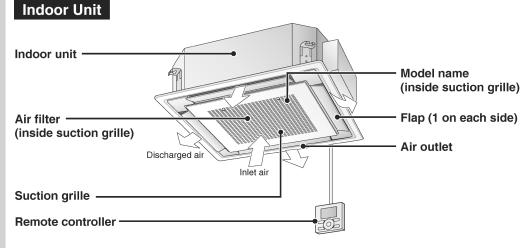
- Pay attention to operating sound. Be sure to use the following places:
  a. Places that can sufficiently withstand the weight of the air conditioner or heat pump yet can suppress the operating sound and vibration.
  b. Places where warm air from the air outlet of the outdoor unit or the operating sound of the outdoor unit does not annoy neighbors.

- Make sure that there are no obstacles close to the outdoor unit. Obstacles close to the outdoor unit may drop the performance of the outdoor unit or increase the operating sound of the outdoor unit.

- Consult your dealer if the air conditioner or heat pump in operation generates unusual noise.

- Make sure that the drainpipe is installed properly to drain water. If no water is discharged from the drainpipe while the air conditioner or heat pump is in the cooling mode, the drainpipe may be clogged with dust or dirt and water leakage from the indoor unit may occur. Stop operating the air conditioner or heat pump and contact your dealer.

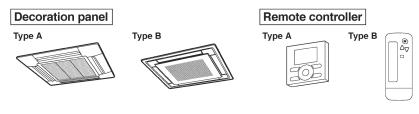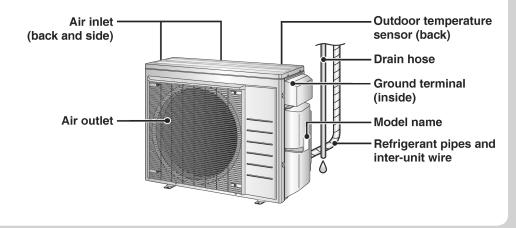This is an appliance that is not accessible to the general public.

3

Names of Parts

Indoor Unit

Indoor unit

Model name
(inside suction grille)

Air filter
(inside suction grille)

Flap (1 on each side)

Discharged air

Air outlet

Inlet air

Suction grille

Remote controller

• The appearance of the suction grille and remote controller may differ between different models.

Decoration panel

Type A   Type B

Remote controller

Type A   Type B

Outdoor Unit

• The appearance of the outdoor unit may differ between different models.

Air inlet
(back and side)

Outdoor temperature
sensor (back)

Drain hose

Ground terminal
(inside)

Air outlet

Model name

Refrigerant pipes and
inter-unit wire

4

Care

Care and Cleaning

⚠ WARNING

- Only a qualified service person is allowed to perform maintenance.
- Before cleaning, be sure to stop unit operation and turn off the circuit breaker.
  Otherwise, an electric shock and injury may result.
- Contact a qualified person regarding the attachment of accessories and be sure to use only accessories specified by the manufacturer.
  If an accessory is attached incorrectly, water leakage, an electric shock, or fire may result.

⚠ CAUTION

- When cleaning, use a sturdy and stable stand and watch your step.
- Make sure to firmly support the suction grille with your hand while performing maintenance tasks to prevent it from falling out.

■ Quick reference

Cleaning parts

Outside panel and flaps
- Wipe the parts with a soft cloth.
- When it is difficult to remove stains, use water or a neutral detergent.
- If the flaps are stained severely, contact your dealer and have the flaps replaced.

If dirty

Air filter
- Vacuum dust or wash the filter.

When the air filter cleaning time indicator lamp on the decoration panel lights up or when "Time to clean filter" displays on the wired remote controller

▶ Page 6

Remote controller
- Wipe them with a soft cloth.

If dirty

Suction grille
- Wipe it with a soft damp cloth.

If dirty ▶ Page 7,8

Notes on cleaning

For cleaning, do not use any of the following:
- Water hotter than 104°F (40°C)
- Volatile liquid such as benzene, gasoline and thinner
- Polishing compounds or liquid insecticide
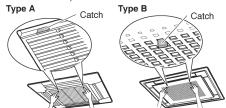- Rough materials such as a scrubbing brush

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■ Cleaning the air filter

Clean the air filter when the air filter cleaning time indicator lamp on the decoration panel lights up or when "Time to clean filter" displays on the wired remote controller.

• If the unit is installed in a room where the impurity content of the air is high, clean the filter more frequently.

• If the filter has become difficult to clean, replace the air filter. (Additional air filter sold separately.)

1. Open the suction grille.

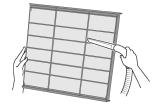• Push the 2 catches away from you and slowly open the suction grille. (To close, perform the steps in reverse.)

Type A　　Catch　　**Type B**　　Catch

2. Remove the air filter.

• Pull the knobs of the air filter downward to disconnect the hooks, and remove the air filter.

Hook

Knob

3. Clean the air filter with a vacuum cleaner or wash it with water.

If the dust does not come off easily

• Wash the air filter using a soft brush and a neutral detergent, then let it dry in the shade.

4. Reattach the air filter.

4-1　Hook one side of the air filter on to the protrusions on the suction grille.

4-2　Push the other side of the air filter into place.

Protrusion

5. Close the suction grille.

• Refer to STEP 1.

6. After turning on the power, reset the filter sign in accordance with the instructions in the operation manual for the wired remote controller or wireless remote controller.

• The air filter cleaning time indicator lamp on the decoration panel turns off or "Time to clean filter" disappears from the display on the wired remote controller.

4

6

Care

Care and Cleaning

■ Cleaning the suction grille (for type A)

1. Open the suction grille.

• Push the 2 catches away from you and slowly open the suction grille. (To close, perform the steps in reverse.)

Catch

2. Remove the suction grille.

• Open the suction grille until it is 45 degrees to the ceiling and then lift it upward.

3. Remove the air filter. ▶Page 6

4. Clean the suction grille.

Wash with a soft bristle brush and a neutral detergent or water, and dry thoroughly.

• **When very dirty**
Directly apply the type of detergent used for cleaning ventilation fans or ovens, wait for about 10 minutes, and then rinse with water.

5. Reattach the air filter. ▶Page 6

6. Reattach the suction grille.

• Refer to STEP 2.

7. Close the suction grille.

• Refer to STEP 1.
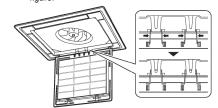
■ Cleaning the suction grille (for type B)

1. Open the suction grille.

• Push the 2 catches away from you and slowly open the suction grille. (To close, perform the steps in reverse.)

Catch

2. Remove the suction grille.

• Open the suction grille so that it hangs by the hinges at 90 degrees to the ceiling.
• Pinch the wire catches inward as shown in the figure.

3. Remove the air filter. ▶Page 6

7

Care

4. Clean the suction grille.

Wash with a soft bristle brush and a neutral detergent or water, and dry thoroughly.

• **When very dirty**
Directly apply the type of detergent used for cleaning ventilation fans or ovens, wait for about 10 minutes, and then rinse with water.

5. Reattach the air filter.   ▶Page 6

6. Reattach the suction grille.
• Refer to STEP 2.

7. Close the suction grille.
• Refer to STEP 1.

■ Prior to a long period of non-use

1. Operate the FAN mode for several hours to dry out the inside.
• To start the operation, refer to the operation manual for the remote controller.

2. After operation stops, turn off the circuit breaker for the room air conditioner.

3. Clean the air filter and reattach it.

4. To prevent battery leakage, take out the batteries from the remote controller. (Only for the wireless remote controller)

■ We recommend periodical maintenance
• In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a qualified contractor.
• For qualified contractor maintenance, please contact the dealer where you bought the air conditioner.

4

8

3P436084-1

5. Remote Controllers

5.1   <BRC1E73> Wired Remote Controller for FDMQ, FFQ Series

Safety Considerations

The original instructions are written in English. All other languages are translation of the original instructions.
Read these **SAFETY CONSIDERATIONS** carefully before operating the remote controller.
Train the customer to operate and maintain the remote controller.
Inform customers that they should store this Operations Manual with the Installation Manual for future reference.
Meanings of **WARNING and CAUTION** Symbols:

⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
⚠ NOTE	Indicates situations that may result in equipment or property-damage accidents only.

● The following pictograms are used in this manual.

🚫	Never do.	❗	Always follow the instructions given.
🚫	Keep water and moisture away.	🚫	Keep wet hands away.

⚠ WARNING	
🚫	● **Do not modify or repair the remote controller.** Consult your Daikin dealer for any modification or for repairs.
🚫	● **Do not relocate or reinstall the remote controller by yourself.** Improper installation may result in electric shocks or fire. Consult your Daikin dealer to relocate or for any reinstallation.
🚫	● **Do not use flammable materials (e.g., hairspray or insecticide) near the remote controller.** Do not clean the product with organic solvents such as paint thinner. The use of organic solvents may cause cracking, damaging the product, causing electric shocks, or fire.
❗	● **Consult the dealer if the remote controller was submerged under water due to a natural disaster, such as a flood or hurricane.** **Do not operate the remote controller at this time or a malfunction, electric shock, or fire can occur.**

2

⸺Items to be Strictly Observed⸺

⚠ **CAUTION**	
🚫	● **Do not allow children to play with the remote controller to avoid causing damage to the product.**
🚫	● **Never disassemble the remote controller.** Touching the interior parts may result in electric shocks or fire. Consult your Daikin dealer for internal inspections and adjustments.
🚫	● **Do not touch the remote controller buttons with wet fingers.** **Touching the buttons with wet fingers can cause an electric shock.**
🚫	● **Do not wash the remote controller.** Doing so may cause electric leakage and result in electric shocks or fire.
🚫	● **Never let the remote controller to get wet.** Water can cause damage to the remote controller, and may cause an electric shock or fire.

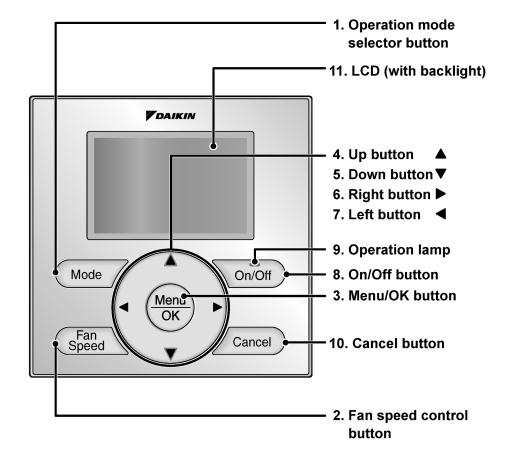| ⚠ **NOTE**	
🚫	● **Never press the button of the remote controller with a hard and pointed object.** The remote controller may be damaged.
🚫	● **Never pull or twist the electric wire of the remote controller.** It may cause the unit to malfunction.
🚫	● **Do not wipe the remote controller with benzine, thinner, chemical dustcloth, etc.** The remote controller may get discolored or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the remote controller clean. And wipe it with another dry cloth.

4

3

Button Locations and Descriptions

1. Operation mode
   selector button

11. LCD (with backlight)

4. Up button   ▲
5. Down button ▼
6. Right button ▶
7. Left button ◀

9. Operation lamp

Mode   On/Off   8. On/Off button

Menu
OK   3. Menu/OK button

Fan
Speed   Cancel   10. Cancel button

2. Fan speed control
   button

Functions other than basic operation items (i.e., On/Off, Operation Mode, Fan Speed, and Setpoint) are set from the menu screen.

NOTE

- Do not install the remote controller in places exposed to direct sunlight, the LCD will be damaged.
- Do not pull or twist the remote controller cord, the remote controller may be damaged.
- Do not use objects with sharp ends to press the buttons on the remote controller, damage may result.

4

1. Operation mode selector button

● Press this button to select the operation mode of your preference. **(See page 10.)**
  * Available modes vary with the indoor unit model.

2. Fan speed control button

● Press this button to select the fan speed of your preference. **(See page 11.)**
  * Available fan speeds vary with the indoor unit model.

3. Menu/OK button

● Used to enter the main menu.
  (See page 20 for the menu items.)
● Used to enter the selected item.

4. Up button ▲

● Used to raise the setpoint.
● The item above the current selection will be highlighted.
  (The highlighted items will be scrolled continuously when the button is continuously pressed.)
● Used to change the selected item.

5. Down button ▼

● Used to lower the setpoint.
● The item below the current selection will be highlighted.
  (The highlighted items will be scrolled continuously when the button is continuously pressed.)
● Used to change the selected item.

6. Right button ▶

● Used to highlight the next items on the right-hand side.
● Each screen is scrolled in the right-hand direction.

7. Left button ◀

● Used to highlight the next items on the left-hand side.
● Each screen is scrolled in the left-hand direction.

8. On/Off button

● Press this button and system will start.
● Press this button again to stop the system.

9. Operation lamp

● This lamp illuminates solid green during normal operation.
● This lamp flashes if an error occurs.

10. Cancel button

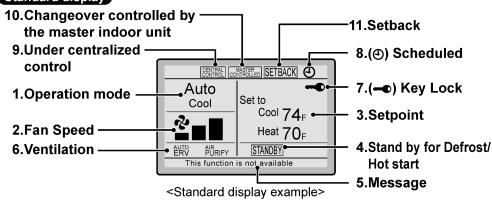● Used to return to the previous screen.

11. LCD (with backlight)

● The backlight will be illuminated for approximately 30 seconds by pressing any button.
● If two remote controllers are used to control a single indoor unit, only the controller accessed first will have backlight functionality.

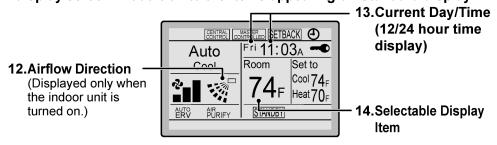**4**

5

Names and Functions

Liquid Crystal Display

● Three types of display mode (Standard, Detailed and Simple) are available.
● Standard display is set by default.
● Detailed and Simple displays can be selected in the main menu. **(See page 40.)**

Standard display

10. **Changeover controlled by the master indoor unit**

9. **Under centralized control**

1. **Operation mode**

2. **Fan Speed**

6. **Ventilation**

11. **Setback**

8. **(⊕) Scheduled**

7. **(━●) Key Lock**

3. **Setpoint**

4. **Stand by for Defrost/ Hot start**
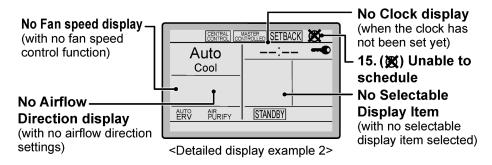
5. **Message**

<Standard display example>

Detailed display

■ **The airflow direction, clock, and selectable item appear on Detailed display screen in addition to the items appearing on Standard display.**

13. **Current Day/Time (12/24 hour time display)**

12. **Airflow Direction**
(Displayed only when the indoor unit is turned on.)

14. **Selectable Display Item**

<Detailed display example 1>

No Fan speed display
(with no fan speed control function)

No Airflow Direction display
(with no airflow direction settings)

No Clock display
(when the clock has not been set yet)

15. **(✕) Unable to schedule**

No Selectable Display Item
(with no selectable display item selected)

<Detailed display example 2>

6

Simple display

1.Operation mode

Auto
Cool
Set to
Heat Cool
70F 74F

Room

74F

STANDBY   SETBACK

14.Selectable Display
Item

3.Setpoint

2.Fan speed

11.Setback
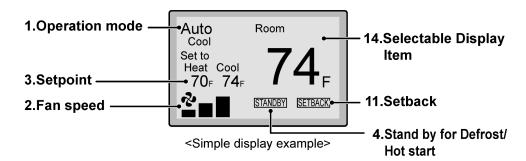
<Simple display example>

4.Stand by for Defrost/
Hot start

4

Note for all display modes

● Depending on the field settings, while the indoor unit is stopped, OFF may be displayed instead of the operation mode and/or the setpoint may not be displayed.

7

Names and Functions

1. Operation mode

- Used to display the current operation mode: Cool, Heat, Vent, Fan, Dry or Auto.
- In Auto mode, the actual operation mode (Cool or Heat) will be also displayed.
- Operation mode cannot be changed when OFF is displayed.
  Operation mode can be changed after starting operation.

2. Fan Speed

- Used to display the fan speed that is set for the indoor unit.
- The fan speed will not be displayed if the connected model does not have fan speed control functionality.

3. Setpoint

- Used to display the setpoint for the indoor unit.
- Use the Celsius/Fahrenheit item in the main menu to select the temperature unit (Celsius or Fahrenheit).

4. Stand by for Defrost/Hot start
" STANDBY " (See page 12.)

If ventilation icon is displayed in this field:
- Indicates that an energy recovery ventilator (ERV) is connected.
  For details, refer to the Operation Manual of the ERV.

5. Message

The following messages may be displayed.
"This function is not available"
- Displayed for a few seconds when an Operation button is pressed and the indoor unit does not provide the corresponding function.
- In a remote control group, the message will not appear if at least one of the indoor units provides the corresponding function.

"Error: Push Menu button"
"Warning: Push Menu button"
- Displayed if an error or warning is detected **(see page 50)**.

"Time to clean filter"
"Time to clean element"
"Time to clean filter & element"
- Displayed as a reminder when it is time to clean the filter and/or element **(see page 48).**

6. Ventilation

- Displayed when an energy recovery ventilator is connected.
- **Ventilation Mode icon.** " AUTO ERV ERV BYPASS "
  These icons indicate the current ventilation mode (ERV only) (AUTO, ERV, BYPASS).
- **Air Purify ICON** " AIR PURIFY "
  This icon indicates that the air purifying unit (Optional) is in operation.

7. ⚷ Key Lock (See page 19.)

- Displayed when the key lock is set.

8. ⊕ Scheduled (See page 30.)

- Displayed if the Schedule or Off timer is enabled.

9. Under Centralized control " CENTRAL CONTROL "

- Displayed if the system is under the management of a multi-zone controller (Optional) and the operation of the system through the remote controller is limited.

10. Changeover controlled by the master indoor unit " MASTER CONTROLLED "
(VRV only)

- Displayed when another indoor unit on the system has the authority to change the operation mode between cool and heat.

8

11. Setback " [SETBACK] " (See page 14.)

● The setback icon flashes when the unit is turned on by the setback control.

12. Airflow Direction " ⌐ "

● Displayed when the airflow direction and swing are set **(see page 23)**.
● If the connected indoor unit model does not include oscillating louvers this item will not be displayed.

13. Current Day/Time (12/24 hour time display)

● Displayed if the clock is set **(see page 42)**.
● If the clock is not set, " -- : -- " will be displayed.
● 12 hour time format is displayed by default.
● Select 12/24 hour time display option in the main menu under "Clock & Calendar".
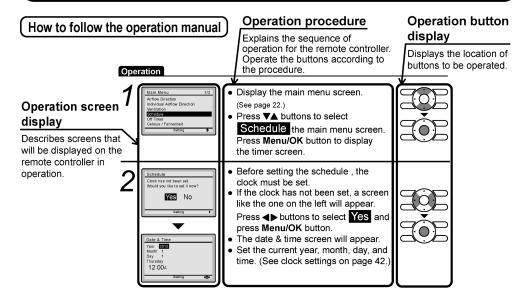
14. Selectable Display Item

● Room temperature is selected by default.
● For other choices see page 41.

15. ⊠ Unable to schedule

● Displayed when the clock needs to be set.
● The schedule function will not work unless the clock is set.
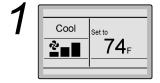
4

9

Basic Operation

Cool/Heat/Auto/Fan Operation (SkyAir and VRV)

How to follow the operation manual

Operation procedure

Explains the sequence of operation for the remote controller. Operate the buttons according to the procedure.

Operation button display

Displays the location of buttons to be operated.

Operation screen display

Describes screens that will be displayed on the remote controller in operation.

Operation

1

Main Menu	1/3
Airflow Direction	
Individual Airflow Direction	
Ventilation	
Schedule	
Off Timer	
Celsius / Fahrenheit	
Setting	⇕

- Display the main menu screen.
  (See page 22.)
- Press ▼▲ buttons to select Schedule the main menu screen. Press **Menu/OK** button to display the timer screen.

2

| Schedule |
| Clock has not been set. |
| Would you like to set it now? |
| Yes No |
| Setting ▶ |

▼

| Date & Time |
| Year 2015 |
| Month 1 |
| Day 1 |
| Thursday |
| 12:00A |
| Setting ◀⇕▶ |

- Before setting the schedule , the clock must be set.
- If the clock has not been set, a screen like the one on the left will appear.
  Press ◀▶ buttons to select Yes and press **Menu/OK** button.
- The date & time screen will appear.
- Set the current year, month, day, and time. (See clock settings on page 42.)

Preparation

- For mechanical protection purposes, apply power to the outdoor units at least six hours before starting the operation of the system.
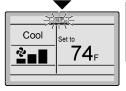
Operation

1

| Cool | Set to |
| 🌀▮▮ | 74F |

▼

| Cool | Set to |
| 🌀▮▮ | 74F |

- Press **Mode** button several times until the desired mode Cool, Heat, Fan, or Auto mode is selected.

  *Unavailable operation modes are not displayed.

  Note
  - Both heat and cool mode may not be selected if the unit is master controlled. See page 16 if MASTER CONTROLLED icon flashes.
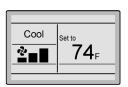
10

2

● Press **On/Off** button.
The Operation lamp will illuminate solid green and the system will start operating.
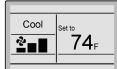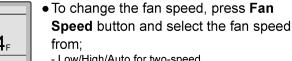
3

Cool | Set to
74F

● The setpoint will increase by 1°F (or 1°C) when ▲ button is pressed and decrease by 1°F (or 1°C) when ▼ button is pressed.

＊Setpoint is not available in fan or dry mode.

4

Cool | Set to
74F

Low   Medium

Auto   High

three fan speeds

Low   Med Low

Auto   Medium

High   Med High

five fan speeds

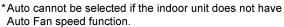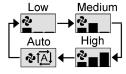● To change the fan speed, press **Fan Speed** button and select the fan speed from;
- Low/High/Auto for two-speed
- Low/Medium/High/Auto for three-speed
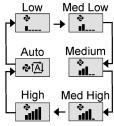- Low/Med Low/Medium/Med High/High/Auto for five-speed
depending on the indoor unit model.

＊Auto cannot be selected if the indoor unit does not have Auto Fan speed function.
＊The system may change the fan speed automatically for equipment protection purposes.
＊The system may turn off the fan when the room temperature is satisfied.
＊It is normal for a delay to occur when changing the fan speed.
＊If the Auto is selected for the fan speed, the fan speed varies automatically based on the difference between setpoint and room temperature.

4

11

Basic Operation

5

● Adjust Airflow Direction from the main menu
(see page 23).

* If the connected indoor unit does not have oscillating louvers,
this function will not be available.

6

On/Off

● When **On/Off** button is pressed again,
the system will stop operating and the
Operation lamp will turn off.

* When the system is stopped while in the heating
mode, the fan will continue to operate for
approximately one minute to remove residual
heat from the indoor unit.

Note
● To prevent condensation water damage or system failure, do not
shut off the power supply to the indoor unit immediately after
operation. Wait at least five minutes for the condensate pump to
finish draining residual water from the indoor unit.

Characteristics of Heat Mode

**The system automatically controls the following operating modes to
prevent the reduction of heating capacity and space comfort.**

Defrost operation

● The system will automatically go into defrost operation to prevent frost
accumulation at the outdoor unit and subsequent loss of heating
capacity.
● The indoor unit fan will stop, and " STANDBY " will be displayed on the
remote controller.
● The system will finish the Defrost operation and return to normal
usually within six to eight minutes. It won't last for more than ten
minutes.

Hot start

● When the system starts heating operation, the indoor unit fan will
operate with a delay in order to prevent a cold draft.
(In that case, " STANDBY " will be displayed on the remote controller.)

12

Dry Mode

Preparation

● For equipment protection purposes, apply power to the outdoor units at least six hours before starting the operation of the system.
● The dry mode may not be selected if the remote controller is master controlled and the system is not already in the cooling mode of operation. (see page 18 for details)

Operation

1

Dry

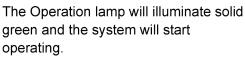● Press **Mode** button several times until the Dry mode is selected.

* The dry mode may not be available depending on the type of indoor unit.

2

On/Off

● Press **On/Off** button.
The Operation lamp will illuminate solid green and the system will start operating.

* In Dry mode, the system maintains automatic temperature and fan speed control. Therefore, temperature setpoint or fan speed settings are not available while the indoor unit is in the Dry mode.

3

● Adjust Airflow Direction from the main menu (see page 23).

* If the connected indoor unit does not have oscillating louvers, this function will not be available.

13

Basic Operation

4

On/Off

• When **On/Off** button is pressed again, the system will stop operating and the Operation lamp will turn off.

Note
● To prevent condensation water damage or system failure, do not shut off the power supply to the indoor unit immediately after operation. Wait at least five minutes for the condensate pump to finish draining residual water from the indoor unit.

Characteristic of Dry mode

The Dry mode dehumidifies the space at reduced cooling capacity to prevent the room temperature from dropping to an uncomfortable level.
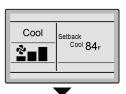
Setback

The Setback function can be used to maintain the space temperature in an assigned range for an unoccupied period.

Note
● When enabled, the Setback mode becomes active when the indoor unit is turned off by either the user, a schedule event or an off timer.
● This function is not available by default. It can be enabled by the system installer.

14

Operation

1

Cool	Setback Cool 84ₓ

↓

Cool	Setback Cool 84ₓ

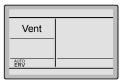● The setback icon flashes when the unit is turned on by the setback control.

Ventilation Mode When the Indoor Unit is Interlocked with Energy Recovery Ventilator

Preparation

● For equipment protection purposes, apply power to the outdoor units at least six hours before starting the operation of the system.

Operation

1

Vent	
AUTO ERV	

● When operating the energy recovery ventilator (ERV) between seasons without the indoor unit, set the control to ventilation mode.

2

● Changes to the ventilation mode are made from the main menu.

＊Ventilation Mode: Auto, ERV, and Bypass

3

● Changes to the ventilation rate are made from the main menu.

＊Ventilation Rate: Low or High

15

Basic Operation

4 | ● Press **On/Off** button.
The Operation lamp will illuminate solid green and the system will start operating.

5 | ● When **On/Off** button is pressed again, the system will stop operating and the Operation lamp will turn off.
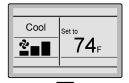
Setting the Cool / Heat Changeover Master

(VRV only)

Setting Changes See page 18 for an explanation of the cool/heat changeover master indoor unit.

1 | Cool | Set to | 74F

Cool | Set to | 74F

● Press **Mode** button on the remote controller of the changeover master indoor unit for at least four seconds while the backlight is illuminated.

● The "MASTER CONTROLLED" icon on each remote controller for the indoor units connected to the same outdoor unit or Branch Selector unit will start flashing.

*Vent mode setting changes are possible regardless of the cool/heat changeover master indoor unit.
*If the outdoor unit is configured as cool/heat changeover master, all remote controllers serving the associated indoor units will display its "MASTER CONTROLLED" icon.

● Set the cool/heat changeover master indoor unit as outlined below.

16

Selection Settings   The icon "⬚MASTER CONTROLLED" will flash on all remote controllers when the power is turned ON for the first time.

2

Cool	Set to
❄∎∎	74ᶠ

▼

Cool	Set to
❄∎∎	74ᶠ

● Press **Mode** button on the remote controller of the indoor unit which is to serve as the cool/heat changeover master.
The remote controller for the changeover master indoor unit is established and the ⬚MASTER CONTROLLED icon is no longer displayed. Other remote controllers in the system (indoor units served by the same outdoor unit or indoor units served by the same branch selector unit) will now display the ⬚MASTER CONTROLLED icon.

3

Cool	Set to
❄∎∎	74ᶠ

● Press **Mode** button on the remote controller of the indoor unit designated as the cool/heat changeover master (the remote controller not displaying the ⬚MASTER CONTROLLED icon) repeatedly until the desired mode is selected. The display will change to **Fan**, **Dry**, **Auto**, **Cool**, **Heat** each time the button is pressed.
● Simultaneously, the other indoor units on the system will follow suit and change modes to reflect the new mode selected at the changeover master remote controller.

17

Basic Operation

Cool / Heat Mode Selection Availability

● "Cool", "Heat", and "Auto" are all only available for selection on the cool/heat changeover master indoor unit. The following table indicates the available operating modes of the other indoor units on the system based upon the selected mode of the master indoor unit.

When the master indoor unit is set to	The other indoor units in the system can be set to			
	Cool	Dry	Heat	Fan
Cool mode	✓	✓		✓
Dry mode	✓	✓		✓
Heat mode			✓	✓
Fan mode				✓
Auto mode (Cooling operation)	✓	✓		✓
Auto mode (Heating operation)			✓	✓

Precautions for Selecting the Cool / Heat Changeover Master Indoor Unit

● The cool/heat changeover master must be set for a single indoor unit in the following applications

(2-Pipe Heat Pump System)

(3-Pipe Heat Recovery System)

Branch Selector unit:
The Branch Selector unit is used for cooling or heat mode selection.

Indoor unit

Indoor unit

A number of indoor units are connected to a single outdoor unit.
Set any one of the indoor units as the cool/heat changeover master.

A number of indoor units are connected to a single Branch Selector unit.
Set any one of the indoor units as the cool/heat changeover master.

18

Key Lock

Operation   Confirm and cancel Key Lock settings in the basic display screen.

1

Cool	Set to
	74F

Basic screen

● Press **Menu/OK** button for at least four seconds while the backlight is illuminated.

2

Cool	Set to
	74F

● "🔑" is displayed.
All buttons are disabled when the keys are locked.
● To cancel the key lock mode, continue pressing **Menu/OK** button for at least four seconds while the backlight is illuminated.

4

19

Quick Reference

■The main menu has the following items.

Menu item		Description	Reference page
Airflow Direction		**Used to configure airflow direction settings.** ● The airflow direction louver is automatically operated up and down (left and right). ● The fixed airflow directions are configurable for five positions. * This function is not available on all indoor unit models.	23
Individual Airflow Direction (depends on indoor unit model)	**Louver Setting**	Set the airflow direction individually for each of the 4 louvers. ● Maximum 16 units (unit 0 till 15).	25
	Louver Setting List	Setting table for louver.	26
	Reset All Louvers Position	Reset all louvers to factory default setting.	27
Ventilation Ventilation operation settings for energy recovery ventilator	**Ventilation Rate**	Used to set "Low" or "High"	28
	Ventilation Mode	Used to set Auto, ERV, or Bypass.	29
Schedule	**Daily Patterns**	● Day settings are selected from four patterns, i.e., "7Days", "Weekday/Sat/Sun", "Weekday/Weekend", and "Everyday".	31
	Settings	● Set the startup time and operation stop time. ON: Startup time, cooling and heating temperature setpoints can be configured. OFF: Operation stop time, cooling and heating setback temperature setpoints can be configured. (−−: Indicates that the setback function is disabled for this time period.) __: Indicates that the temperature setpoint and setback temperature setpoint for this time period is not specified. The last active setpoint will be utilized. ● Up to five actions can be set for each day.	32
Off Timer		**Used to set the run-time for the indoor unit using this controller.** ● Possible to set in 10 minute increments from 30 to 180 minutes.	35
Celsius / Fahrenheit		● Used to select whether temperature values will be displayed in Celsius or Fahrenheit.	—

20

4

Menu item		Description	Reference page
Filter Auto Clean		Set the time when the filter needs to be automatically cleaned. For the detailed operation refer to the Operation Manual of the self cleaning decoration panel.	—
Maintenance Information		Used to display the maintenance information.	37
Configuration	**Draft Prevention** (Only available with Occ. sensor installed indoor unit model)	The draft prevention function can be **enabled** or **disabled**. When enabled, the Occ. sensor will adjust the louver's position to prevent air blowing directly on occupant.	38
	Contrast Adjustment	Used to make LCD contrast adjustment.	39
	Display	**Used to set the display mode.** ● Display mode Standard, Detailed, or Simple display ● Detailed and Simple displays provide the selectable display item among Room Temp, System, None or Outside Air Temp.	40
Current Settings		● Used to display a list of current settings for available items.	42
Clock & Calendar	**Date & Time**	**Used to configure date and time settings and corrections.** ● The default time display is 12H. ● The clock will maintain accuracy to within ±30 seconds per month. ● If there is a power failure for a period not exceeding 48 hours, the clock will continue working with the built-in backup power supply.	42
	12H/24H Clock	The time can be displayed in either a 12 hour or a 24 hour time format.	45
Daylight Saving Time		Used to adjust the clock in observance of daylight saving time.	45
Language		The display language can be selected between **English**, **Francais**, or **Espanol**.	48

Note: Available setting items vary with the indoor unit model.

Sub Remote Controller Menu Items	
If two remote controllers are connected to a single indoor unit, the following menu items are not set in the sub remote controller. In this case, the following items should be configured in the main remote controller.	Indoor unit
● Individual Airflow Direction ● Setback ● Schedule ● Draft Prevention ● Off timer	Outdoor unit Two remote controllers in control

21

Menu Options

Navigating the Main Menu Screen

■Display Method for Main Menu

Operation

1

Cool | Set to
74 F

Basic screen

● Press **Menu/OK** button.

2

Main Menu   1/3
Airflow Direction
Individual Airflow Direction
Ventilation
Schedule
Off Timer
Celsius / Fahrenheit
Setting

Main menu screen

● The main menu screen is displayed.

⇦ Instructions for navigating the main menu will appear.

3

● Selecting items from the main menu.
　1. Press ▼▲ buttons to select the desired item to be set.
　2. Press **Menu/OK** button to display the details for the selected item.

4

● To go back to the basic screen from the main menu, press **Cancel** button.

Note

● If a button is not pressed for 5 minutes during configuration, the controller will automatically revert to the basic screen.

22

Airflow Direction

■Configuring Airflow direction

Operation

1

Main Menu	1/3
Airflow Direction	
Individual Airflow Direction	
Ventilation	
Schedule	
Off Timer	
Celsius / Fahrenheit	
Setting	

● Display the main menu screen.
(See page 22.)
● Press ▼▲ buttons to select
Airflow Direction and press
Menu/OK button.

2

Airflow Direction
Position 0

Setting

Airflow Direction
Swing

Setting

Airflow direction
setting (up/down)

Airflow Direction
Swing

Setting

Airflow direction
setting (left/right)

(1) Adjusting method when there is single
airflow direction.
● Select the desired airflow direction
from Position 0 , Position 1 ,
Position 2 , Position 3 , Position 4 ,
Swing or Auto using
▼▲ buttons.
● Press **Menu/OK** button to confirm the
settings and to return to the basic
screen.

Note
● The airflow directions appear on the screen as follows:

Up/down direction	Left/right direction	0 : Position 0
		1 : Position 1
		2 : Position 2
		3 : Position 3
		4 : Position 4

Notice
These operation and screen are example of
single airflow direction type indoor unit.
It is different from Single flow cassette model.
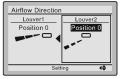
23

Menu Options

3

Airflow Direction
| Louver1 | Louver2 |
| Position 0 | Position 0 |

When front/back
direction is selected

Airflow Direction
| Louver1 | Louver2 |
| Position 0 | Position 0 |

Setting

When left/right
direction is selected

(2) Adjusting method for selecting dual
    airflow directions.
● Press ◀▶ buttons, to select front/back
  or left/right direction setting.

┌─ **Notice** ─────────────────────────┐
These operation and screen are example of
dual airflow directions type indoor unit
(Single flow cassette model).
└──────────────────────────────────┘

4

Airflow Direction
| Louver1 | Louver2 |
| Position 0 | Position 0 |

Setting

Airflow Direction
| Louver1 | Louver2 |
| Swing | Position 0 |

Setting

Airflow Direction
| Louver1 | Louver2 |
| Swing | Swing |

Setting

● Select the desired airflow direction
  from Position 0 , Position 1 , Position 2 ,
  Position 3 , Position 4 , Swing or Auto
  using ▼▲ buttons.
● Selecting Swing will cause the airflow
  direction louver to swing position 0 to 4.
● Setting Auto is not available when left/
  right direction is selected.
● Press **Menu/OK** button to confirm the
  settings and return to the basic screen.

5

Cool	Fri 11:03A
	Room	Set to
	74F	74F

Basic screen
(Detailed display)

● If dual airflow directions are set, then the
  dual airflow direction icons are displayed
  in the basic screen.

24

Individual Airflow Direction

■Louver Setting

Operation

1
```
Main Menu                    1/3
Airflow Direction
Individual Airflow Direction
Ventilation
Schedule
Off Timer
Celsius / Fahrenheit
            Setting
```
● Display the main menu screen.
(See page 22.)
● Select Individual Airflow Direction and
press **Menu/OK** button.

2
```
Individual Airflow Direction
Louver Setting
Louver Setting List
Reset All Louvers Position


            Setting
```
● Select Louver Setting and press
Menu/OK button.

3
```
Louver Setting
   Outlet          Direction
  Unit 0          No Ind Set


 Outletmark
     □
            Setting
```
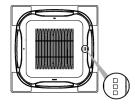● Use ▼▲ buttons to select the unit and
outlet mark.
● Maximum 16 units for each group (unit 0
till 15) can be selected.

Note
In case of four outlets (cassette type), you can control each
one of the four louvers individually (the following marks are
beside each air outlet: □, □□, □□□, □□□□).

Menu Options

4

Louver Setting
Outlet | Direction
Unit 0 | No Ind Set
Outletmark
□□□□
Setting

- Press ◀▶ button to select the airflow direction.
- Use ▼▲ buttons to change the airflow direction to the following:
  No Ind Set , Position 0 , Position 1 , Position 2 , Position 3 , Position 4 , Swing or Blocked .
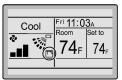 No Ind Set : No Individual Louver Setting.
  Blocked : Individual airflow is blocked.
- Press **Menu/OK** button to confirm the settings and to return to the basic screen.

5

Cool | Fri 11:03A
Room | Set to
74F | 74F

Basic screen
(Detailed display)

- If individual airflow direction is set, then the individual airflow direction icon is displayed in the basic screen.

■Louver Setting List

Operation

1

Individual Airflow Direction
Louver Setting
Louver Setting List
Reset All Louvers Position
Setting

- Display the individual airflow direction screen. (See page 25.)
- Press ▼▲ buttons to select Louver Setting List and press **Menu/OK** button.

2

Louver Setting List
Unit 0
Outletmark | Direction | Indiv.
□ | Position 0 | OFF
□□ | Position 0 | OFF
□□□ | Position 0 | OFF
□□□□ | Position 0 | OFF

- A table shows the current settings. Press ▼▲ buttons to go to the next unit.
- Press **Cancel** button to return to the previous menu.

26

■Reset All Louvers Position

Operation

1

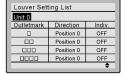| Individual Airflow Direction |
| Louver Setting |
| Louver Setting List |
| Reset All Louvers Position |
| Setting |

- Display the individual airflow direction screen.
  (See page 25.)
- Press ▼▲ buttons to select Reset All Louvers Position and press **Menu/OK** button.

2

| Reset All Louvers Position |
| Clear individual airflow setting? |
| **Yes** No |
| Setting |

- Press ◄► buttons to select Yes .
- Press **Menu/OK** button to confirm the reset and to return to the basic screen.

4

Operational Details and Functions

There are two types of airflow direction settings.

Airflow direction swing

The louvers automatically oscillate up and down.

```
               Indoor unit
```

(Automatic swing)   (Automatic swing)

Airflow direction

You can select from one of five fixed directions. (This has no relation to the angle of the louvers.)

```
               Indoor unit
```

(Desired position)   (Desired position)

Movement of airflow direction louver

Under the operating conditions shown next, airflow direction is controlled automatically. Actual operation may be different than what is displayed on the remote controller.

27

Menu Options

Operating condition	● Room temperature is higher than the remote controller's setpoint (in heating operation). ● When defrosting (in heating operation). (The airflow discharges horizontally to avoid creating a draft for the room occupants.) ● Under continuous operation with the airflow discharging horizontally.

Ventilation

■Ventilation screen display properties

Operation

1

Main Menu   1/3
Airflow Direction
Individual Airflow Direction
Ventilation
Schedule
Off Timer
Celsius / Fahrenheit
                 Setting   ↕

▼

Ventilation
Ventilation Rate
Ventilation Mode

                 Setting   ↕

● Display the main menu screen.
  (See page 22.)
● Press ▼▲ buttons to select Ventilation
  on the main menu screen.
  (For models with no ventilation function,
  Ventilation will not be displayed on the main
  menu screen.)
  Press **Menu/OK** button to display the
  ventilation screen.

■Changing the ventilation rate

Operation

1

Ventilation
Ventilation Rate
Ventilation Mode

                 Setting   ↕

● Navigate to the ventilation screen
  (see above).
● Press ▼▲ buttons to select
  Ventilation Rate on the ventilation
  screen.
  Press **Menu/OK** button to display the
  ventilation rate screen.

28

2

| Ventilation |
| Ventilation Rate |
| **High** |
| Setting |

● Press ▼▲ buttons to toggle between the Low and High settings.

＊Only modes that can be set are displayed.

3

● Selecting and confirming the desired ventilation rate will take you back to the basic screen.
(Pressing **Cancel** button takes you back to the previous screen without changing the ventilation rate.)

4

■Changing the ventilation mode

Operation

1

| Ventilation |
| Ventilation Rate |
| Ventilation Mode |
| Setting |

● Display the ventilation screen.
(See page 28.)

● Press ▼▲ buttons to select Ventilation Mode on the ventilation screen.
Press **Menu/OK** button to display the ventilation mode screen.

2

| Ventilation |
| Ventilation Mode |
| **Auto** |
| Setting |

● Pressing ▼▲ buttons cycles through the settings in the order shown below.

Auto ◀▶ **ERV** ◀▶ **Bypass**

＊Only modes that can be set are displayed.

29

Menu Options

3

Cool	Set to
🌀▪■	74_F
AUTO ERV	

- Selecting and confirming the desired ventilation mode will take you back to the basic screen.
  (Pressing **Cancel** button takes you back to the previous screen without changing the ventilation mode.)
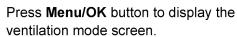
Ventilation Mode

Auto mode

Using information from the indoor unit (cool, heat, fan, and setpoint) and the energy recovery ventilator unit (indoor and outdoor temperatures), the ventilation mode is automatically changed between ERV and Bypass.

ERV mode

Outside air is passed through the ERV core and is supplied to the conditioned space.

Bypass mode

Outside air is supplied to the conditioned space without passing through the ERV core.

Schedule

■Setting the schedule

Operation   The schedule will disappear when a multizone controller is connected, but can be re-enabled by the system installer.

1

Main Menu	1/3
Airflow Direction	
Individual Airflow Direction	
Ventilation	
Schedule	
Off Timer	
Celsius / Fahrenheit	
Setting	

- Display the main menu screen.
  (See page 22.)
- Press ▼▲ buttons to select Schedule .
  Press **Menu/OK** button to display the schedule screen.
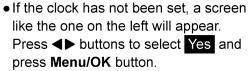
30

4

Schedule
Clock has not been set.
Would you like to set it now?
Yes   No
Setting ▶

▼

Date & Time
Year **2015**
Month   1
Day   1
Thursday
12:00ᴀ
Setting ◀↕▶

- Before setting the schedule, the clock must be set.
- If the clock has not been set, a screen like the one on the left will appear. Press ◀▶ buttons to select **Yes** and press **Menu/OK** button.
- The date & time screen will appear.
- Set the current year, month, day, and time. (See clock settings on page 42.)

2

Schedule
Enable/Disable
Daily Patterns
Settings
Setting ↕

- Press ▼▲ buttons to select the desired function on the schedule screen and press **Menu/OK** button.

■Daily Patterns

Operation

1

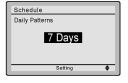| Schedule |
| --- |
| Enable/Disable |
| Daily Patterns |
| Settings |
| Setting ↕ |

- The schedule screen will appear.
- Press ▼▲ buttons to select **Daily Patterns** on the schedule screen.
  The daily patterns screen will appear when **Menu/OK** button is pressed.

2

Schedule
Daily Patterns
7 Days
Setting ↕

- Press ▼▲ buttons to select **7 Days** , **Weekday/Sat/Sun** , **Weekday/Weekend** or **Everyday** on the daily patterns screen.
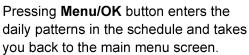 The confirmation screen will appear when **Menu/OK** button is pressed.

31

Menu Options

3

Schedule
Save the settings?

Yes   No

Setting   ▶

- Press ◀▶ buttons to select **Yes** on the confirmation screen.
Pressing **Menu/OK** button enters the daily patterns in the schedule and takes you back to the main menu screen.

■Settings

Operation

1

Schedule
Enable/Disable
Daily Patterns
Settings

Setting   ⬍

- The schedule screen will appear.
- Press ▼▲ buttons to select **Settings** on the schedule screen.
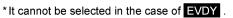The settings screen will appear when **Menu/OK** button is pressed.

2

Schedule

	Time	Act	Cool	Heat
Mon	--:--	--	—	—
	--:--	--	—	—
	--:--	--	—	—
	--:--	--	—	—
	--:--	--	—	—

Setting   ◀⬍▶

- Press ▼▲ buttons to select the day to be set.

* It cannot be selected in the case of **EVDY** .

3

Schedule

	Time	Act	Cool	Heat
Mon	**6**:00ᴀ	--	—	—
	--:--	--	—	—
	--:--	--	—	—
	--:--	--	—	—
	--:--	--	—	—

Setting   ◀⬍▶

Schedule

	Time	Act	Cool	Heat
Mon	6:**00**ᴀ	--	—	—
	--:--	--	—	—
	--:--	--	—	—
	--:--	--	—	—
	--:--	--	—	—

Setting   ◀⬍▶

- Input the time for the selected day.
- Press ◀▶ buttons to move the highlighted item and press ▼▲ buttons to input the desired operation start time. Each press of ▼▲ buttons moves the numbers by 1 hour or 1 minute.

32

4

Schedule			
	Time	Act	Cool	Heat
Mon	6:00A	--	___	___
	--:--	--		
	--:--	--	___	___
	--:--	--	___	___
	--:--	--	___	___
		Setting		

▼

Schedule			
	Time	Act	Cool	Heat
Mon	6:00A	ON	90F	60F
	--:--	--		
	--:--	--	___	___
	--:--	--	___	___
	--:--	--	___	___
		Setting		

● Press ◀▶ buttons to move the highlighted item and press ▼▲ buttons to configure ON/OFF/-- settings.
--, ON, or OFF changes in sequence when ▼▲ buttons are pressed.

ON: The temperature setpoints can be configured.
OFF: The setback temperature setpoints can be configured.
– –: The temperature setpoints and setback temperature setpoints become disabled.

Schedule			
	Time	Act	Cool	Heat
Mon	6:00A	ON	75F	70F
	8:00A	OFF	--F	___
	--:--	--	___	___
	--:--	--	___	___
	--:--	--	___	___
		Setting		

● The cooling and heating temperature setpoints for both ON and OFF (Setback) are configured.

__: Indicates that the temperature setpoint and setback temperature setpoint for this time period is not specified. The last active setpoint will be utilized.
––: Indicates that the setback function is disabled for this time period.

5

Schedule			
	Time	Act	Cool	Heat
Mon	6:00A	ON	75F	70F
	8:00A	OFF	85F	50F
	5:30P	ON	75F	70F
	10:00P	--	___	___
	--:--	--	___	___
		Setting		

▼

Schedule			
	Time	Act	Cool	Heat
Mon	6:00A	ON	75F	70F
	8:00A	OFF	85F	50F
	5:30P	ON	75F	70F
	10:00P	OFF	82F	62F
	--:--	--	___	___
		Setting		

▼

Schedule			
	Time	Act	Cool	Heat
Tue	6:00A	ON	75F	70F
	8:00A	OFF	85F	50F
	5:30P	ON	75F	70F
	10:00P	OFF	82F	62F
	--:--	--	___	___
		Setting		

A maximum of five actions per day can be set.
● Press **Menu/OK** button when settings for each day are completed. The confirmation screen will appear.

To copy the settings for the previous day, press **Mode** button so that the existing settings will be copied.
Example: The contents for Monday are copied by pressing **Mode** button after selecting Tuesday.

33

Menu Options

6

Schedule
Save the settings?
Yes No
Setting ▶

• Press ◀▶ buttons to select **Yes** on the confirmation screen.
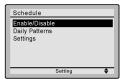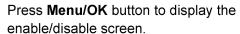Pressing **Menu/OK** button confirms the settings for each day and takes you back to the basic screen.

💡 Enabling or disabling the schedule

Operation

1

Schedule
Enable/Disable
Daily Patterns
Settings
Setting ⬍

• Display the schedule screen.
(See page 30.)
• Press ▼▲ buttons to select **Enable / Disable** on the schedule screen.
Press **Menu/OK** button to display the enable/disable screen.

2

Schedule
Enable/Disable
Disable
Setting ⬍

• Press ▼▲ buttons to select **Enable** or **Disable** on the enable/disable screen.
Press **Menu/OK** button after selecting the item. The confirmation screen is displayed.

3

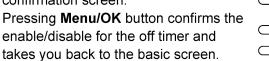| Schedule |
| --- |
| Save the settings? |
| **Yes** No |
| Setting ▶ |

• Press ◀▶ buttons to select **Yes** on the confirmation screen.
Pressing **Menu/OK** button confirms the enable/disable setting for the schedule and takes you back to the basic screen.

34

Off Timer

■Configuring and Confirming the Off Timer settings

Operation

1

> Main Menu   1/3
> Airflow Direction
> Individual Airflow Direction
> Ventilation
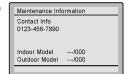> Schedule
> Off Timer
> Celsius / Fahrenheit
> Setting

- Display the main menu screen.
  (See page 22.)
- Press ▼▲ buttons to select the
  Off Timer on the main menu screen.
  Press **Menu/OK** button to display the off
  timer screen.

2

> Off Timer
> Enable/Disable
> Settings
> Setting

- Press ▼▲ buttons to select
  Settings on the off timer screen.
  Press **Menu/OK** button to display the
  configuration screen.

3

> Off Timer
> After you turn on the unit,
> it will automatically
> turn off in
> 60
> minutes.
> Setting

- Use ▼▲ buttons to set the time from
  operation start until the unit
  automatically stops.
  Selections can be made in increments of
  10 minutes from 30 to 180 minutes.
  Holding down the button causes the
  number to change continuously.
- Select the desired time and press **Menu/
  OK** button.
  The confirmation screen will appear.

4

> Off Timer
> Save the settings?
>
> Yes   No
> Setting

- Press ◄► button to select Yes on the
  confirmation screen.
  Pressing **Menu/OK** button confirms the
  off timer and takes you back to the basic
  screen.

35

Menu Options

Enabling or disabling the off timer

Operation

1

Off Timer
Enable/Disable
Settings
Setting ↕

● Navigate to the off timer screen.
  (See page 35.)
● Press ▼▲ buttons to select
  Enable/Disable on the off timer screen.
  Press **Menu/OK** button to display the
  enable/disable screen.

2

Off Timer
Enable/Disable
Disable
Setting ↕

● Press ▼▲ buttons to select Enable or
  Disable on the enable/disable screen.
  Press **Menu/OK** button after selecting
  the item. Then the confirmation screen
  is displayed.

3

Off Timer
Save the settings?
Yes   No
Setting ▶

● Press ◀▶ button to select Yes on the
  confirmation screen.
  Pressing **Menu/OK** button confirms the
  enable/disable for the off timer and
  takes you back to the basic screen.

36

Maintenance Information

■Displaying the service contact and model information

Operation

1

Main Menu	2/3
Filter Auto Clean	
Maintenance Information	
Configuration	
Current Settings	
Clock & Calendar	
Daylight Saving Time	
Setting	

- Display the main menu screen.
  (See page 22.)
- Press ▼▲ buttons to select
  Maintenance Information on the main
  menu screen and press **Menu/OK**
  button.

2

Maintenance Information

Contact Info
0123-456-7890

Indoor Model   ---/000
Outdoor Model   ---/000

- The phone number for the contact is
  displayed at the top of the screen.
  (If it has not yet been entered, it will not be
  displayed.)
- The model information of the indoor and
  outdoor units for your product will be
  displayed on the bottom of the screen.
  (For some models the product code may be
  displayed.)

  * The model name will not be displayed if the
    indoor unit PCB has been replaced.

* The error code history may also be displayed.
  If the Operation lamp is not flashing, the unit is
  working properly.
  The error code history is no longer displayed if
  you press **On/Off** button for more than
  4 seconds.

37

Menu Options

Configuration

■Draft Prevention

Operation

1

    Main Menu   2/3
    Filter Auto Clean
    Maintenance Information
    Configuration
    Current Settings
    Clock & Calendar
    Daylight Saving Time
            Setting

- Display the main menu screen.

  (See page 22.)

- Press ▼▲ buttons to select
  Configuration and press **Menu/OK**
  button.

2

    Configuration
    Draft Prevention
    Contrast Adjustment
    Display

            Setting

- Press ▼▲ buttons to select
  Draft Prevention and press
  Menu/OK button.

3

    Draft Prevention
    Enable/Disable

          Disable

            Setting

- Press ▼▲ buttons to select
  Enable or Disable .
- The confirmation screen will appear
  when **Menu/OK** button is pressed.

4

    Draft Prevention
    Save the settings?

        Yes   No

            Setting

- Press ◄► buttons to select Yes .
- Press **Menu/OK** button to confirm the
  settings and to return to the basic
  screen.

38

■Contrast Adjustment

Operation

1
Configuration
Draft Prevention
Contrast Adjustment
Display
Setting

● Navigate to the configuration screen.
(See page 38.)
● Press ▼▲ buttons to select
Contrast Adjustment on the
configuration screen.
Press **Menu/OK** button to display the
contrast adjustment screen.

2
Contrast Adjustment
▲ Dark
▼ Light
Setting

● On the contrast adjustment screen press
▼▲ buttons until you reach the desired
contrast.
After setting, press **Menu/OK** button and
return to the basic screen.

4

39

Menu Options

■Display
Display Mode

Operation

1

Configuration
Draft Prevention
Contrast Adjustment
Display
Setting

● Navigate to the configuration screen.
  (See page 38.)
● Press ▼▲ buttons to select
  `Display` on the configuration screen.
  Press **Menu/OK** button to display the
  display screen.

2

Display	
Display Mode	Standard
Display Item	Room
Setting	

● Press ▼▲ buttons to select
  `Display Mode` on the display screen.
  Press **Menu/OK** button to display the
  display mode screen.

3

Display
Display Mode
`Standard`
Setting

● Press ▼▲ buttons to select `Standard` ,
  `Detailed` or `Simple` on the display
  screen.
● Press **Menu/OK** button to confirm the
  settings and return to the basic screen.

  * Refer to **Display Item** to change the selectable
   display item for Detailed and Simple display
   modes. (See page 41.)

40

Display Item

Operation

1

Display
Display Mode   Standard
Display Item   Room

Setting

● Navigate to the display screen.
  (See page 40.)
● Press ▼▲ buttons to select
  Display Item on the display screen.
  Press **Menu/OK** button to display the
  display item screen.

2

Display
Display Item

Room Temp

Setting

● Pressing ▼▲ buttons displays the following.

  Room Temp ◄►* System
  * Outside Air Temp ◄► None

  *Some models may not display these items even if they are selected.

● Be sure to read the following notes regarding display
  of room temperature and outside air temperature.

  Room Temp
              .... The temperature at the remote
              controller.
              The temperature that is detected may
              be affected by the location of the
              remote controller.

  Outside Air Temp
              .... The temperature at the outdoor unit.
              The temperature that is detected may
              be affected by factors such as the
              location of the unit (for example, if it is
              in direct sunlight) and unit operation
              during defrosting.

● After setting, press **Menu/OK** button to
  confirm settings and return to the basic
  screen.

4

41

Menu Options

Current Settings

■Confirming the current settings

Operation

1

```
Main Menu              2/3
Filter Auto Clean
Maintenance Information
Configuration
Current Settings
Clock & Calendar
Daylight Saving Time
        Setting        ⬍
```

● Display the main menu screen.
(See page 22.)
● Press ▼▲ buttons to select
 Current Settings on the main menu
screen and press **Menu/OK** button.

2

```
Current Setting        1/2
Airflow Direction    Swing
Ventilation Rate     Low
Ventilation Mode     Auto
Schedule             Enable
Off Timer            Disable
Display Mode         Standard
                     ◄ ►
```

● A list showing the current setting status
will appear.
Press ◄► buttons to go to the next item.
● Pressing **Cancel** button takes you back
to the main menu screen.

┌─ Display items ─────────────────────────┐
│   │
│ Airflow Direction   Off Timer   │
│ Ventilation Rate   Display Mode   │
│ Ventilation Mode   Display Item   │
│ Schedule   Filter Auto Clean│
└──┘

＊Display items may differ depending on the model.
Only the items that can be set are displayed.

Clock & Calendar

■Date & Time

Operation

1

```
Main Menu              2/3
Filter Auto Clean
Maintenance Information
Configuration
Current Settings
Clock & Calendar
Daylight Saving Time
        Setting        ⬍
```

● Display the main menu screen. (See page 22.)
● Press ▼▲ buttons to select
 Clock & Calendar on the main menu
screen.
Press **Menu/OK** button to display the
clock & calendar screen.

42

2

Clock & Calendar
Date & Time
12H/24H Clock

Setting

● Press ▼▲ buttons to select ▐ Date & Time ▌
on the clock & calendar screen.
Press **Menu/OK** button to display the
date & time screen.

3

Date & Time
Year   2015
Month   1
Day   1
Thursday
12:00A

Setting

● Select **Year** with ◀▶ buttons.
Change the year with ▼▲ buttons.
Holding down the button causes the
number to change continuously.

4

Date & Time
Year   2016
Month 10
Day   1
Saturday
12:00A

Setting

● Select **Month** with ◀▶ buttons.
Change the month with ▼▲ buttons.
Holding down the button causes the
number to change continuously.

5

Date & Time
Year   2016
Month 10
Day   7
Friday
12:00A

Setting

● Select **Day** with ◀▶ buttons.
Change the day with ▼▲ buttons.
Holding down the button causes the
number to change continuously.
Days of the week change automatically.

6

Date & Time
Year   2016
Month 10
Day   7
Friday
12:00A

Setting

● Select **Hour** with ◀▶ buttons.
Change the hour with ▼▲ buttons.
Holding down the button causes the
number to change continuously.

4

43

Menu Options

7

Date & Time	
Year	2016
Month	10
Day	7
Friday	
12:**21**ₚ	
Setting	⟷

● Select **Minute** with ◀▶ buttons.
Change the minute with ▼▲ buttons.
Holding down the button causes the
number to change continuously.
● Press **Menu/OK** button.
The confirmation screen will appear.

┌─ Note: ────────────────────┐
The date can be set between
January 1, 2015 and December 31, 2099.
└────────────────────────────┘

8

Date & Time	
Save the settings?	
Yes No	
Setting	▶

● Press ◀▶ button to select **Yes** on the
confirmation screen.
Press **Menu/OK** button to confirm the
clock and return to the basic screen.

*When setting the schedule, the display returns to
the settings screen.

44

■12H/24H CLOCK

Operation

1

Clock & Calendar
Date & Time
12H/24H Clock

Setting

- Display the clock & calendar screen. (See page 42.)
- Press ▼▲ buttons to select 12H/24H Clock on the clock & calendar screen.
  The 12H/24H clock screen will appear when **Menu/OK** button is pressed.

2

12H/24H Clock

12H

Setting

By default, the time display is set to the 12H format.
- Press ▼▲ buttons to select 12H 24H on the 12H/24H clock screen.
- The confirmation screen will appear when **Menu/OK** button is pressed.

3

12H/24H Clock
Save the settings?

Yes   No

Setting

- Press ◀▶ buttons to select Yes on the confirmation screen.
  Pressing **Menu/OK** button confirms the 12H or 24H and takes you back to the basic screen.

Daylight Saving Time

■How to display Daylight Saving Time

Operation

1

Main Menu   2/3
Filter Auto Clean
Maintenance Information
Configuration
Current Settings
Clock & Calendar
Daylight Saving Time
Setting

- Display the main menu screen. (See page 22.)
- Press ▼▲ buttons to select Daylight Saving Time on the main menu screen. Press **Menu/OK** button to display the daylight saving time screen.

45

Menu Options

Enabling or disabling Daylight Saving Time

Operation

1

Daylight Saving Time
Enable/Disable
DST Dates

Setting

- Display the daylight saving time screen.
  (See page 45.)
- Press ▼▲ buttons to select ▉Enable/Disable▉ on the daylight saving time screen.
  Press **Menu/OK** button to display the enable/disable screen.

2

Daylight Saving Time
Enable/Disable
Disable

Setting

- Press ▼▲ buttons to select ▉Enable▉ or ▉Disable▉ on the enable/disable screen.
- Press **Menu/OK** button to display the setting confirmation screen.

3

Daylight Saving Time
Save the settings?

Yes No

Setting

- Press ◄► buttons to select ▉Yes▉ on the setting confirmation screen.
  Pressing **Menu/OK** button confirms the daylight saving time enable/disable setting and takes you back to the basic screen.

Setting the date

Operation

1

Daylight Saving Time
Enable/Disable
DST Dates

Setting

- Display the daylight saving time screen.
  (See page 45.)
- Press ▼▲ buttons to select ▉DST Dates▉ on the daylight saving time screen. Press **Menu/OK** button to display the duration setting screen.

2

Daylight Saving Time
Start March
2nd Sunday
End November
1st Sunday
Setting

Daylight Saving Time
Start March
2nd Sunday
End November
1st Sunday
Setting

● Press ▼▲ buttons to select the start month and the end month.
● Press ◀▶ buttons to select a week. Press ▼▲ buttons to select the start week and the end week.

● After setting the Start and End dates, press **Menu/OK** button to display the setting confirmation screen.

3

Daylight Saving Time
Save the settings?

Yes No
Setting

● Press ◀▶ buttons to select Yes on the setting confirmation screen.
Pressing **Menu/OK** button confirms the Daylight Saving Time settings and takes you back to the basic screen.

When Daylight Saving Time is enabled

When the time in the remote controller reaches 2:00 a.m. on the specified start date, the clock is automatically set forward by one hour. When the time in the remote controller reaches 2:00 a.m. on the end date, the clock is automatically set back by one hour.

47

Menu Options

Language

■Selectable Languages

Operation

1

Main Menu	3/3
Language	
Setting	⬍

● Display the main menu screen.
  (See page 22.)
● Press ▼▲ buttons to select
  Language on the main menu screen
  and press **Menu/OK** button.

2

Language	
English	
Setting	⬍

● Press ▼▲ buttons to select the preferred
  language on the language screen.
  English/Français/Español are available.
● Press **Menu/OK** button to confirm the
  settings and return to the basic screen.

Maintenance

Reset Filter Indicator

Operation

1

Cool	Set to
♨■■	74ᶠ
Time to clean filter	

● When it is time to clean or replace the filter, one of
  the following messages will be displayed on the
  bottom of the basic screen.
  Time to clean filter
  Time to clean filter & element
  Time to clean element
  *This is not displayed when Simple display is set.

● Wash, clean, or replace the filter or
  element.
  For details, refer to the operation
  manual supplied with the indoor unit.

48

2

- Reset the filter indicator when the filter or element is cleaned or replaced.
- Press **Menu/OK** button.
  The main menu screen will be displayed.

3

Main Menu   1/3
Reset Filter Indicator
Airflow Direction
Individual Airflow Direction
Ventilation
Schedule
Off Timer
Setting

- Press ▼▲ buttons to select
  Reset Filter Indicator on the main menu screen and press **Menu/OK** button.

Cool | Set to
74ᶠ

- The displayed message "Time to clean filter" is no longer displayed on the basic screen when the filter sign is reset.

Maintaining the Unit and LCD Display

- Wipe the LCD and surface of the remote controller with a dry cloth when they become dirty.
- If the dirt on the surface cannot be removed, soak the cloth in neutral detergent diluted with water, squeeze the cloth tightly, and clean the surface. Wipe the surface with a dry cloth.

Note
- Do not use any paint thinner, organic solvent, or strong acid.

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Reference Information

Error Code Display

■Contact your Daikin dealer in the following cases

Operation

1

Cool	Set to
✿▪■■	74ꜰ
⌇Error : Push Menu button⌇	

● If an error occurs, either one of the following items will flash in the basic screen.

Error: Push Menu button
   * The Operation lamp will flash.
   * For Simple display, the message is not displayed, and only the Operation lamp flashes.

Warning: Push Menu button
   * The Operation lamp will not flash.
   * For Simple display, the message is not displayed, and the Operation lamp does not flash, either.

Operation lamp

● Press **Menu/OK** button.

2

Error Code: A1

Contact Info
0123-456-7890

Indoor Model   ---/000
Outdoor Model   ---/000

● The error code will flash and the service contact and model name or code may be displayed.
● Notify your Daikin dealer of the Error code and model name or code.

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After-sale Service

⚠ Warning

● **Do not relocate or reinstall the remote controller by yourself.**
 Improper installation may result in electric shocks or fire.
 Consult your Daikin dealer.

🚫

■Advise your Daikin Dealer of the following items

● Model name
● Date of installation
● Failure conditions: As precise as possible.
● Your address, name, and telephone number

■Repairs after Warranty Period

Consult your Daikin dealer.

■Inquiry about After-sale Service

Contact your Daikin dealer.

4

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5.2 <BRC082A43> Wireless Remote Controller for FDMQ Series

Fig. 1-1

Fig. 1-2

The situation which opened the front cover of the remote control

Fig. 1-3

Fig. 2

COOL/HEAT CHANGEOVER
REMOTE CONTROL SWITCH

3

CONTENTS

1. SAFETY CONSIDERATIONS

Please read these "SAFETY CONSIDERATIONS" carefully
before installing air conditioning equipment and be sure to
install it correctly. After completing the installation, make sure
that the unit operates properly during the start-up operation.
Please instruct the customer on how to operate the unit and
keep it maintained.
Also, inform customers that they should store this operation
manual along with the installation manual for future reference.
This air conditioner comes under the term "appliances not
accessible to the general public".
Meaning of warning, caution and note symbols.

⚠ **WARNING** .... Indication a potentially hazardous situa-
tion which, if not avoided, could result in
death or serious injury.

⚠ **CAUTION** .... Indication a potentially hazardous situa-
tion which, if not avoided, may result in
minor or moderate injury. It may also be
sued to alert against unsafe practices.

⚠ **NOTE** .... Indication situation that may result in equip-
ment or property-damage-only accidents.

**Keep these warning sheets handy so that you can refer to
them if needed.**
Also, if this equipment is transferred to a new user, make sure to
hand over this operation manual to the new user.

——— ⚠ **WARNING** ———————————————
- **It is not good for your health to expose your body to the
air flow for a long time.**
- **In order to avoid electric shock, fire or injury, or if you
detect any abnormality such as smell of fire, turn off
power and call your dealer for instructions.**
- **Ask your dealer for installation of the air conditioner.**
Incomplete installation performed by yourself may result in a
water leakage, electric shock, and fire.
- **Ask your dealer for improvement, repair, and maintenance.**
Incomplete improvement, repair, and maintenance may
result in a water leakage, electric shock, and fire.
- **Do not put a finger, a rod or other objects into the air inlet
or outlet. As the fan is rotating at high speed, it will
cause injury.**
- **Ask your dealer to move and reinstall the air conditioner.**
Incomplete installation may result in a water leakage, electric
shock, and fire.

- **Do not touch the switch with wet fingers.**
Touching a switch with wet fingers can cause electric shock.
- **Do not operate the air conditioner with a wet hand.**
Otherwise, you could receive an electric shock.

——— ⚠ **CAUTION** ———————————————
- **Do not use the air conditioner for other purposes.**
In order to avoid any quality deterioration, do not use the unit
for cooling precision instruments, food, plants, animals or
works of art.
- **To avoid oxygen deficiency, ventilate the room suffi-
ciently if equipment with burner is used together with
the air conditioner.**
- **Do not allow a child to mount on the unit or avoid placing
any object on it.**
Falling or tumbling may result in injury.
- **Do not let children play on and around the unit.**
If they touch the unit carelessly, it may result in injury.
- **Do not place a flower vase and anything containing water.**
Water may enter the unit, causing an electric shock or fire.
- **Do not operate the air conditioner when using a room
fumigation - type insecticide.**
Failure to observe could cause the chemicals to become
deposited in the unit, which could endanger the health of
those who are hypersensitive to chemicals.
- **Never use flammable spray such as hair spray, lacquer
or paint near the unit.**
It may cause a fire.

2. NAMES AND FUNCTIONS OF THE OPERATING SECTION (Fig. 1-1~3, 2)

1	**DISPLAY " ▲ " " l " (SIGNAL TRANSMISSION)**
	This lights up when a signal is being transmitted.
2	**DISPLAY " 🌀 " " 💧 " " [A] " " ❄ " " ☀ " (OPERATION MODE)**
	This display shows the current OPERATION MODE. For VRV system, " [A] " is not installed.
3	**DISPLAY " 🔢°F " (SET TEMPERATURE)**
	This display shows the set temperature.
4	**DISPLAY " hr.⊙·○ hr.⊙·l " (PROGRAMMED TIME)**
	This display shows PROGRAMMED TIME of the system start or stop.
5	**DISPLAY " 🌀 " " 🌀 " " 🌀 " (FAN SPEED)**
	This display shows the set fan speed.
6	**DISPLAY " ☀TEST " (INSPECTION/ TEST OPERA-TION)**
	When the INSPECTION/TEST OPERATION BUTTON is pressed, the display shows the system mode is in.
7	**ON/OFF BUTTON**
	Press the button and the system will start. Press the button again and the system will stop.

4

8	**FAN SPEED CONTROL BUTTON**
	Press this button to select the fan speed, HIGH, MEDIUM or LOW, of your choice.
9	**TEMPERATURE SETTING BUTTON**
	Use this button for SETTING TEMPERATURE. (Operates with the front cover of the remote controller closed.)
10	**PROGRAMMING TIMER BUTTON**
	Use this button for programming "START and/or STOP" time. (Operates with the front cover of the remote controller opened.)
11	**TIMER MODE START/STOP BUTTON**
	Refer to page 7.
12	**TIMER RESERVE/CANCEL BUTTON**
	Refer to page 7.
13	**OPERATION MODE SELECTOR BUTTON**
	Press this button to select OPERATION MODE.
14	**FILTER SIGN RESET BUTTON**
	Refer to the section of MAINTENANCE in the operation manual attached to the indoor unit.
15	**INSPECTION/TEST OPERATION BUTTON**
	This button is pressed for inspection or test operation. Do not use for normal operation.
16	**EMERGENCY OPERATION SWITCH**
	This switch is readily used if the remote controller does not work.
17	**RECEIVER**
	This receives the signals from the remote controller.
18	**OPERATING INDICATOR LAMP (Red)**
	This lamp stays lit while the air conditioner runs. It flashes when the unit is in trouble.
19	**TIMER INDICATOR LAMP (Green)**
	This lamp stays lit while the timer is set.
20	**AIR FILTER CLEANING TIME INDICATOR LAMP (Red)**
	Lights up when it is time to clean the air filter.
21	**DEFROST LAMP (Orange)**
	Lights up when the defrosting operation has started. (For cooling only type this lamp does not turn on.)
22	**FAN/AIR CONDITIONING SELECTOR SWITCH**
	Set the switch to " ❀ " (FAN) for FAN and " ⒡ " (A/C) for HEAT or COOL.
23	**COOL/HEAT CHANGEOVER SWITCH**
	Set the switch to " ❄ " (COOL) for COOL and " ☀ " (HEAT) for HEAT.

⚠ **NOTE**
- For the sake of explanation, all indications are shown on the display in Fig. 1-1 contrary to actual running situations.
- Fig. 1-2 shows the remote controller with the front cover opened.
- Fig. 2 shows this remote controller can be used in conjunction with the one provided with the VRV system.
- If the air filter cleaning time indicator lamp lights up, clean the air filter as explained in the operation manual provided with the indoor unit.
  After cleaning and reinstalling the air filter, press the filter sign reset button on the remote controller. The air filter cleaning time indicator lamp on the receiver will go out.
- The DEFROST lamp will flash when the power is turned on. This is not a malfunction.

3. HANDLING FOR WIRELESS REMOTE CONTROLLER

- **Precautions in handling remote controller**
- **Direct the transmitting part of the remote controller to the receiving part of the air conditioner.**
  If something blocks the transmitting and receiving path of the indoor unit and the remote controller as curtains, it will not operate.

Receiver

2 short beeps from the receiver indicates that the transmission is properly done.

- **Transmitting distance is approximately 23 ft..**
- **Do not drop or get it wet.**
  It may be damaged.
- **Never press the button of the remote controller with a hard, pointed object.**
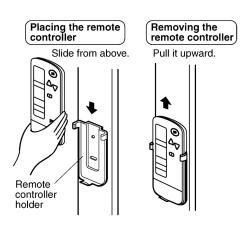 The remote controller may be damaged.
- **Installation site**
  It is possible that signals will not be received in rooms that have electronic fluorescent lighting. Please consult with the salesman before buying new fluorescent lights.
  If the remote controller operated some other electrical apparatus, move that machine away or consult your dealer.

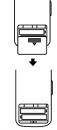**Placing the remote controller in the remote controller holder**
Install the remote controller holder to a wall or a pillar with the attached screw. (Make sure it transmits.)

5

Placing the remote controller
Slide from above.

Removing the remote controller
Pull it upward.

Remote controller holder

How to put the dry cell batteries
(1) Remove the back cover of the remote controller to the direction pointed by the arrow mark.

(2) Put the dry cell batteries.
Use two LR03<AM4> dry cell batteries. Put the dry cell batteries correctly to fit their (+) and (–).

(3) Close the back cover as before.

— **When to change batteries** —
Under normal use, batteries last about 1 year. However, change them whenever the indoor unit doesn't respond or responds slowly to commands, or if the display becomes dark.

— ⚠ **CAUTION** —
• Replace all batteries at the same time, do not use new and old batteries intermixed.
• In case the remote controller is not used for a long time take out all batteries in order to prevent liquid leak of the battery.

IN THE CASE OF CENTRALIZED CONTROL SYSTEM
If the indoor unit is under centralized control, it is necessary to switch the remote controller's setting.
In this case, contact your dealer.

4.   OPERATION PROCEDURE

• Contact your dealer to confirm your system type.
• To protect the unit, turn on the main power switch 6 hours before operation.
• If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

COOLING, HEATING, AUTOMATIC, FAN, AND PROGRAM DRY OPERATION

Operate in the following order.
• AUTOMATIC OPERATION can be selected only by Heat pump system or Heat recovery system.

《《**FOR SYSTEMS WITHOUT COOL/HEAT CHANGEOVER REMOTE CONTROL SWITCH (Fig. 1-1~2 on page 3)**》》

1 [MODE]   **OPERATION MODE SELECTOR**

Press OPERATION MODE SELECTOR button several times and select the OPERATION MODE of your choice as follows.
■ COOLING OPERATION .... " ❄ "
■ HEATING OPERATION .... " ☀ "
■ AUTOMATIC OPERATION .... " Ⓐ "
   • In this operation mode, COOL/HEAT changeover is automatically conducted.
   • For VRV system, " Ⓐ " is not installed.
■ FAN OPERATION .... " ❀ "
■ DRY OPERATION .... " ▮ "
   • The function of this program is to decrease the humidity in your room with the minimum temperature decrease.
   • The microchip automatically determines TEMPERATURE and FAN SPEED.
   • This system does not go into operation if the room temperature is below 60°F.

2 [ON/OFF]   **ON/OFF**

Press ON/OFF button.
OPERATING INDICATOR lamp lights up or goes off and the system starts or stops OPERATION.

— ⚠ **NOTE** —
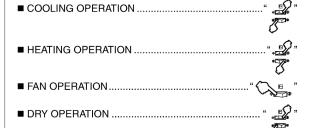• Do not turn off power immediately after the unit stops. Then, wait no less than 5 minutes.
Water is leaking or there is something else wrong with the unit.

《《**FOR SYSTEMS WITH COOL/HEAT CHANGEOVER REMOTE CONTROL SWITCH (Fig. 2 on page 3)**》》

1 [⚙]   **OPERATION MODE SELECTOR**

(1) Select OPERATION MODE with the COOL/HEAT CHANGEOVER REMOTE CONTROL SWITCH as follows.

■ COOLING OPERATION .... " "

■ HEATING OPERATION .... " "

■ FAN OPERATION .... " "

■ DRY OPERATION .... " "

• See "FOR SYSTEM WITHOUT COOL/HEAT CHANGEOVER REMOTE CONTROL SWITCH" for details on dry operation.

4

6

(2) Press OPERATION MODE SELECTOR button several times and select " ▣ ".
(This operation is only available during dry operation.)

2 ⏻ON/OFF **ON/OFF**

Press ON/OFF button.
OPERATING INDICATOR lamp lights up or goes off and the system starts or stops OPERATION.

⚠ **NOTE**
• Do not turn off power immediately after the unit stops. Then, wait no less than 5 minutes.
  Water is leaking or there is something else wrong with the unit.

[EXPLANATION OF HEATING OPERATION]
DEFROST OPERATION
• As the frost on the coil of an outdoor unit increase, heating effect decreases and the system goes into DEFROST OPERATION.
• The fan operation stops and the DEFROST lamp of the indoor unit goes on.
• After 6 to 8 minutes (maximum 10 minutes) of DEFROST OPERATION, the system returns to HEATING OPERATION.

Heating capacity & Outdoor air temperature
• Heating capacity drops as outdoor air temperature lowers. If feeling cold, use another heater at the same time as this air conditioner.
• Hot air is circulated to warm the room. It will take some time from when the air conditioner is first started until the entire room becomes warm. The internal fan automatically turns at low speed until the air conditioner reaches a certain temperature on the inside. In this situation, all you can do is wait.
• If hot air accumulates on the ceiling and feet are left feeling cold, it is recommended to use a circulator. For details, contact the place of purchase.

ADJUSTMENT

For programming TEMPERATURE and FAN SPEED, follow the procedure shown below.

△UP DOWN▽ **TEMPERATURE SETTING**

Press TEMPERATURE SETTING button and program the setting temperature.

△UP   Each time this button is pressed, setting temperature rises 1°F.

▽DOWN   Each time this button is pressed, setting temperature lowers 1°F.

In case of automatic operation

△UP   Each time this button is pressed, setting temperature shifts to "H" side.

▽DOWN   Each time this button is pressed, setting temperature shifts to "L" side.

[°F]

	H	•	M	•	L
Setting temperature	77	73	71	70	66

• The setting is impossible for fan operation.

⚠ **NOTE**
• The setting temperature range of the remote controller is 60°F to 90°F.

🌀FAN **FAN SPEED CONTROL**

Press FAN SPEED CONTROL button.
High, Medium or Low fan speed can be selected.
The microchip may sometimes control the fan speed in order to protect the unit.

PROGRAM TIMER OPERATION

Operate in the following order.
• The timer is operated in the following 2 ways.
  Programming the stop time (⏲ · ○)
  .... The system stops operating after the set time has elapsed.
  Programming the start time (⏲ · |)
  .... The system starts operating after the set time has elapsed.
• The timer can be programmed a maximum of 72 hours.
• The start and the stop time can be simultaneously programmed.

1 TIMER **TIMER MODE START/STOP**

Press the TIMER MODE START/STOP button several times and select the mode on the display.
The display flashes.
For setting the timer stop .... "⏲ · ○"
For setting the timer start .... "⏲ · |"

2 △DOWN UP▽ **PROGRAMMING TIMER**

Press the PROGRAMMING TIMER button and set the time for stopping or starting the system.

△UP   When this button is pressed, the time advances by 1 hour.

▽DOWN   When this button is pressed, the time goes backward by 1 hour.

3 RESERVE **TIMER RESERVE**

Press the TIMER RESERVE button.
The timer setting procedure ends.
The display changes from flashing light to a constant light.

4 CANCEL **TIMER CANCEL**

Press the TIMER CANCEL button to cancel programming.
The display vanishes.

7

For example.

When the timer is programmed to stop the system after 3 hours and start the system after 4 hours, the system will stop after 3 hours and then 1 hour later the system will start.
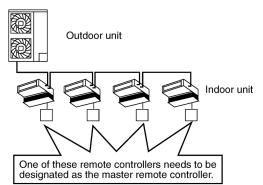
⚠ **NOTE**

- After the timer is programmed, the display shows the remaining time.

HOW TO SET MASTER REMOTE CONTROLLER (For VRV system)

- When the system is installed as shown below, it is necessary to designate the master remote controller.
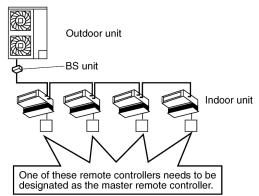
■ **For Heat pump system**
When 1 outdoor unit is connected with several indoor units.

Outdoor unit

Indoor unit

One of these remote controllers needs to be designated as the master remote controller.

■ **For Heat recovery system**
When 1 BS unit is connected with several indoor units.

Outdoor unit

BS unit

Indoor unit

One of these remote controllers needs to be designated as the master remote controller.

- Only the master remote controller can select HEATING, COOLING or AUTOMATIC OPERATION.

When the indoor unit with master remote controller is set to "COOL", you can switch over operation mode between "FAN", "DRY" and "COOL".
When the indoor unit with master remote controller is set to "HEAT", you can switch over operation mode between "FAN" and "HEAT".
When the indoor unit with master remote controller is set to "FAN", you cannot switch operation mode.
1 long beep .... When attempting settings than that consented above.
Only with Heat recovery system, you can set the indoor unit to AUTOMATIC. Attempting to do so.

How to designate the master remote controller
Operate in the following order.

1 [MODE]

Continuously press the OPERATION MODE SELECTOR button for 4 seconds.
The displays showing " ⊕ " of all slave indoor unit connected to the same outdoor unit or BS unit flash.

2 [MODE]

Press the OPERATION MODE SELECTOR button to the indoor unit that you wish to designate as the master remote controller. Then designation is completed. This indoor unit is designated as the master remote controller and the display showing " ⊕ " vanishes.

- To change settings, repeat steps ① and ②.

EMERGENCY OPERATION

When the remote controller does not work due to battery failure or the absence there of, use this switch which is located beside the discharge grille on the indoor unit. When the remote controller does not work, but the battery low indicator on it is not lit, contact your dealer.

[START]

1 Press the EMERGENCY OPERATION switch.

The machine runs in the previous mode.

[STOP]

2 Press the EMERGENCY OPERATION switch again.

PRECAUTIONS FOR GROUP CONTROL SYSTEM OR 2 REMOTE CONTROLLERS CONTROL SYSTEM

This system provides 2 other control systems beside individual control (1 remote controller controls 1 indoor unit) system. Confirm the following if your unit is of the following control system type.

4

8

■ **Group control system**
   1 remote controller controls up to 16 indoor units.
   All indoor units are equally set.

■ **2 remote controllers control system**
   2 remote controllers control 1 indoor unit.
   (In case of group control system, 1 group of indoor units)
   The unit follows individual operation.

⚠ **NOTE**

• Cannot have 2 remote controllers control system with only wire-less remote controllers. (It will be a 2 remote controllers control system having 1 wired and 1 wireless remote controllers.)

• Under 2 remote controllers control system, wireless remote controller cannot control timer operation.

• Only the operating indicator lamp out of 3 other lamps on the indoor unit display functions.

• Contact your dealer in case of changing the combination or setting of group control and 2 remote controllers control systems.

5. NOT MALFUNCTION OF THE AIR CONDITIONER

The following symptoms do not indicate air conditioner malfunction.

■ **THE SYSTEM DOES NOT OPERATE**

• **The system does not restart immediately after the ON/OFF button is pressed.**
   If the OPERATING INDICATOR lamp lights, the system is in normal condition. It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.

• **The system does not restart immediately when TEM-PERATURE SETTING button is returned to the former position after pushing the button.**
   It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.

• **If the reception beep is rapidly repeated 3 times. (It sounds only 2 times when operating normally.)**
   Control is set to the optional controller for centralized control.

• **If the DEFROST lamp on the indoor unit's display is lit when heating is started.**
   This indication is to warn against cold air being blown from the unit. There is nothing wrong with the equipment.

■ **The unit stops operation from time to time.**

• **With "U4" "U5" displayed on the remote controller, the unit stops, but it resumes operation in a few minutes.**
   Since electric noises produced from other equipment than the air conditioner interrupt communication between the units, the unit stops operation.
   If these electric noises subside, operation is restarted automatically.

■ **COOLING / HEATING changeover is impossible.**

• **If the indoor unit emits a receiving sound "1 long beep".**
   It is because the indoor unit under the control of operation changeover is set to the mode that cannot be selected.

■ **Display Indicates only a part.**

• **Even if the unit is in operation, the display shows only operational indication. Even if the indication is shown, the indication other than operation disappears after a while.**
   It is because the remote controller is set to multi-system.

■ **Display disappears or shows all indication.**

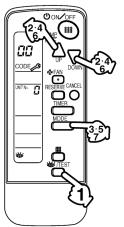• **It happens when the button of the remote controller is pressed.**
   It is because the battery is dead.

■ **No favorable cooling is achieved.**

• **The unit is in DRY OPERATION.**
   DRY OPERATION is carried out to perform operation such that the room temperature is not decreased as much as possible.

6. HOW TO DIAGNOSE TROUBLE SPOTS

■ **EMERGENCY STOP**
When the air conditioner stops in emergency, the run lamp on the indoor unit starts blinking. Take the following steps yourself to read the malfunction code that appears on the display. Contact your dealer with this code. It will help pinpoint the cause of the trouble, speeding up the repair.

1 [🌀 TEST]

Press the INSPECTION/TEST OPERATION button to select the inspection mode " 🔲 ".

" 🔲 " appears on display and blinks. "UNIT No." lights up.

2 [△▽ UP/DOWN]

Press PROGRAMMING TIMER button and change the unit number.
Press to change the unit number until the indoor unit beeps and perform the following operation according to the number of beeps.

Number of beeps

3 short beeps .... Perform all steps from ③ to ⑥.

1 short beep .... Perform ③ and ⑥ steps.

1 long beep .... Normal state

9

3 MODE

Press OPERATION MODE SELECTOR button.

" ⎕ " on the left-hand of the malfunction code blinks.

4 UP DOWN

Press PROGRAMMING TIMER button and change the malfunction code.
Press until the indoor unit 2 beeps.

5 MODE

Press OPERATION MODE SELECTOR button.

" ⎕ " on the right-hand of the malfunction code blinks.

6 UP DOWN

Press PROGRAMMING TIMER button and change the malfunction code.
Press until the indoor unit makes 1 long beep.
The malfunction code is fixed when the indoor unit makes 1 long beep.

7 MODE   Reset of the display

Press OPERATION MODE SELECTOR button to get the display back to the normal state.

■ **IN CASE BESIDES EMERGENCY STOP**
• **The unit does not operate at all.**
   • Check if the receiver is exposed of sunlight or strong light. Keep receiver away from light.
   • Check if there are batteries in the remote controller. Place the batteries.
   • Check if the indoor unit number and wireless remote controller number are equal.

Number

Operate the indoor unit with the remote controller of the same number.
Signal transmitted from 1 remote controller of a different number cannot be accepted. (If the number is not mentioned, it is considered as "1".)
■ **The system operates but it does not sufficiently cool or heat.**
   • If the set temperature is not proper. (See page 7)
   • If the FAN SPEED is set to LOW SPEED. (See page 7)
Contact the place of purchase in the following case.

⚠ **WARNING**
When you detect a burning odor, shut OFF power immediately and contact the place of purchase. Using the equipment in anything but proper working condition can result in equipment damage, electric shock or fire.

[Trouble]
■ **The OPERATING INDICATOR lamp of the indoor unit is flashing and the unit does not work at all.**

Malfunction Code
Unit No. which sensed trouble

INSPECTION display
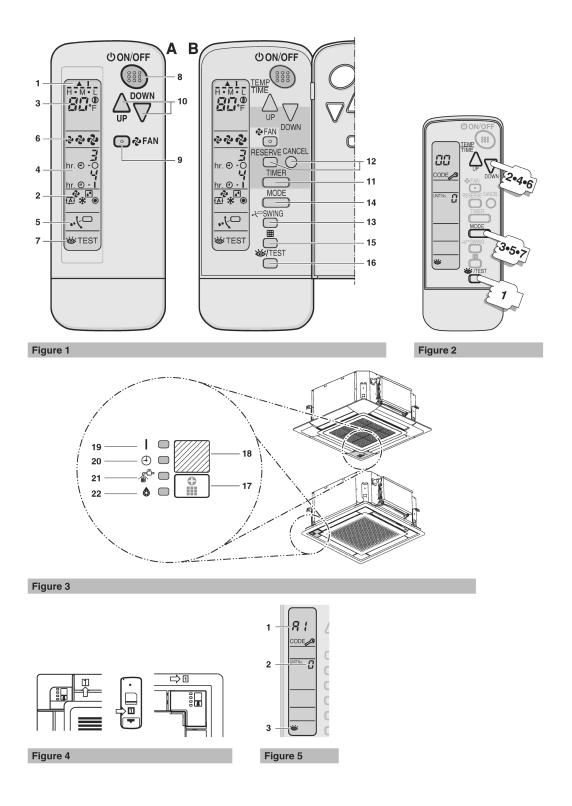
Check the malfunction code (A1 - UF) on the remote controller and contact the place of purchase. (Refer to indoor unit installation manual.)

4

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3P510048-1

5.3   <BRC082A41W, BRC082A42W(S)> Wireless Remote Controller for FFQ Series

Figure 1

Figure 2

Figure 3

Figure 4   **Figure 5**

Contents

Information classified as **NOTE** contains instructions to ensure proper use of the equipment.
After reading, keep this manual in a convenient place so that you can refer to it whenever necessary. If the equipment is transferred to a new user, be sure also to hand over the manual.

⚠️ **WARNING**

■ Be aware that prolonged, direct exposure to cool or warm air from the air conditioner, or to air that is too cool or too warm can be harmful to your physical condition and health.

■ When the air conditioner is malfunctioning (giving off a burning odor, etc.) turn off power to the unit and contact your local dealer. Continued operation under such circumstances may result in a failure, electric shock or fire hazards.

■ Do not attempt to install or repair the air conditioner yourself. Improper workmanship may result in water leakage, electric shock or fire hazards. Please contact your local dealer or qualified personnel for installation and maintenance work.

■ Ask your dealer to perform servicing or repairs whenever necessary.
Improper servicing or repairs may result in water leaks, electric shock or fire.

■ Do not place objects, including rods, your fingers, etc., in the air inlet or outlet. Injury may result due to contact with the air conditioner's highspeed fan blades.

■ Consult your local dealer regarding relocation and reinstallation of the air conditioner. Improper installation work may result in leakage, electric shock or fire hazards.

⚠️ Thank you for purchasing this Daikin remote controller. Carefully read this operation manual before using the air conditioner. It will tell you how to use the unit properly and help you if any trouble occurs. After reading the manual, file it away for future reference.

The English text is the original instruction. Other languages are translations of the original instructions.

Safety considerations

To gain full advantage of the air conditioner's functions and to avoid malfunction due to mishandling, we recommend that you read this instruction manual carefully before use.
The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.

⚠️ **WARNING**
Failure to follow these instructions properly may result in personal injury or loss of life.
CAUTION
Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

⚠️ **CAUTION**

■ Do not use the air conditioner for purposes other than those for which it is intended. Do not use the air conditioner for cooling precision instruments, food, plants, animals or works of art as this may adversely affect the performance, quality and/or longevity of the object concerned.

■ To avoid oxygen depletion, ensure that the room is adequately ventilated if equipment such as a burner is used together with the air conditioner.

■ Do not expose plants or animals directly to air flow from the unit as this may cause adverse effects.

■ To avoid electric shock, do not operate with wet hands.

■ Do not place burners or heaters in places exposed to the air flow from the unit as this may impair combustion of the burner or heater.

■ Do not place flammable sprays or operate spray containers near the unit as this may result in fire.

4

1

Names and functions of the operating section

See figure 1, (figure 1B shows the remote controller with front cover opened)

1 DISPLAY " ▲ " (SIGNAL TRANSMISSION)
This lights up when a signal is being transmitted.

2 DISPLAY " 🌀 " " 🔲 " " {A} " " ❄ " " ☀ " (OPERATION MODE)
This display shows the current OPERATION MODE.

3 DISPLAY " ᴴ·ᴹ·ᴸ " , " 🔢°F " (SET TEMPERATURE)
This display shows the set temperature.

4 DISPLAY " hr. ⊕ ·O   hr. ⊕ · I " (PROGRAMMED TIME)
This display shows PROGRAMMED TIME of the system start or stop.

5 DISPLAY " ◦\⌐ " (SWING FLAP)
Refer to "AIR FLOW DIRECTION ADJUST" on page 5.

6 DISPLAY " 🌀 " " 🌀 " " 🌀 " (FAN SPEED)
The display shows the set fan speed.

7 DISPLAY " 👁TEST " (INSPECTION/TEST OPERATION)
When the INSPECTION/TEST OPERATION BUTTON is pressed, the display shows the system mode is in.

8 ON/OFF BUTTON
Press the button and the system will start. Press the button again and the system will stop.

9 FAN SPEED CONTROL BUTTON
Press this button to select the fan speed, LOW, MEDIUM or HIGH, of your choice.

10 TEMPERATURE SETTING BUTTON
Use this button for SETTING TEMPERATURE.

11 TIMER MODE START/STOP BUTTON
Refer to "TIMER MODE START/STOP" on page 6.

12 TIMER RESERVE/CANCEL BUTTON
Refer to "PROGRAMMING TIME" on page 6.

13 AIR FLOW DIRECTION ADJUST BUTTON
Refer to "AIR FLOW DIRECTION ADJUST" on page 5.

14 OPERATION MODE SELECTOR BUTTON
Press this button to select OPERATION MODE.

15 FILTER SIGN RESET BUTTON
Refer to the section of MAINTENANCE in the operation manual attached to the indoor unit.

16 INSPECTION/TEST OPERATION BUTTON
This button is used only by qualified service persons for maintenance purposes.

See figure 3, (receiver on decoration panel)

17 EMERGENCY OPERATION SWITCH
This switch is readily used if the remote controller does not work.

18 RECEIVER
This receives the signals from the remote controller.

19 OPERATION LAMP (Red)
This lamp stays lit while the air conditioner runs. It blinks when the unit is in trouble.

20 TIMER LAMP (Green)
This lamp stays lit while the timer is set.

21 AIR FILTER CLEANING TIME INDICATOR LAMP (Red)
Lights up when it is time to clean the air filter.

22 DEFROST LAMP (Orange)
Lights up when the defrosting operation has started.

| NOTE | ■ For the sake of explanation, all indications are shown on the display in figure 1 contrary to actual running situations.
■ If the AIR FILTER CLEANING TIME INDICATOR lamp lights up, clean the air filter as explained in the operation manual provided with the indoor unit.
After cleaning and reattaching the air filter, press the FILTER SIGN RESET button on the remote controller. The AIR FILTER CLEANING TIME INDICATOR lamp on the receiver will go out.
■ The DEFROST lamp will blink when the power is turned on. This is not a malfunction. |

2

Handling for wireless remote controller

Precautions in handling remote controller

■ Direct the transmitting part of the remote controller to the receiving part of the air conditioner.

■ If something blocks the transmitting and receiving path of the indoor unit and the remote controller such as curtains, it will not operate.

■ Transmitting distance is approximately 23ft (7m).

■ 2 short beeps from the receiver indicates that the transmission is properly done.

■ Do not drop or get it wet.
It may get damaged.

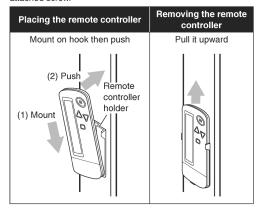■ Never press the button of the remote controller with a hard, pointed object.
The remote controller may get damaged.

Installation site

■ It is possible that signals will not be received in rooms that have electronic fluorescent lighting. Please consult with the salesman before buying new fluorescent lights.

■ If the remote controller operated some other electrical apparatus, move that machine away or consult your dealer.
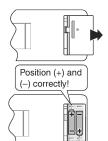
Placing the remote controller in the remote controller holder

Choose a place where the signals reach the unit.
Install the remote controller holder to a wall or a pillar with the attached screw.

Placing the remote controller	Removing the remote controller
Mount on hook then push	Pull it upward

(2) Push

(1) Mount

Remote controller holder

How to put the batteries

1 Slide the back cover to take it off.

2 Insert 2 dry batteries AAA. LR03 (alkaline).

Position (+) and (–) correctly!

3 Replace the back cover.

When to change batteries

Under normal use, batteries last about a year. However, if the remote controller display begins to fade and the possible transmission range becomes shorter within a year, replace both batteries as specified above.

NOTE	Replace the two batteries at the same time, do not use new and old batteries intermixed. In case the remote controller is not used for a long time, take out all batteries in order to prevent liquid leak of the battery.

In case of a centralized control system

If the indoor unit is under centralized control, it is necessary to switch the remote controller's setting. In this case, contact your dealer.

4

3

Operation range

■ Refer to the operation manual provided with the indoor unit or with the outdoor unit.
■ If the indoor temperature or humidity is beyond operating conditions as listed in the indoor unit or outdoor unit manuals, it may happen
- that safety devices work,
- that the air conditioner does not operate,
- that water drips from the indoor unit.
■ The setting temperature range of the remote controller is 60°F (16°C) to 90°F (32°C).

Operation procedure

■ If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

COOLING, HEATING, AUTOMATIC, FAN and DRY operation

Operate in the following order:
AUTOMATIC operation can be selected only by heat pump system.

For systems without a cool/heat changeover remote control switch

| 1 | MODE ⬭ | OPERATION MODE SELECTOR |

See figure 1
Press the OPERATION MODE SELECTOR button several times and select the OPERATION MODE of your choice as follows:

- COOLING operation .... ❄
- HEATING operation .... ☀
- AUTOMATIC operation .... ⒶA
  - In this operation mode, COOL/HEAT changeover is automatically conducted.
- FAN operation .... ♻
- DRY operation .... ⟐
  - This operation is to decrease the humidity in your room with the minimum temperature decrease.
  - The set point is the air temperature when starting operation by DRY operation.
  - Micro computer automatically determines TEMPERATURE and FAN SPEED.
  - DRY operation will not activate when room temperature is 57°F (14°C) or less.

| 2 | ⏻ ON/OFF | ON/OFF |

Press ON/OFF button.
The OPERATION lamp lights up or goes off and the system starts or stops operation.

⚠ Do not turn OFF power immediately after the unit stops. Wait at least 5 minutes. Failure to do so may result in water leakage etc.

Explanation of HEATING operation
DEFROST operation

■ As the frost on the coil of an outdoor unit increase, heating effect decreases and the system goes into DEFROST operation.
■ The FAN operation stops and the DEFROST lamp of the indoor unit goes on.
After about 4 to 12 minutes of DEFROST operation, the system returns to HEATING operation.

Heating capacity and outdoor air temperature
■ Heating capacity drops as outdoor air temperature lowers. If feeling cold, use another heater at the same time with this air conditioner.
■ Hot air is circulated to warm the room. It will take some time from when the air conditioner is first started until the entire room becomes warm. The internal fan automatically turns at low speed until the air conditioner reaches a certain temperature on the inside.
■ If hot air accumulates on the ceiling and feet are left feeling cold, it is recommended to use a circulator. For details, contact the place of purchase.

4

Adjustment

For programming TEMPERATURE, FAN SPEED and AIR FLOW DIRECTION, follow the procedure shown below.

TEMPERATURE SETTING

Press TEMPERATURE SETTING button and program the setting temperature.

UP — Each time this button is pressed, setting temperature rises 1°F (0.56°C).

DOWN — Each time this button is pressed, setting temperature lowers 1°F (0.56°C).

In case of AUTOMATIC operation

UP — Each time this button is pressed, setting temperature shifts to "H" side.

DOWN — Each time this button is pressed, setting temperature shifts to "L" side.

°F(°C)

	H	•	M	•	L
Setting temperature	77 (25)	73 (23)	71.5 (22)	70 (21)	66 (19)

• The setting is impossible for FAN operation

- The setting temperature range of the remote controller is 60°F (16°C) to 90°F (32°C).

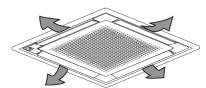### FAN SPEED CONTROL

Press FAN SPEED CONTROL button.
- LOW, MEDIUM or HIGH fan speed can be selected.
- The micro computer may sometimes control the fan speed in order to protect the unit.

AIR FLOW DIRECTION ADJUST

The movable limit of the flap is changeable. Contact your dealer for details.
- Up and down adjustment

Press the AIR FLOW DIRECTION ADJUST button to select the air direction as shown below.

Display appears and the air flow direction continuously varies. (Automatic swing setting.)

Press AIR FLOW DIRECTION ADJUST button to select the air direction of your choice. Display vanishes and the air flow direction is fixed. (Fixed air flow direction setting.)

- Movement of the swing flap
  For the following conditions, the micro computer controls the air flow direction so it may be different from the display.

Operation mode	HEATING
Operation conditions	■ When starting operation. ■ When room temperature is higher than the set temperature. ■ In DEFROST operation. (The flaps turn to the horizontal position to avoid blowing cold air directly on the occupants of the room.)

NOTE   ■ Operation mode includes AUTOMATIC operation.

4

Program timer operation

Operate in the following order.
- The timer is operated in the following two ways:
  - Programming the stop time (⊕ ► ◯).
    The system stops operating after the set time has elapsed.
  - Programming the start time (⊕ ► |).
    The system starts operating after the set time has elapsed.
- The timer can be programmed for a maximum of 72 hours.
- The start and the stop time can be simultaneously programmed.

1   TIMER   TIMER MODE START/STOP

Press the TIMER MODE START/STOP button several times and select the mode on the display.
The display blinks.

- For setting the timer stop .... ⊕ ► ◯
- For setting the timer start .... ⊕ ► |

2   UP DOWN   PROGRAMMING TIME

Press the TEMPERATURE SETTING button and set the time for stopping or starting the system.

△   When this button is pressed, the time advances by 1 hour.
UP

▽   When this button is pressed, the time goes backward by 1 hour.
DOWN

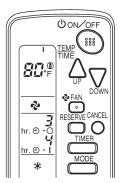**3**   RESERVE   TIMER RESERVE

Press the TIMER RESERVE button.
- The timer setting procedure ends.
- The display changes from blinking light to a constant light.

4   CANCEL   TIMER CANCEL

Press the TIMER CANCEL button to cancel programming.
The display vanishes.
For example.
When the timer is programmed to stop the system after 3 hours and start the system after 4 hours, the system will stop after 3 hours and then 1 hour later the system will start.

NOTE   After the timer is programmed, the display shows the remaining time.

Emergency operation

When the remote controller does not work due to battery failure or the absence thereof, use the switch which is located beside the discharge grille on the indoor unit.
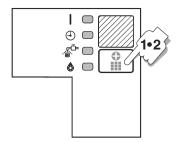When the remote controller does not work, contact your dealer.

1   START

Press the emergency operation switch.
- The unit runs in the previous mode.
- The system operates with the previously set air flow direction.

2   STOP

Press the emergency operation switch again.

Precautions for group control system or two remote control system

This system provides two other control systems beside individual control (one remote controller controls one indoor unit) system. Confirm the following if your unit is of the following control system type:
- Group control system
  One remote controller controls up to 16 indoor units.
  All indoor units are equally set.
- Two remote controller control system
  Two remote controllers control one indoor unit. (In case of group control system, one group of indoor units.)
  The unit follows individual operation.

NOTE
- Cannot have a two remote controller control system with only wireless remote controllers. (It will be a two remote controller control system having one wired remote controller and one wireless remote controller.)
- Under two remote controller control system, wireless remote controller cannot control timer operation.
- Only the OPERATION lamp out of 3 other lamps on the indoor unit display functions.
Contact your dealer in case of changing the combination or setting of group control and two remote controller control systems.

6

Troubleshooting

Emergency stop

(See figure 2)
When the air conditioner stops unexpectedly, the OPERATION lamp on the indoor unit starts blinking. Take the following steps yourself to read the malfunction code that appears on the display. Contact your dealer with this code. It will help pinpoint the cause of the trouble and speeding up the repair.

1   TEST

Press the INSPECTION/TEST button to select the inspection mode.
"UNIT No." lights up and the unit number " _0_ " blinks.

2

Press the TEMPERATURE SETTING button and change the unit number.
Hold down the TEMPERATURE SETTING button until the indoor unit emits one of the following beep tones.
Number of beeps
   - 3 short beeps .... perform all steps from 3 to 6
   - 1 short beep .... perform steps 3 and 6
   - 1 long beep..No trouble

3   MODE

Press the OPERATION MODE SELECTOR button.
" _0_ " on the left-hand of the malfunction code blinks.

4

Press the TEMPERATURE SETTING button and change the malfunction code.
Press until the indoor unit makes 2 short beeps.

5   MODE

Press the OPERATION MODE SELECTOR button.
" _0_ " on the right-hand of the malfunction code blinks.

6

Press the TEMPERATURE SETTING button and change the malfunction code.
Press until the indoor unit makes a long beep.
The malfunction code is fixed when the indoor unit makes a long beep.

7   MODE   Reset of the display.

Press OPERATION MODE SELECTOR button to get the display back to its normal state.

In case besides emergency stop

1   The unit does not operate at all.
   ■ Check if the receiver is exposed of sunlight or strong light. Keep receiver away from light.
   ■ Check if there are batteries in the remote controller. Place the batteries.
   ■ Check if the indoor unit number and wireless remote controller number are equal. See figure 4.
      Operate the indoor unit with the remote controller of the same number.
      Signals transmitted from a remote controller of a different number cannot be accepted. (If the number is not mentioned, it is considered as "1".)

2   The system operates but it does not sufficiently cool or warm.
   ■ Check if the set temperature is proper.
   ■ Check if the FAN SPEED is not set to LOW SPEED.
   ■ Check if the air flow angle is proper.
   Contact the place of purchase in the following case.

> ⚠ When you detect a burning odor, shut OFF power immediately and contact the place of purchase. Using the equipment in anything but proper working condition can result in equipment damage, electric shock and/or fire.

Trouble
The OPERATION lamp of the indoor unit is blinking and the unit does not work at all. See figure 5.
   1 Malfunction code
   2 Unit No. which sensed trouble
   3 INSPECTION display

Remedial action
Check the malfunction code (_A1-UF_) on the remote controller. Notify and inform the model name and what the malfunction code indicates to your dealer.

4

7

When you think there is something wrong

The following symptoms do not indicate air conditioner malfunction:

Symptom 1: The system does not operate

Example	Reason
The system does not restart immediately after the ON/OFF button is pressed.	If the OPERATION lamp lights, the system is in normal condition. It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
If operation stops as a result of changing the temperature setting, there will be a delay before operation restarts if the setting is lowered (in COOLING) or raised (in HEATING) again.	It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
If the reception beep is rapidly repeated 3 times (It sounds only twice when operating normally.)	Control is set to the optional controller for centralized control.
If the DEFROST lamp on the indoor unit's display is lit when heating is started.	This indication is to warn against cold air being blown from the unit. There is nothing wrong with the equipment.
The outdoor unit stops.	Because the room temperature reaches to the set temperature. The indoor unit goes into FAN operation.

Symptom 2: The unit stops once in a while

Example	Reason
The remote controller indicates "U4" and "U5", the unit stops. Within several minutes the unit restarts.	Due to electrical noise other than that from the air conditioner, the communication between the units is cut off and the unit stops. When the noise is gone, the unit automatically restarts.

Symptom 3: No changeover is available between HEATING and COOLING modes

Example	Reason
The indoor unit makes a long beep sound.	When operation changeover is under control, the control is set to the mode that cannot be carried out.

Symptom 4: Air flow rate cannot be obtained as set

Example	Reason
During HEATING operation, even if the FAN SPEED CONTROL button is pressed, the air flow rate does not change.	When the room temperature reaches the indoor unit set temperature, the outdoor unit stops and the air flow rate of indoor unit drops to the minimum. This is to avoid the cold air from getting in contact with the people in the room.

Symptom 5: Air discharge direction is not as set

Example	Reason
The remote controller indication and the air discharge direction is not the same. Air discharge direction swing is impossible.	Because it is controlled by microcomputer. Refer to "AIR FLOW DIRECTION ADJUST" on page 5.

Symptom 6: Only a part of indication shows

Example	Reason
Even if the unit is operated, only the operation indication shows, or even if the indication shows, soon after, the indication other than that for operation disappears.	The corresponding indoor unit is that for multi-system and the remote controller is set to the multi-system.

Symptom 7: No indication shows or all indication show

Example	Reason
When the remote controller button is pressed.	The battery is dead.

Symptom 8: Insufficient cooling

Example	Reason
It is in DRY operation.	The DRY operation is an operation mode trying to keep the room temperature constant as much as possible. Refer to "COOLING, HEATING, AUTOMATIC, FAN and DRY operation" on page 4.

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3P444561-1

Part 5
Options

5

1. Option List

1.1   Outdoor Unit

	Option Name	Model Name
1	Drain plug	KKPJ5F180

1.2   BP Unit

	Option Name	Model Name
1	REFNET joint	KHRP26A22T

1.3   Indoor Unit

Wall Mounted Type

	Option Name		Model Name
			CTXG series
1	Wired remote controller ★1		BRC944B2
2	Wired remote controller cord (shielded wire)	Length 9.8 ft (3 m)	BRCW901A03
		Length 26.3 ft (8 m)	BRCW901A08
3	Wireless LAN connection adaptor		BRP072A43
4	Wiring adaptor for timer clock / remote controller ★2 (normal open pulse contact / normal open contact)		KRP413AB1S
5	Central remote controller ★3		DCS302C71
6	Unified ON/OFF controller ★3		DCS301C71
7	Schedule timer controller ★3		DST301BA61
8	Interface adaptor for DIII-NET (residential air conditioner)		KRP928BB2S
9	Titanium apatite deodorizing filter (without frame)		KAF970A46
10	Remote controller loss prevention with chain		KKF910A4

Notes: ★1 3 m (BRCW901A03) or 8 m (BRCW901A08) length wired remote controller cord is necessary.
  ★2 Timer clock and other devices ; obtained locally.
  ★3 An interface adaptor (KRP928BB2S) is also required for each indoor unit.

	Option Name		Model Name	
			CTXS07JVJU CTXS09/12HVJU	CTXS07LVJU FTXS series
1	Wired remote controller ★1		BRC944B2	
2	Wired remote controller cord (shielded wire)	Length 9.8 ft (3 m)	BRCW901A03	
		Length 26.3 ft (8 m)	BRCW901A08	
3	Wiring adaptor for timer clock / remote controller ★2 (normal open pulse contact / normal open contact)		KRP413AB1S	
4	Central remote controller ★3		DCS302C71	
5	Unified ON/OFF controller ★3		DCS301C71	
6	Schedule timer controller ★3		DST301BA61	
7	Interface adaptor for DIII-NET (residential air conditioner)		KRP928BB2S	
8	Air-purifying filter with deodorizing function (without frame)		KAF952A42 ★4	—
9	Titanium apatite deodorizing filter (without frame)		—	KAF970A46 ★4
10	Remote controller loss prevention with chain		KKF910A4	

Notes: ★1 3 m (BRCW901A03) or 8 m (BRCW901A08) length wired remote controller cord is necessary.
  ★2 Timer clock and other devices ; obtained locally.
  ★3 An interface adaptor (KRP928BB2S) is also required for each indoor unit.
  ★4 Standard accessory

Duct Connected Type

	Option Name		Model Name	
			FDXS09/12LVJU	CDXS15/18LVJU
1	Wired remote controller ★1		BRC944B2	
2	Wired remote controller cord	Length 3 m (shielded wire)	BRCW901A03	
		Length 8 m (shielded wire)	BRCW901A08	
3	Wiring adaptor for timer clock / remote controller ★2 (normal open pulse contact / normal open contact)		KRP413AB1S	
4	Central remote controller ★3		DCS302C71	
5	Unified ON/OFF controller ★3		DCS301C71	
6	Schedule timer controller ★3		DST301BA61	
7	Interface adaptor for DIII-NET (residential air conditioner)		KRP928BB2S	
8	Insulation kit for high humidity		KDT25N32	KDT25N50
9	Remote controller loss prevention with chain		KKF910A4	

	Option Name		Model Name
			CDXS24LVJU
1	Wired remote controller ★1		BRC944B2
2	Wired remote controller cord	Length 3 m (shielded wire)	BRCW901A03
		Length 8 m (shielded wire)	BRCW901A08
3	Wiring adaptor for timer clock / remote controller ★2 (normal open pulse contact / normal open contact)		KRP413AB1S
4	Central remote controller ★3		DCS302C71
5	Unified ON/OFF controller ★3		DCS301C71
6	Schedule timer controller ★3		DST301BA61
7	Interface adaptor for DIII-NET (residential air conditioner)		KRP928BB2S
8	Insulation kit for high humidity		KDT25N63
9	Remote controller loss prevention with chain		KKF910A4

Notes: ★1 3 m (BRCW901A03) or 8 m (BRCW901A08) length wired remote controller cord is necessary.

★2 Timer clock and other devices ; obtained locally.

★3 An interface adaptor (KRP928BB2S) is also required for each indoor unit.

	Option Name		Model Name	
			FDMQ09/12RVJU	FDMQ15/18/24RVJU
1	Remote controller (required)	Wired type ★	BRC1E73	
		Wireless type	BRC082A43	
2	High efficiency filter	65%	KAFP632B56	KAFP632B80
		90%	KAFP633B56	KAFP633B80
3	Longlife filter		KAFP631B56	KAFP631B80
4	Filter chamber		KDDFP63B56	KDDFP63B80
5	Central remote controller		DCS302C71	
6	Unified ON/OFF controller		DCS301C71	
7	Schedule timer controller		DST301BA61	
8	Service panel	White	KTBJ25K56W	KTBJ25K80W
		Fresh white	KTBJ25K56F	KTBJ25K80F
		Brown	KTBJ25K56T	KTBJ25K80T
9	Air discharge adaptor		KDAP25A56A	KDAP25A71A
10	Shield plate for side plate		KDBD63A160	
11	Remote sensor		KRCS01-4B	
12	Remote controller loss prevention with chain		KKF910A4	

Note: ★ Wiring for wired remote controller should be obtained locally.

Floor Standing Type

	Option Name	Model Name
1	Wiring adaptor for timer clock / remote controller ★1 (normal open pulse contact / normal open contact)	KRP413AB1S
2	Central remote controller ★2	DCS302C71
3	Unified ON/OFF controller ★2	DCS301C71
4	Schedule timer controller ★2	DST301BA61
5	Interface adaptor for DIII-NET (residential air conditioner)	KRP928BB2S
6	Titanium apatite deodorizing filter (without frame)	KAF968A42 or KAF968B42
7	Remote controller loss prevention with chain	KKF910A4

Notes: ★1 Timer clock and other devices ; obtained locally.

★2 An interface adaptor (KRP928BB2S) is also required for each indoor unit.

Ceiling Mounted Cassette Type

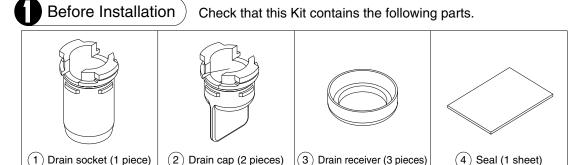|	Option Name		Model Name
1	Decoration panel (required)	New design (white)	BYFQ60C2W1W
		New design (silver)	BYFQ60C2W1S
		Current design (white)	BYFQ60B3W1
2	Remote controller (required)	Wired type ★1	BRC1E73
		Wireless type	BRC082A42W ★2 ★6 BRC082A42S ★3 ★6 BRC082A41W ★4 ★6
3	Sensor kit		BRYQ60A2W ★2 / BRYQ60A2S ★3
4	Sealing member of air discharge outlet		BDBHQ44C60
5	Panel Spacer		KDBQ44BA60A ★4
6	Fresh air intake kit (direct installation type)		KDDQ44XA60
7	Longlife filter		KAFQ441BA60
8	Central remote controller		DCS302C71
9	Unified ON/OFF controller		DCS301C71
10	Schedule timer controller		DST301BA61
11	Adaptor for wiring ★5		KRP1C75
12	Wiring adaptor for electrical appendices ★5		KRP4A74
13	Installation box for adaptor PCB		KRP1BA101
14	Remote sensor		KRCS01-4B

Notes: ★1 Wiring for wired remote controller should be obtained locally.

★2 For BYFQ60C2W1W

★3 For BYFQ60C2W1S

★4 For BYFQ60B3W1

★5 Installation box for adaptor PCB (KRP1BA101) is necessary.

★6 Sensing function and individual flap control function are not available.

2. Options for Outdoor Unit

2.1 <KKPJ5F180> Drain Plug

Installation

■ **Use this plug to connect a drain hose to dispose the drain from the outdoor unit.**

❶ Before Installation) Check that this Kit contains the following parts.

| ① Drain socket (1 piece) | ② Drain cap (2 pieces) | ③ Drain receiver (3 pieces) | ④ Seal (1 sheet) |

❷ Installation Procedure

• Please refer to the installation manual of outdoor unit.

1. Insert drain receiver ③ onto drain socket ① and drain cap ② beyond 4 projections around drain socket and drain cap.
   Refer to a right picture (Note: 2)

   Drain socket ①   Drain cap ②

   Projections   Projections

   Drain receiver ③

2. Insert drain socket and drain caps into their matching drain hole; Drain socket ① into drain hole B and drain caps ② into drain hole C and D. After insertion, turn them about 40° clockwise.

Note: 1
   Be sure not to insert them into wrong drain holes, or there causes water leakage.

   (View from bottom)

Note: 2
   Please check whether drain receiver ③ is caught in four projections of drain socket ① and drain cap ② correctly. It will become the cause of the leak they are not attached correctly.

   Projection   Projection
   (4 places)   (4 places)

3. Connect vinyl hose on the market (internal diameter of 25mm) to drain socket ①.
   (If the house is too long and hangs down, fix it carefully to prevent the kinks.)

4. Affix seals ④ to part A as shown on the above drawing.
   (It is unnecessary when it is the model which does not have opening in A.)

5. After join drainsocket ① and draincap ②, please check whether there is not any leak to A and the other parts by pouring water.

Note: 3
1. If the drain holes of the outdoor unit are covered with the mounting bracket or the floor, raise the unit to provide the space of more than 100mm under the leg of the outdoor unit.
2. Do not use this option in the cold latitudes.
   At bottom frame, drained water is frozen up.

3P066795-1B

5

3. Options for BP Unit

3.1 <KHRP26A22T> REFNET Joint

Dimensions

GAS SIDE JOINT

LIQUID SIDE JOINT

ACCESSORY
REDUCER : GAS SIDE : 2pcs
INSULATION : 2pcs
INSTALLATION MANUAL

D3K03622D

Installation

■ THIS KIT INCLUDES THE FOLLOWING PARTS.

KIT NAME	SHAPE				
	GAS SIDE JOINT	LIQUID SIDE JOINT	INSULATION	REDUCER (FOR GAS PIPE)	REDUCER (FOR LIQUID PIPE)
KHRP26A 22T	※	※	2 pcs.	φ19.1 φ22.2	
KHRP26A 33T			2 pcs.	φ19.1 φ22.2 φ25.4	
KHRP26A 72T			2 pcs.	φ22.2 φ25.4/φ22.2 φ28.6 2 PCS.	φ15.9 φ19.1
KHRP26A 73T			2 pcs.	φ12.7 φ22.2 φ28.6 φ31.8 φ38.1	φ6.4 φ19.1 φ22.2

※···Make sure gas side joint and liquid side joint are for R410A. (Label for R410A is attached on each part.)

(SELECTION PROCEDURE)

According to the INSTALLATION MANUAL of outdoor unit.

(INSTALLATION PROCEDURE)

❶ The pipe size of each parts are shown below.

KIT NAME	GAS SIDE JOINT	LIQUID SIDE JOINT
KHRP26A 22T	I.Dφ12.7 I.φD19.1 I.Dφ15.9 I.Dφ12.7 Inlet I.Dφ15.9 Outlet I.Dφ15.9 I.Dφ12.7	I.Dφ9.5 I.Dφ9.5 I.Dφ6.4 Inlet Outlet I.Dφ6.4 I.Dφ9.5
KHRP26A 33T	I.Dφ22.2 I.Dφ19.1 I.Dφ19.1 I.Dφ15.9 Inlet Outlet I.Dφ15.9 I.Dφ12.7	I.Dφ12.7 I.Dφ9.5 I.Dφ9.5 I.Dφ6.4 Inlet Outlet I.Dφ6.4 I.Dφ9.5
KHRP26A 72T	I.Dφ31.8 I.Dφ25.4 I.Dφ25.4 I.Dφ19.1 I.Dφ15.9 Inlet I.Dφ28.6 Outlet I.Dφ19.1 I.Dφ12.7 I.Dφ15.9	I.Dφ15.9 I.Dφ12.7 I.Dφ12.7 I.Dφ9.5 Inlet Outlet I.Dφ12.7 I.Dφ6.4 I.Dφ9.5
KHRP26A 73T	I.Dφ38.1 I.Dφ31.8 I.Dφ31.8 I.Dφ28.6 I.Dφ25.4 I.Dφ25.4 Outlet Inlet I.Dφ19.1 I.Dφ15.9	I.Dφ15.9 I.Dφ19.1 I.Dφ19.1 I.Dφ15.9 I.Dφ12.7 I.Dφ15.9 Outlet Inlet I.Dφ12.7 I.Dφ9.5

❷ According to SELECTION PROCEDURE, cut the pipe with a pipe cutter for use.
• (Ex.) FOR KHRP26A33T

① GAS SIDE JOINT

Field pipe
φ19.1 or φ15.9
Outlet (1)
To next joint or
indoor unit
Field pipe
φ15.9 or φ12.7
Inlet
Outlet (2)
To outdoor unit
Field pipe
φ22.2 or φ19.1

Note) For the size of inlet is φ19.1 or
the size of outlet (1) is φ19.1,
the size of outlet (2) is φ15.9.

Note) For the size of outlet (1) is φ22.2 or
the size of outlet (2) is φ19.1.

② LIQUID SIDE JOINT

To next joint or
indoor unit
Outlet (1)
Field pipe
φ9.5 or φ6.4
Inlet
Outlet (2)
To outdoor unit
Field pipe
φ12.7 or φ9.5

Note) For the size of inlet is φ9.5 or
the size of outlet (1) is φ9.5,
the size of outlet (2) is φ9.5.

• Cut the pipe with a pipe cutter.

• Cut the pipe with a pipe cutter.

Joint   Part A

Connections

Field pipe
φ19.1 or φ15.9

Cut in the center of the connections.

Cut in the center of the part A
and connect a field pipe.

Joint   Part B

Connections

Field pipe
φ22.2 or φ19.1

Pipe size reducer
(Supplied)

Cut in the center of the connections.

Cut in the center of the part B,
use Pipe size reducer (supplied)
and connect a field pipe.

Joint   Part A

Connections

Field pipe
φ9.5

Cut in the center of the connections.

Cut in the center of the part A
and connect a field pipe.

• Make sure to flow nitrogen gas through the pipe when brazing.

❸ Insulation of Joint
Be sure to insulate the gas and liquid side Joint.
Note) The insulation of the refrigerant piping must be reinforced based on the environment of installation.
Otherwise, dew may condensate on the surface of the insulation. For details, see Engineering Data.

| GAS SIDE | • Set the insulation matching the joint and wind the field supplied tape from the center without any clearances on the matching face of insulation. |

• Seal the insulation and field piping insulation joint with the field supplied tape.

| LIQUID SIDE | • Insulate by the same method as gas side joint. |

Insulation
(Supplied)

Joint

Tape
(Field supply)

Field piping
insulation

(INSTALLATION PRECAUTIONS)

• Install the Joint so that it is branched vertically or horizontally.

Horizontal
(Inclination 30˚ Max.)
±30˚

Max.
±30˚

"A" ARROW VIEW

A

Vertical

• Do not apply extra force on the piping part. The brazed part may be damaged and it may result in gas leakage.

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4. Options for Indoor Unit

4.1 <KDT25N32/50/63> Insulation Kit for High Humidity

Caution
- This kit can be installed to the Ceiling mounted Built-in Type Air Conditioners.<Slim duct type>
- When the Installation box for adapter PCB(KPP1B101)is used together, mount this kit before Installation box.
- It is recommended to mount this kit before installing the indoor unit.

Combination table

Kit name		
KDT25N32	KDT25N50	KDT25N63
FDXS09/12LVJU	CDXS15/18LVJU	CDXS24LVJU

Details of parts

Designation	① Top plate insulation (T-1)	② Top plate insulation (T-2)	③ Side plate insulation (S-1)	④ Side plate insulation (S-2)
Shape	A, Slit (mm)	A, Slit (mm)	Score 380 Slit (mm)	Score 240 (mm)
	Kit name / A: KDT25N32 700, KDT25N50 900, KDT25N63 1100; 380	Kit name / A: KDT25N32 700, KDT25N50 900, KDT25N63 1100; 240	207	207
Number of pieces	1 pc.	1 pc.	2 pcs.	1 pc.

Designation	⑤ Bottom plate insulation (B-1)	⑥ Chamber cover insulation (C-1)
Shape	A, Slit (mm) Kit name / A: KDT25N32 704, KDT25N50 904, KDT25N63 1104; 420	A, Slit (mm) Kit name / A: KDT25N32 621, KDT25N50 821, KDT25N63 1021; 200
Number of pieces	1 pc.	1 pc.

Designation	⑦ Hanger (right) insulation (H-1)	⑧ Hanger (left) insulation (H-2)	⑨ Installation manual
Shape	390 (mm) Slit 90	390 (mm) 90 Slit	(This instruction)
Number of pieces	1 pc.	1 pc.	1 pc.

5

① How to attach ≪ ⚠ When moving the unit at or after opening, hold the unit by the hanger brackets. ≫
Do not apply force to the refrigerant piping, drain piping or flange parts.

<Procedure> Stick the insulations carefully according to the following procedures
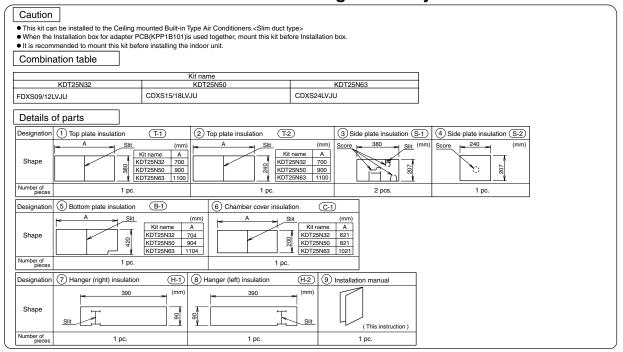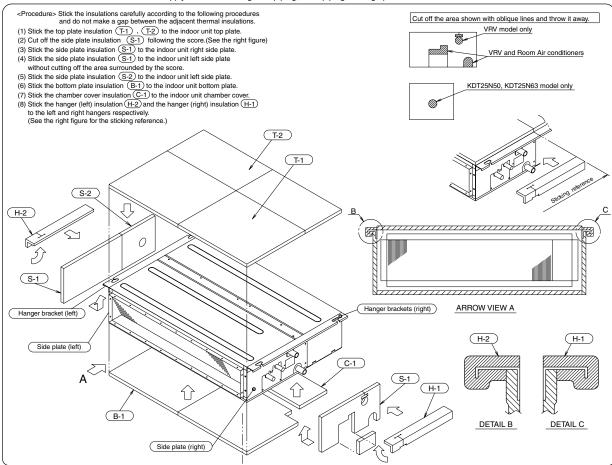and do not make a gap between the adjacent thermal insulations.
(1) Stick the top plate insulation (T-1) , (T-2) to the indoor unit top plate.
(2) Cut off the side plate insulation (S-1) following the score.(See the right figure)
(3) Stick the side plate insulation (S-1) to the indoor unit right side plate.
(4) Stick the side plate insulation (S-1) to the indoor unit left side plate
without cutting off the area surrounded by the score.
(5) Stick the side plate insulation (S-2) to the indoor unit left side plate.
(6) Stick the bottom plate insulation (B-1) to the indoor unit bottom plate.
(7) Stick the chamber cover insulation (C-1) to the indoor unit chamber cover.
(8) Stick the hanger (left) insulation (H-2) and the hanger (right) insulation (H-1)
to the left and right hangers respectively.
(See the right figure for the sticking reference.)

Cut off the area shown with oblique lines and throw it away.
VRV model only
VRV and Room Air conditioners
KDT25N50, KDT25N63 model only

Sticking reference

T-2
T-1
S-2
H-2
S-1
Hanger bracket (left)
Side plate (left)
A
B-1
Side plate (right)
B
ARROW VIEW A
C
Hanger brackets (right)
C-1
S-1
H-1
H-2 DETAIL B
H-1 DETAIL C

C: 3P131323-1E

4.2   <KDDFP63B56/80> Filter Chamber

Precaution

● This product can be mounted to air conditioners of ceiling mounted duct connection type.
● Mount the product after checking the model name of the indoor unit
   with the table on the right.
● Refer to the operation manual and installation manual for the indoor unit
   as well at the time of the installation of this product.
● Use of long –life filters
   Long-life filter can be washed and used again. On completion of installation,
   advise the customer of the cleaning interval and removal method of the filters
   by using the operation manual for the indoor unit and this installation manual.
● Use of high-performance filters
   High-performance filters cannot be washed in water for reuse.
   On completion of installation, advise the customer of the replacing interval
   of the filters by using the operation manual for the indoor unit.

Parts Make sure that the following parts are provided with the product

Name		Filter Chamber	Screws	Installation manual
Shape			M5×16	
Quantity	KDDFP63B36		12	
	KDDFP63B56		14	
	KDDFP63B80	1	18	1 (This copy)
	KDDFP63B160		26	
	KDDF63B160B		28	

Combination table The use of the chamber requires each filter as an optional accessory.

Model name	Hi-performance filter (Optional accessory)	Long-life filter (Optional accessory)
KDDFP63B36	KAFP632B36 or KAFP633B36	KAFP631B36
KDDFP63B56	KAFP632B56 or KAFP633B56	KAFP631B56
KDDFP63B80	KAFP632B80 or KAFP633B80	KAFP631B80
KDDFP63B160	KAFP632B160 or KAFP633B160	KAFP631B160
KDDF63B160B	KAF632B160B or KAF633B160B	KAF631B160B

KAFP632B36・KAFP632B56・KAFP632B80・KAFP632B160・KAF632B160B
 ・・・65%(Colorimeter method)
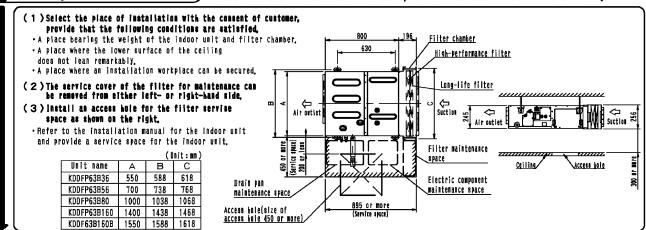KAFP633B36・KAFP633B56・KAFP633B80・KAFP633B160・KAF633B160B
 ・・・90%(Colorimeter method)

① Before installation 〈Do not throw away the required accessories until the installation of the product is completed.〉

（1）Decide the carry-in route.
（2）Carry the product into the place of installation without unpacking the product.
     If it is avoidable to unpack and carry in the product, pay the utmost attention to handle the product.
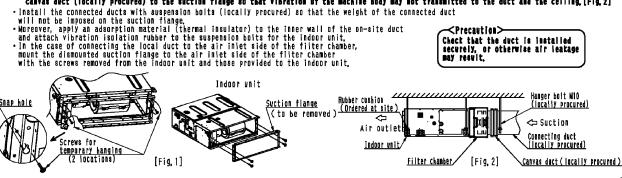
② Selecting Place of Installation 〈Refer to the installation manual provided to the indoor unit as well.〉

（1）Select the place of installation with the consent of customer,
     provide that the following conditions are satisfied.
 ・A place bearing the weight of the indoor unit and filter chamber.
 ・A place where the lower surface of the ceiling
   does not lean remarkably.
 ・A place where an installation workplace can be secured.
（2）The service cover of the filter for maintenance can
     be removed from either left- or right-hand side.
（3）Install an access hole for the filter service
     space as shown on the right.
 ・Refer to the installation manual for the indoor unit
   and provide a service space for the indoor unit.

(Unit : mm)

Unit name	A	B	C
KDDFP63B36	550	588	618
KDDFP63B56	700	738	768
KDDFP63B80	1000	1038	1068
KDDFP63B160	1400	1438	1468
KDDF63B160B	1550	1588	1618

③ Preparation before installation 〈Refer to the installation manual provided to the indoor unit as well.〉

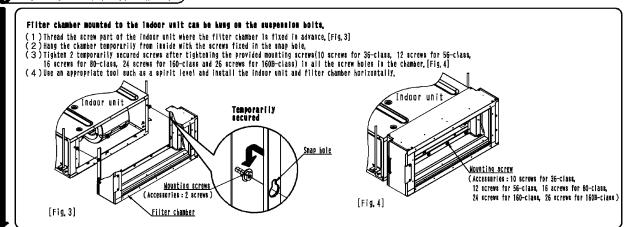（1）Remove the suction flange of the indoor unit. [Fig.1]
 ・Remove 8 screws used for fixing the suction flange except for 2 fixing screws in the upper side of the snap hole (2 screws for temporary hanging)
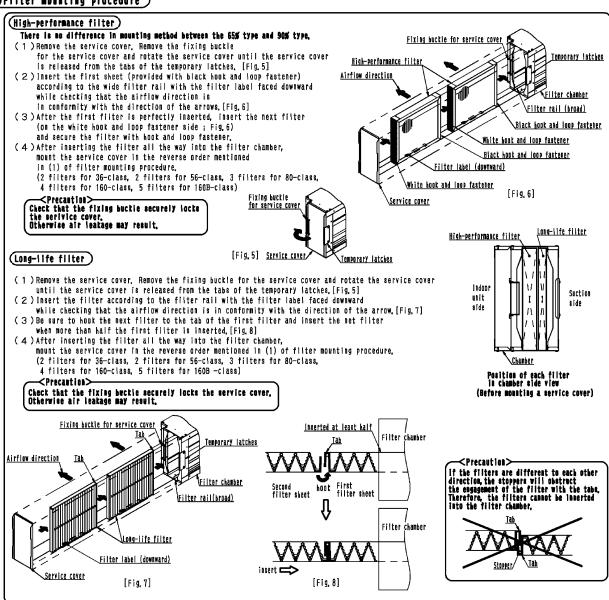 ・Loosen screws for temporary hanging remove the suction flange.
（2）In the case of connecting the site-duct to the air outlet of the air conditioner body and to the air inlet of the filter chamber, fit the
     canvas duct (locally procured) to the suction flange so that vibration of the machine body may not transmitted to the duct and the ceiling. [Fig.2]
 ・Install the connected ducts with suspension bolts (locally procured) so that the weight of the connected duct
   will not be imposed on the suction flange.
 ・Moreover, apply an adsorption material (thermal insulator) to the inner wall of the on-site duct
   and attach vibration isolation rubber to the suspension bolts for the indoor unit.
 ・In the case of connecting the local duct to the air inlet side of the filter chamber,
   mount the dismounted suction flange to the air inlet side of the filter chamber
   with the screws removed from the indoor unit and those provided to the indoor unit.

〈Precaution〉
Check that the duct is installed securely, or otherwise air leakage may result.

[Fig.1]   [Fig.2]

④ Installation of Filter Chamber

Filter chamber mounted to the indoor unit can be hung on the suspension bolts.
(1) Thread the screw part of the indoor unit where the filter chamber is fixed in advance. [Fig. 3]
(2) Hang the chamber temporarily from inside with the screws fixed in the snap hole.
(3) Tighten 2 temporarily secured screws after tightening the provided mounting screws(10 screws for 36-class, 12 screws for 56-class,
      16 screws for 80-class, 24 screws for 160-class and 26 screws for 160B-class) in all the screw holes in the chamber. [Fig. 4]
(4) Use an appropriate tool such as a spirit level and install the indoor unit and filter chamber horizontally.

[Fig. 3]

[Fig. 4]

⑤ Filter mounting procedure

High-performance filter

There is no difference in mounting method between the 65% type and 90% type.
(1) Remove the service cover. Remove the fixing buckle
      for the service cover and rotate the service cover until the service cover
      is released from the tabs of the temporary latches. [Fig. 5]
(2) Insert the first sheet (provided with black hook and loop fastener)
      according to the wide filter rail with the filter label faced downward
      while checking that the airflow direction is
      in conformity with the direction of the arrows. [Fig. 6]
(3) After the first filter is perfectly inserted, insert the next filter
      (on the white hook and loop fastener side ; Fig. 6)
      and secure the filter with hook and loop fastener.
(4) After inserting the filter all the way into the filter chamber,
      mount the service cover in the reverse order mentioned
      in (1) of filter mounting procedure.
      (2 filters for 36-class, 2 filters for 56-class, 3 filters for 80-class,
      4 filters for 160-class, 5 filters for 160B-class)

<Precaution>
**Check that the fixing buckle securely locks
the service cover.
Otherwise air leakage may result.**

Long-life filter

(1) Remove the service cover. Remove the fixing buckle for the service cover and rotate the service cover
      until the service cover is released from the tabs of the temporary latches. [Fig. 5]
(2) Insert the filter according to the filter rail with the filter label faced downward
      while checking that the airflow direction is in conformity with the direction of the arrow. [Fig. 7]
(3) Be sure to hook the next filter to the tab of the first filter and insert the net filter
      when more than half the first filter is inserted. [Fig. 8]
(4) After inserting the filter all the way into the filter chamber,
      mount the service cover in the reverse order mentioned in (1) of filter mounting procedure.
      (2 filters for 36-class, 2 filters for 56-class, 3 filters for 80-class,
      4 filters for 160-class, 5 filters for 160B -class)

<Precaution>
**Check that the fixing buckle securely locks the service cover.
Otherwise air leakage may result.**

[Fig. 5]

[Fig. 6]

**Position of each filter
in chamber side view
(Before mounting a service cover)**

[Fig. 7]

[Fig. 8]

<Precaution>
**If the filters are different to each other
direction, the stoppers will obstruct
the engagement of the filter with the tabs.
Therefore, the filters cannot be inserted
into the filter chamber.**

3P399856-1B

4.3 <KDAP25A56/71A> Air Discharge Adapter

Precaution
- This product can be installed on ceiling mounted duct type air conditioner.
- Refer to the installation manual for the indoor unit as well at the time of installation.

Parts Make sure that the following parts are provided with the product.

Name	Air discharge adapter		Screw		(Others)
36 class		1PC.		8PCS.	
56 class		1PC.	M5×30	8PCS.	Installation manual (This copy)
71 class		1PC.		8PCS.	
140 class		1PC.		12PCS.	

Required Tools
Screw driver +

Operating procedures

1. Remove the air discharge flange from indoor unit.

2. Attach the air discharge adapter to the indoor unit.

   ① Tighten two screws to the indoor unit.
      (Leave about 20mm of the thread exposed)
   ② Hang the air discharge adapter on the screws and then tighten all screws definitively.

Screws M5×16

Indoor unit

Air discharge flange

Screws M5×30

indoor unit

Air discharge adapter

Cautions for the installation

Fasten the screws tightly so as no gap between the indoor unit and the air discharge adapter is made.

3P399034-1

4.4   <KDBD63A160> Shield Plate for Side Plate

Precaution

- This kit can be installed to the ceiling mounted duct type air conditioners.
- Install this kit before installing the indoor unit.
- See installation manual attached to the indoor unit as well at the time of installation.

Parts   · Make sure that the following parts are provided with the product.

Name	① Shield Plate for Side Plate	② Clamp(L)	③ Clamp(S)	④ Screw	⑤ Installation manual
Quantity	1	1	1	2	1
Shape					(This copy)

❶ Removal of outside panel

(1) Remove the suction flange, chamber cover, bottom plate(1), bottom plate(2) and control box cover.[Fig.1]

[Fig.1]

❷ Removing and mounting the control box

(1) Remove the clamp which fixes the internal wiring (A) of the indoor unit [Fig.1-1], the clamp which fixes the motor harness (B) and the wiring fixing board. [Fig.1-2]
(2) Remove screws which fix the control box (C).[Fig.1-1]
(3) Pull out the control box and invert it. [Fig.2]

[Fig.1-1]   [Fig.1-2]

[Fig.2]

(5) Lay the wires on the back side of the control box in accordance with Fig.3 and insert the control box
to the indoor unit without tangling the wires. [Fig.3 and 4]
(6) Mount the control box with the screws removed in the process of (2). [Fig.4-C]
(7) Mount the control box cover using screws removed in the process of ❶ Removal of outside panel . [Fig.5]
(8) Bundle the extra wires of indoor unit (A) and fix them with clamps (L)② to the cable clamp.
Fix the motor harness (B) with clamp (S)③ to the clamp of top panel. [Fig.6]
(9) Mount the Shield Plate for Side Plate① to the indoor unit using Screw④. [Fig.7]

Screw hole   This hole is not used

(Side view)
[Fig.3]

[Fig.4]

[Fig.5]

Clamp(L)②   Control box cover   A

Shield Plate for Side Plate①

Mount the outside panel

Chamber cover

[Fig.8]

B   Clamp (S)③

Screw④

[Fig.6]   [Fig.7]

Suction flange
Bottom plate (2)   Bottom plate (1)

[Fig.9]

(1) Attach the chamber cover which was removed with the screws removed
in ❶ Removal of outside panel [Fig.8]

NOTE) When using the suction flange, mount the bottom plate (1) and (2) with
the screws removed in the process of ❶ Removal of outside panel and fix
the suction flange with screws after ❸ Electric wiring work is finished. [Fig.9]

❸ **Electric wiring work**   Refer to Electric wiring work in the installation manual for the indoor unit as well.

Wiring method

● Keep the distance of 50mm between the low voltage wiring and the high voltage wiring
⚠ at anywhere outside the unit. If both the wires are laid down together, they may be
affected by electric noise (outside noise) and cause malfunction or failure.

Wire inlet (high-voltage)
· Earth wire
For Sky Air
· Transmission wiring for Indoor and Outdoor unit
For VRV
· Power supply wiring

< ⚠ Warning >
Trim and lay the wiring neatly and attach the control box cover securely.
An electric shock or fire may result if the control box lid catches any
wiring or wires push up the lid.

1. Remove the control box [Fig.1]
2. Remove the bottom plate of the control box. When it removed, the terminal
block fixing plate becomes movable. [Fig.2]
3. Lay a wire to inside of the control box through the wire inlet
on the side of the control box.
4. Refer to the Electric wiring work in the installation manual of the
indoor unit for the connection to the terminal block and carry out
the wiring work inside the control box.
5. Wrap the seal material for wiring (S) attached to the indoor unit so that
the clearance around the wire penetrating hole can be filled. [Fig.4]
· Seal the clearance around the wires with putty and insulating material (field supply).
(If insects and small animals get into the unit, short circuiting may occur inside the
control box.)
6. Fix each wirings with the clamps attached to the indoor unit. [Fig.5]
7. Fix the terminal block fixing plate the way it was and attach the control box cover.

Control box cover

Wire inlet (Low-voltage)
· Remote control wiring
For VRV
· Transmission wiring

Screws   Terminal block fixing plate   Screws

[Fig.1]

Lay the wire up to sheath into the control box

Fix wires with the cable clamp attached to the indoor unit fixed by the clamp.

Remote control wiring (low-voltage)
For VRV
· Transmission wiring

Earth wire (High-voltage)
· Transmission wiring for Indoor and Outdoor unit (High-voltage)
For VRV
· Power supply wiring

[Fig.3]

< Movement of terminal block fixing plate >
[Fig.2]

The wire penetrating hole

Seal material (S)
(Attached to the indoor unit)

Power supply wiring, Transmission wiring for indoor and Outdoor unit, Earth wire, or remote control wiring, transmission wiring.

Cable clamp   [Fig.4]

Remote control wiring
For VRV
· Transmission wiring

Earth wire
· Transmission wiring for Indoor and Outdoor unit
For VRV
· Power supply wiring

[Fig.5]   Clamp
(Attached to the indoor unit)

3P400742-1

4.5 <BRYQ60A2W(S)> Sensor Kit

7

8

9

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4P343368-1A

4.6 <KDBQ44BA60A> Panel Spacer

Caution

- When the Panel Spacer is installed, it is not possible to have 2-way air outlet.
- Refer to the installation manual for both indoor unit and the Panel spacer for its installation.

Contents of kit

Check if following parts are included with your kit.

Name	Panel spacer frame	Resin corner part	Fixing metal	Screw
Quantity	4 PCS.	4 PCS.	4 PCS.	28 PCS.
Shape · number	①	②	③	④ M4×12 Tapping screw (Class 2)

Name	Sealing material	
Quantity	2 PCS.	2 PCS.
Shape · number	⑤	⑥

1 Preparation of the decoration panel

- Handle the decoration panel with care.

Never place the panel face down, or lean the panel against wall or place on the projective object.
(It causes the dent or damage of the surface of the panel or damage of swing motor.)

(1) Remove the suction grill from the decoration panel.
(Refer to the installation manual of the decoration panel how to remove.)

(2) Place the panel face down on the corrugated board or the vinyl sheet to protect the surface of the panel.

2 Installation of the indoor unit

Adjust the height of the indoor unit.

Be sure the piping will not contact with the ceiling joist etc. after adjusting the height.

Standard installation

Hanger bracket

False ceiling

(180mm) 285mm

When the Panel spacer is installed

Hanger bracket

False ceiling

(140mm) 245mm 255mm or more

5

❸ Assembly of panel spacer

(1) Assemble the panel spacer frame ① and the plastic corner joint ② temporarily.

(2) Fix with the screws ④ from the top. (4 screws in each corner)

Insert

Insert

❹ Fixing to the decoration panel

(1) Set the fixing metal ③ on each corner with screws ④ .

(2) Place the panel spacer assembled in item ③ Assembly of panel spacer of the above on the outer frame of the decoration panel.

(3) Fix the panel spacer to the fixing metal ③ with screws ④ (4 portions).

Decoration panel

❺ Adhesion of the sealing material

Adhere the sealing material ⑤ ⑥ on the upper face of the panel spacer in the order of ⑤ and ⑥ .

Sticking reference
(Adhere it along the inner rib.)

Sealing material
⑤ ⑥

Panel spacer

Decoration panel

❻ Installation of the decoration panel

Install the decoration panel to the indoor unit according to the installation manual of decoration panel.

The panel spacer is not firmly fixed to the decoration panel, so that never hold the panel spacer directly or lean the decoration panel extremely.

1P107764-1C

4.7   <KDDQ44XA60> Fresh Air Intake Kit

Remarks :

1. This kit can be installed to the Ceiling mounted cassette type (Multi-flow).

2. When installing this kit, duct (Nominal dia. : φ100) is required on site.

> · In case that metal duct is penetrated through wooden walls, make sure the duct and the
>   wall electrically insulated.
>
> · Install the duct inclined downwardly to outdoor so that the rain may not get into the duct.
>   (Inclination 1/100 to 1/50)
>
> · To avoid birds, small animals or insects getting inside the duct, make sure to install net
>   where it contacts the outside air.

Contents

Prior to installation, make sure you have the complete kit of parts.

Name	① Duct flange	② Screws	③ Insulation for duct flange	④ Insulation for opening of unit	⑤ Installation manual
Q'ty	1 piece	4 pieces	1 piece	1 piece	1 piece
Shape		M4×12			

Necessary tools

Philips head screw driver, nipper, cutter etc.

1   Installation procedures of duct flange

1. Cut off the knockout hole on the side plate. (Fig.1)

The knockout hole is opposite to ref. pipe.

Ref. pipe

Knockout hole

Drain pipe

Side plate

Fig.1

Cut it off
with nipper.

Slit

Side plate

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2. Adhere the insulation ④ for opening of unit to the opening. (Fig. 2)

   Put the insulation ④ to be suitable for the hole of the insulation ④
   and hole of the indoor unit.
   However, put the insulation ④ so as not to conceal the screw hole of the indoor unit.

Insulation ④

Fig. 2

3. Install the duct flange① with screws ②(M4×12, 4 screws) to the opening and adhere the insulation③ (Fig. 3)

Duct flange ①

Screws ②
(M4×12, 4screws)

Insulation ③

Fig. 3

❷ Installation procedures of duct <Nominal diameter of duct : φ100>

1. Connect the duct to the duct flange. (Flange fits inside the duct.) (Fig. 4)
2. After connection, wrap vinyl tape (field supply) around the duct connection to prevent
   air leak.

Duct flange ①

Wrap the tape around the duct to avoid air leak.

Indoor unit

Fig. 4

Tape

φ100 Duct (Field supply)

Precaution
   · All ducts must be completely insulated.
   · Do not do the followings when installing duct.

A) To bend the duct excessively   B) To bend the duct too many times   C) To reduce the duct diameter

WRONG   WRONG   WRONG

2P108307-1B

5. Control Devices

5.1 <BRC944B2> Wired Remote Controller for Residential Air Conditioner

5.1.1 Installation Manual

⚠ **CAUTION**

1. No switch box or staple is supplied. Prepare them locally.
2. No remote controller cord is supplied. Prepare the optional remote controller cord 4 wire.
3. Be sure to turn off the power to any apparatus connected prior to mounting.
4. Prior to mounting equipment, touch something metallic such as a doorknob to remove static electricity from your body. Never touch the remote controller board or the adapter board.
5. Keep the wiring away from any other power source lines to avoid electric noise (external noise).
6. Select a flat surface, wherever possible, to mount the remote controller. To prevent deformation of the cases, do not overtighten the mounting screws.

1. Securing the remote controller lower case

Insert a bladed screwdriver into the concave (凹) in the remote controller lower case to remove the upper case assembly (two locations).

The remote controller board is located on the upper case. Take care not to scratch the board with the screwdriver.

Upper case

Screwdriver

Lower case

To remove, insert and twist the screwdriver slightly.

(1) Exposed mounting
Secure the remote controller lower case with the two supplied wood screws.

Wood screws (ϕ3.5mm x 16mm)

(2) Embedded mounting
Secure the remote controller lower case with the two supplied machine screws.

KJB2121A

KJB1111A

Switch box
(Field supplied parts)

Machine screws (M4 x 16)

For the field supplied switch box, use optional accessories KJB1111A or KJB2121A.

2. Securing the remote control adapter

Remove the upper case of the remote control adapter
and secure the lower case assembly.

Double-face
adhesive tape

Wood screws (φ3.5mm x 16mm)

(Mounting with supplied wood screws)   (Mounting with supplied double-face adhesive tape)

3. Wiring

Remote control adapter (attached)

To indoor unit S21-HA connector

Connector

Tie-band
(to secure the cord)

Attached
five-wire cord

Using wire cutters, make
a notch for wiring and
then seal the notch to
ensure it is waterproof.

Remote controller cord
(Note 1)

Lower case

Tie-band
(to secure the cord)

Note 1) Ground the both ends of the shielded wire.

Remote controller cord 4 wire

Item No.	Length
BRCW901A03	Approx. 3m (10ft)
BRCW901A08	Approx. 8m (26ft)

Connector

Connector

Remote controller
board

Remote controller
board

Tie-band
(to secure the cord)

Upper case
assembly

→ To remote control adapter

(Cord drawn out on the back)   (Cord drawn out on the top)

4. Placing the upper case assembly of the remote controller and the upper case of the remote controller adapter back into their original positions

Catch the lower hook first.

During mounting of the remote
controller cord, be careful not to pinch
or otherwise damage the wires.
(Remote controller cord 4 wire)

5. Temperature indication change

To change from Celsius temperature indication to Fahrenheit one

Press and hold down ⊕TEMP at the
same time for 5 seconds while the
Celsius temperature is indicated.

← See Operation Manual

3P202923-2B

5.1.2   Operation Manual

Controller Commands and their Corresponding Functions

Run indicator lamp (green)

Display
Displays the operating conditions.

ON/OFF button
Press to start the system.
Press again to stop the system.

Timer select button
Selects one of the following:
ONE TIME timer ON
DAILY timer ON
TIMER OFF

Mode select button
Selects an operation mode.
(☞ page 7)

Swing button
(☞ page 9)

Airflow rate button
Adjusts the airflow rate.

Clock setting button
(☞ page 5)

Time setting button for the timer

Timer setting button
Sets the current time and timer.

Temperature adjustment button
Adjusts the temperature setting.

How to Set the Timer

ONETIME TIMER | ONETIME/DAILY | Set to the ONETIME TIMER ▶ SET ▶ ⏱▶| ON time UP DOWN ▶ SET ▶ ⏱▶○ OFF time UP DOWN ▶ SET ▶END

DAILY TIMER | ONETIME/DAILY | Set to the DAILY TIMER ▶ SET ▶ TIMER❶❷ ⏱▶| ON time UP DOWN ▶ SET ▶ ⏱▶○ OFF time UP DOWN ▶ SET ▶END

❷◀❶

⚠ CAUTION

● This remote controller cannot be used together with a standard wireless remote controller.
Otherwise, what appears on this remote controller's display may fail to correspond to actual operating conditions.

4

Preparation before Operation

■ **Checking the power**

If nothing appears on the remote controller's display, turn on the circuit breaker.

■ **Setting the current time**

1 Press ▭ ⏱ .

The current time starts blinking.
0:00 lights up.

2 Press DOWN ▽ and set the current time.

● Hold the button down to rapidly advance the time.

3 Press ▭ ⏱ .

: blinks.
(This completes the current time setting)
● The clock's accuracy is ±30 seconds per month.

Notes

To use the unit efficiently

● Avoid overcooling or overheating. Moderate room temperature setting contributes to power saving.

Recommended temperature setting
For cooling ·············· 26~28°C (79°F~82°F)
For heating ·············· 20~22°C (68°F~72°F)

● Hang a blind or a curtain on the window. This will enhance the cooling/heating effect by intercepting direct sunlight and drafts.
● A clogged air filter reduces the cooling/heating effect and wastes energy. Clean the air filter monthly (every two weeks as required) or so.

Please take note of the following points

● Electric power is consumed even when the air conditioner is not in operation.
● When the unit is not used for a long period of time such as during off-season, turn off the breaker.

Operating conditions

● If the operation is continued under any conditions other than the following, the safety device may work to stop the operation. Also, dew may form on the indoor unit and drip from it. (Cooling/DRY)

Cooling	Outdoor temp.	-10 to 46°C (14°F to 115°F)
	Room temp.	18 to 32°C (64°F to 90°F)
	Indoor humidity	Less than 80%
DRY	Outdoor temp.	-10 to 46°C (14°F to 115°F)
	Room temp.	18 to 32°C (64°F to 90°F)
	Indoor humidity	Less than 80%
Heating	Outdoor temp.	-15 to 20°C (5°F to 68°F)
	Room temp.	Less than 27°C

● Operation limit differ according to the model.

5

Preparation before Operation

■ Setting Temperature Indication change

Temperature indication can be changed between Celsius and Fahrenheit before use.

To change from Celsius temperature indication to Fahrenheit one

1 Press and hold down ⬆️TEMP⬇️ at the same time for 5 seconds while the Celsius temperature is indicated.

To change from Fahrenheit temperature indication to Celsius one

2 Press and hold down ⬆️TEMP⬇️ at the same time for 5 seconds while the Fahrenheit temperature is indicated.

👩 Notes

■ **Temperature indication change between Celsius and Fahrenheit on the remote controller**
● Change the temperature indication in the modes other than the DRY mode.
  In the DRY mode, temperature indication setting cannot be changed because the temperature is not indicated.
● When the Fahrenheit temperature indication is changed to Celsius one, the temperature value (0.5°C) will be rounded up. Thus, the preset temperature may be changed.
Example:
  A preset temperature of 65°F (equivalent to 18.5°C) will be changed to 19°C (66°F) by changing the temperature indication. In this case, if you change the Celsius temperature indication again to the Fahrenheit one, the preset temperature is shown not as 65°F but as 66°F (equivalent to 19°C). If the preset temperature is 66°F (equivalent to 19°C) and is changed to the Celsius temperature indication, the indication becomes 19°C (66°F). In this case, no change by the temperature indication change is observed.
● When the temperature indication change is set, the preset temperature is transmitted to the indoor unit so that the reception sound will be heard from the indoor unit.

6

Automatic·DRY·Cooling·Heating Operation

Select your desired operation mode.
Once preset, the system can get restarted in the same operation mode.

1 Press [MODE] to select your desired operation mode.

- Each time the button is pressed, the mode changes as follows.

(Automatic) → (DRY) → (Cooling) → (Heating) → Heat pump model

(DRY) → (Cooling) Cooling only model

- The system does not have the FAN mode.

Run indicator lamp (green)

ON/OFF

27°C

15:30

ONE TIME / DAILY   UP   FAN   MODE
SET   DOWN   TEMP   SWING
TIMER

2 Press ON/OFF .

The run indicator lamp lights up.

■ To stop the operation:

Press ON/OFF again.

The run indicator lamp goes out.

Automatic operation

- In Automatic, the temperature setting and operation mode (DRY, Cooling or Heating) are automatically selected according to the room temperature and outdoor temperature at the time of starting operation.

DRY operation

- In this mode, humidity is removed from the air.

Note

- While running in the DRY mode, you may feel cool or warm air from the air outlet. In this case, readjust the airflow direction with the vertical airflow direction louvers. (except Duct Connected type)

7

■ **To adjust the temperature and airflow rate:**

Setting to be adjusted \ Operation mode	**Automatic**	**Cooling**	**Heating**	**DRY**
⌃ ⓘ**TEMP** ⌄ (Temperature)	Temperature is adjustable. Recommended temperature Cooling : 26°C-28°C (79°F~82°F) Heating : 20°C-22°C (68°F~72°F)			Temperature cannot be adjusted.
❀**FAN** (Airflow rate)	Five levels of airflow rate setting from " ▖ " to " ▐ " plus " Ⓐ " are available.			Airflow rate cannot be adjusted.

● When the unit runs in the cooling or heating mode at a low airflow rate, the cooling or heating effect may be insufficient.

■ **To adjust the airflow direction:**
(☞ page 9)

Heating operation

● Since the heating operation is performed by taking the heat from outdoor into the room, the heating capacity decreases as the outdoor temperature lowers. If the room is not heated sufficiently, it is recommended to use other heating appliance at the same time.
● Since the air conditioner heats the whole room by circulating hot air, it takes some time to heat the entire room completely.

● If the outdoor unit gets frosted during heating operation, the heating capacity is decreased. In this case, the unit starts defrosting operation.
● No hot air comes out of the indoor unit during defrosting operation.

8

Adjusting Airflow Direction

Adjust the airflow direction for maximum comfort.

To adjust the Airflow Direction

1 Press ⬚ during operation.
SWING

● Each time the button is pressed, the airflow direction louvers change their movement.

■ Wall Mounted Types (without horizontal swing function)

Swing — The horizontal airflow direction louvers move up and down.

Airflow direction louvers stop — The louvers stop just when the button is pressed.

Adjustment of horizontal airflow direction

● The automatic moving range of the horizontal airflow direction louvers varies depending on the operation mode.

Notes

● In fixing the horizontal airflow direction, keep the horizontal airflow direction louvers tilted downward in the heating mode, and keep them nearly horizontal level in the cooling or DRY mode. This will enhance the cooling and heating effect.
● On the air conditioners with vertical and horizontal swing function, be sure to adjust the airflow directions using the remote controller. Do not forcibly adjust louvers by hand or a malfunction may occur.

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■ Wall Mounted Type (with horizontal swing function)

Swing horizontally	The horizontal airflow direction louvers move up and down.
Swing vertically	The horizontal airflow direction louvers stop just when the button is pressed. Then the vertical ones start moving right and left.
Airflow direction louvers stop	The vertical airflow direction louvers stop just when the button is pressed.

● The vertical and horizontal louvers cannot move at the same time.

■ Duct Connected Type (without swing function)

This function cannot be used.

Note

● The operating procedure and remote controller display are different depending on the indoor unit being connected.
Read **How to Adjust the Airflow Direction** in the air conditioner's Operation Manual.

10

Timer Operation

The Timer Operation feature automatically turns off operation when you go to sleep and turns it back on when you wake up.
Use the DAILY Timer mode on weekdays, and the ONE TIME timer mode on weekends.

■ **To select the ONE TIME timer mode:**

1 Press ⬚ to select the ONE TIME timer mode.
ONE TIME / DAILY

● Each time the button is pressed, the modes change as follows.

ONE TIME timer
↓
DAILY timer
↓
TIMER OFF

The timer lamp lights up.

(ON time)
(OFF time)

(Timer settings displayed)

■ **To cancel the timer settings:**

1 Press ⬚ to clear the timer settings.
ONE TIME / DAILY

The ONE TIME or DAILY TIMER disappears from the display, and the timer lamp goes out too.

15:01

Notes

● Even when the timer has been off, its programmed settings are still in memory.
● If the system has the timer control ON but you start and stop it manually using the ON/OFF button before the designated ON time, the system will restart again at the programmed ON time.

Precautions in setting the timer

● Before starting the timer operation, make sure the current time is correct. If not, set the clock correctly. (☞ page 5)
● In making time settings, --:-- is displayed to make it easy to disable the timer too.
● If one minute has passed before making any timer setting, the previous timer settings are reintroduced and the timer is on standby.
  In this case, use the SET (time setting) button and make your desired timer settings.

Timer operation

● When the ON timer is programmed, the system starts one hour (maximum) earlier so that the temperature set by the remote controller is reached just in time.
● When the ONE TIME timer is programmed, the current time is no longer displayed.

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■ **ONE TIME timer**
Once the timer has been activated and then deactivated, it is in the OFF mode.
The ON or OFF timers can be programmed.

1 Press [ONE TIME /DAILY] to select the ONE TIME timer.

ONE TIME $\quad$ 6:00
$\quad$ 0:00 light up.

2 Press [SET] .

$\quad$ 6:00 $\quad$ blinks.
$\quad$ 0:00

3 Press [UP DOWN] to make the ON timer setting.

10:00 $\quad$ When the ON timer is not used,
0:00 $\quad$ save the setting as ⊕▸| – –:– –
● Each time the button is pressed, the setting changes in a 10-minute increment or decrement. Hold the button down to advance quickly.

4 Press [SET] .

10:00 $\quad$ blinks.
0:00

5 Press [UP DOWN] to make the OFF timer setting.

10:00 $\quad$ When the OFF timer is not used,
15:00 $\quad$ save the setting as ⊕▸○ – –:– – .

6 Press [SET] .
(The ONE TIME timer is now programmed.)

10:00 $\quad$ Both of the ON and OFF time
15:00 $\quad$ cannot be set as $\quad$ – –:– –

Example of display with the ONE TIME timer programmed

10:00
15:00

ONE TIME timer
programmed.
(The set time is displayed.)

→

15:00

ON timer activated
and system starts.
(The ON timer setting no longer displays.)

→

15:01

OFF timer activated,
and system stops.
(The timer setting no longer displays.)

Notes

■ In the following cases, reset the clock (the time setting is kept in the memory).
● The circuit breaker has been activated.
● The power fails.

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Timer Operation

■ To select the DAILY timer mode:

1 Press [ONE TIME / DAILY] to select the DAILY timer mode.

● Each time the button is pressed, the modes change as follows.

ONE TIME timer
↓
DAILY timer
↓
TIMER OFF

The timer lamp lights up.

Timers ❶❷
Two pairs of ON and OFF time settings can be programmed.

ON time

24-hour timer display
The settings of timers ❶ and ❷ can be seen at a glance.

OFF time

(Timer settings displayed)

■ To cancel the timer settings:

1 Press [ONE TIME / DAILY] to clear the timer settings.

The ONE TIME or DAILY TIMER, and the timer lamp are no longer displayed.

15:01

Example of display with DAILY timer programmed

Timers ❶ and ❷ programmed.

Timer ❶ alone programmed.

Note

● The system starts and stops repeatedly until the DAILY timer is set off. Before you leave home for a long time, set the DAILY timer off.

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■ **DAILY timer**

After programming, the system starts and stops each day at the preset times. Two pairs of time settings can be programmed.

(Example: 8:00 ~ 10:00, and 18:00 ~ 23:00)

1 Press [ONE TIME / DAILY] to select the DAILY timer.

DAILY timer indication appears.
[icon] lights up.

2 Make the ON and OFF time settings. ● Take the steps from ① to ⑧.

Program example: 8:00 ~ 10:00, and 18:00 ~ 23:00

Settings \ Procedure	Press **SET**	Press **UP** △ / **DOWN** ▽ to make the timer setting.
Timer 1 — ON time setting ● When the timer **1** is not used, save the setting as ⊕ ▸ ∣ – – ꞉ – –	① DAILY TIMER**1** 6:00 / 0:00	② DAILY TIMER**1** 8:00 / 0:00
Timer 1 — OFF time setting	③ DAILY TIMER**1** 8:00 / 0:00	④ DAILY TIMER**1** 8:00 / 10:00
Timer 2 — ON time setting ● When the timer **2** is not used, save the setting as ⊕ ▸ ∣ – – ꞉ – –	⑤ DAILY TIMER**12** – – ꞉ – – / 0:00	⑥ DAILY TIMER**12** 18:00 / 0:00
Timer 2 — OFF time setting	⑦ DAILY TIMER**12** 18:00 / 0:00	⑧ DAILY TIMER**12** 18:00 / 23:00

3 Press **SET** [ ]. The DAILY timer is now programmed.

> **Note**
>
> ● If the following appears on the display, the timer must be reprogrammed.
>
> [DAILY TIMER**12** 9:35] The 24-hour timer display is blinking.
>
> This means that Timers **1** and **2** are programmed for the same time settings. New time settings must be made.
>
> [DAILY TIMER — 9:35] The 24-hour timer display is blinking.
>
> This means that the timer has not been programmed yet.

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Cleaning

Cleaning the remote controller

● Wipe it clean with soft, dry cloth.
Do not use any water hotter than 40°C (104°F), or volatile liquids such as benzine, gasoline and thinner, polishing powder, or anything hard such as a scrub brush.

When the unit is not used for a long time

① On a sunny day, keep the system running for half a day in the FAN mode to dry it up inside.

FAN mode

1 Press ▷MODE to select the cooling mode.

2 Press ⓑTEMP △ to adjust the set temperature to 32°C (90°F).

3 Press ⏻ON/OFF .

● The airflow rate remains the same, and is not adjustable.
● Run the system when the room temperature is below 28°C (82°F).

② Finally turn off the circuit breaker dedicated for the room air conditioner.
③ Clean the air filter and place it back into position.

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5.2   <BRCW901A03/08> Wired Remote Controller Cord

Safety Precautions

- Turn OFF the controlled equipment when connecting the equipment.
- Hold the plug of the connector when connecting or disconnecting the connector.

Precautions for Use

- This remote controller cable is of thin-profile BRC944-series remote controller units.
- Be sure to ground both ends of the shield wire.
- Install the controlled equipment after reading through the installation manual of the equipment.

Complete Parts

- **Remote Controller Cable**

Ground terminal   Ground terminal

4-pin
connector   4-pin
                    L   connector

Parts number	L
BRCW901A03	Approx. 3m
BRCW901A08	Approx. 8m

- **Installation Manual**   • **Packing Case**

3P201487-1

5.3   \<BRP072A43\> Wireless LAN Connection Adaptor

Safety Considerations

Give this installation manual to the customer when installation is completed.

- Read these **Safety Considerations** carefully to ensure correct installation.
- Be sure to complete trial operation of the air conditioner / heat pump, in advance, in accordance with the instructions in the installation manual for the air conditioner / heat pump.
- Meanings of **WARNING** and **CAUTION** symbols:

⚠ **WARNING** : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** : Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **WARNING**

- Only qualified personnel must carry out the installation work. Installation must be done in accordance with this installation manual. Improper installation may result in electric shock, fire, or equipment damage.
- Use only specified accessories and parts for installation work. Failure to use specified parts may result in electric shock, fire, the product falling, or equipment damage.
- Before touching electrical parts, turn off the air conditioner / heat pump.
- Electrical work must be performed in accordance with relevant local and national regulations and with the instructions in this installation manual. Always use a dedicated circuit. Failure to comply may result in electric shock or fire.
- Do not disassemble, modify, or repair. Doing so may result in fire, electric shock, or injury.
- Do not handle this product with wet hands. Doing so may result in electric shock or fire.
- Do not allow this product to get wet or use it when bathing or similar activities using water. Failure to comply may result in electric shock or fire.

- Do not use this product near medical equipment or persons using cardiac pacemakers or defibrillators. This product may cause life-threatening electromagnetic interference.
- Do not use this product near auto-control equipment such as automatic doors or fire alarm equipment. Doing so may result in accidents due to malfunctioning.
- Immediately turn off the circuit breaker for the air conditioner / heat pump if there is an abnormal odor or sound, the unit is overheating, or smoke is emanating from the unit.
  There is a risk of fire or malfunction.
  Request an inspection by your dealer.
- Turn off the circuit breaker for the air conditioner / heat pump if the product was dropped or the case is damaged.
  There is a risk of fire or electric shock.
  Request an inspection by your dealer.
- Do not install the wireless LAN connection adapter in the plenum of the building. Doing so may result in fire.

⚠ **CAUTION**

- Do not install this product where gas leakage could be exposed to open flames.
  If the gas leaks and builds up around the product, it may catch fire.
- Touch a nearby metal object (doorknob, aluminum sash, etc.) to discharge static electricity from your body before touching this set. Static electricity from your body can damage this set.
- Grip the connector when disconnecting the connection cord from the outlet.
  Otherwise fire or electric shock can occur.
- Do not use where small children can get access.
  There is a risk of injury to small children.

- Do not use this product near a microwave oven.
  This can affect wireless LAN communications.

Accessories

Ⓐ Wireless LAN connection adapter	1	Ⓑ Serial number sticker *1	1	Ⓒ Installation manual (multi-language)	1
Ⓓ Connection cord (1.6m) *2	1	Ⓔ Fastening tape	1	Ⓕ Mounting screw	2
Ⓖ Home automation printed-circuit board (HA PCB) *3	1	Ⓗ Harness (with ferrite core) *3	1	Ⓙ Harness (without ferrite core) *3	1

*1 Attach to the sticker attachment area on this document and keep safe.
*2 Do not use extension or other cords.
*3 Not used with air conditioners fitted with an S21 connector.

[About the SSID and KEY]
- The [SSID] and [KEY] shown on the Ⓑ serial number sticker are necessary when connecting the air conditioner and a smartphone via wireless LAN.

[Sticker attachment area]
Attach the Ⓑ serial number sticker to the sticker attachment area and keep safe.

Names of Parts

Ⓐ Wireless LAN connection adapter

POWER lamp (green)
lights when running.

RUN lamp (orange)
lights when connecting to a router (wireless LAN access point).

AP lamp (yellow)
lights when connected directly to a smartphone.

POWER
RUN
AP
SETUP
MODE

SETUP button
Use when connecting to a router (wireless LAN access point).

MODE button
Switches modes (RUN/AP) when held down.

[Resetting the connection adapter]
• If the [SETUP] button and the [MODE] button are held down together for 5 seconds, all lamps will begin blinking. If the [SETUP] button is pressed in this state, settings will revert to factory default values.
(Data including network settings and power consumption history are erased.)

Installation Position

Ⓐ Wireless LAN connection adapter

Electrical wiring box

Ⓖ HA PCB

Wiring Outline

Inside the indoor unit

S21 S601
S602
Ⓖ HA PCB

Ⓐ Wireless LAN connection adapter

S403

Ⓗ or Ⓙ Harness

Ⓓ Connection cord

Printed-circuit board of the indoor unit

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HA PCB Installation Procedure (1)

Type A model

Not fitted with an S21 connector (1 flap)

1 flap

Type B model

Not fitted with an S21 connector (2 flaps)

2 flaps

Other models

Fitted with an S21 connector

etc.

⚠ **WARNING**

Be sure to turn OFF the power at the time of installation work.
Touching any electric parts with the power turned ON may cause electric shock.

1. **Remove the front panel, service lid, and front grille in accordance with the installation manual for the air conditioner.**

2. **Install the Ⓖ HA PCB.**
   Installation procedures for the Ⓖ HA PCB differ by model type.
   Refer to the relevant section.

   For **Type A model** ⇒ Proceed to "HA PCB Installation Procedure (2) (Type A)"

   For **Type B model** ⇒ Proceed to "HA PCB Installation Procedure (2) (Type B)"

   For **Other models** ⇒ Connect the Ⓓ connection cord to the S21 connector in accordance with the installation manual for the air conditioner.
   (It is not necessary to install the Ⓖ HA PCB.) After making the connection, return the front grille, service lid, and front panel to their original positions.

HA PCB Installation Procedure (2) | Type A

3. Remove the electrical wiring box cover.

• Disengage the hooks to remove the electrical wiring box cover.

Hooks

Electrical wiring box cover

4. Remove the electrical wiring box (if necessary).

If there is workspace on the right-hand side of the indoor unit, the installation work can be conducted without removing the electrical wiring box. Connect the Ⓖ HA PCB without removing the electrical wiring box, if possible.

1) Disconnect the inter-unit wire.
2) Disconnect the fan motor connector (S200) and swing motor connector (S6).
3) Disconnect the thermistor and ground wire from the heat exchanger (2 screws).
   (Some models may not have ground wire.)
4) Remove the mounting screw of the electrical wiring box (1 screw).

Ground wire*
(Green/Yellow)

Ground wire*
(Green)

Inter-unit wire

Thermistor
• Make sure that the
  mounting bracket of the
  thermistor will not fall off.

* The position of the ground wire may differ depending on the model.

Mounting screw of electrical
wiring box

S200
S6

5. Install the HA PCB to the electrical wiring box.

1) Attach the Ⓗ harness (with ferrite core), by connecting it to the S601 and S602 connectors on the Ⓖ HA PCB. (See **Fig. 2**)
2) Insert the connector of the Ⓗ harness (with ferrite core) into the S403 connector on the electrical wiring box. (See **Fig. 2**)
3) Install the Ⓖ HA PCB to the electrical wiring box. (See **Fig. 2**)
4) Insert the Ⓓ connection cord into the S21 connector (white) on the Ⓖ HA PCB. (See **Fig. 3**)
   • Insert the connector of the Ⓓ connection cord without the cord anchor. (See **Fig. 1**)
5) Route the Ⓓ connection cord as shown in the figure. (See **Fig. 3**)

Fig. 1

Cord anchor

Ⓓ Connection cord

Fig. 2

S403
S601
Ⓖ HA PCB
S602

To S403
connector

Ⓗ Harness
(with ferrite core)

How to attach the Ⓖ HA PCB

Back of the
Ⓖ HA PCB

Spacer

Electrical wiring box

Fig. 3

S21 connector (white)

Electrical
wiring box

Ⓖ HA PCB

Ⓓ Connection
cord

6. Return the electrical wiring box cover and electrical wiring box (if it was removed) to their original positions.

7. Return the front grille, service lid, and front panel to their original positions in accordance with the installation manual for the air conditioner.

## HA PCB Installation Procedure (2)						Type B

3. Remove the electrical wiring box cover.

• Disengage the hooks to remove the electrical wiring box cover.

Electrical wiring box cover								Hooks

4. Remove the electrical wiring box (if necessary).

If there is workspace on the right-hand side of the indoor unit, the installation work can be conducted without removing the electrical wiring box. Connect the Ⓖ HA PCB without removing the electrical wiring box, if possible.

1) Disconnect the inter-unit wire.
2) Disconnect the fan motor connector (S200) and swing motor connector (S6).
3) Disconnect the thermistor and ground wire from the heat exchanger (2 screws).
   (Some models may not have ground wire.)
4) Remove the mounting screw of the electrical wiring box (1 screw).

Ground wire*
(Green/Yellow)

Ground wire*
(Green)

Inter-unit wire

Thermistor
• Make sure that the
  mounting bracket of the
  thermistor will not fall off.

S6				S200

* The position of the ground wire may differ depending on the model.

Mounting screw of electrical
wiring box

5. Install the HA PCB to the electrical wiring box.

1) Attach the Ⓙ harness (without ferrite core), by connecting it to the S601 and S602 connectors on the Ⓖ HA PCB. (See **Fig. 2**)
2) Insert the connector of the Ⓙ harness (without ferrite core) into the S403 connector
   on the electrical wiring box. (See **Fig. 2**)
3) Install the Ⓖ HA PCB to the electrical wiring box. (See **Fig. 2**)
4) Insert the Ⓓ connection cord into the S21 connector (white) on the Ⓖ HA PCB. (See **Fig. 3**)
   • Insert the connector of the Ⓓ connection cord without the cord anchor. (See **Fig. 1**)
5) Route the Ⓓ connection cord as shown in the figure. (See **Fig. 3**)

Fig. 1

Cord anchor

Ⓓ Connection cord

Fig. 2

Ⓙ Harness (without ferrite core)

S403				To S403
				connector

S602

Ⓖ HA PCB

S601

How to attach the Ⓖ HA PCB

Back of the
Ⓖ HA PCB

Spacer

Electrical wiring box

Fig. 3

Ⓖ HA PCB				S21 connector (white)

Ⓓ Connection
cord

6. Return the electrical wiring box cover and electrical wiring box (if it was removed) to their original positions.

7. Return the front grille, service lid, and front panel to their original positions in accordance with the installation manual for the air conditioner.

Wireless LAN Connection Adapter Installation Procedure   All types

The following procedures are also applicable to air conditioners fitted with an S21 connector.

1. Remove the upper case of the Ⓐ wireless LAN connection adapter.

Press a slot-head screwdriver* into the dent between the upper and lower cases of the Ⓐ wireless LAN connection adapter to remove. (Be careful not to damage the case.)
* Use a slot-head screwdriver with a wide head (0.2 inches (5mm) or wider is recommended).

Ⓐ Wireless LAN connection adapter

Do not press the screwdriver into the hole for the connection cord.

Slot-head screwdriver

Upper case

Lower case

2. Attach the Ⓓ connection cord to the Ⓐ wireless LAN connection adapter.

1) Attach the connector of the Ⓓ connection cord.
2) Fasten the Ⓓ connection cord to the notch in the lower case of the Ⓐ wireless LAN connection adapter.

Connector

Ensure that the connector on the Ⓓ connection cord is firmly inserted all the way.

Cord anchor

Fasten the Ⓓ connection cord and ensure that external force is not transmitted.

3. Install the lower case of the Ⓐ wireless LAN connection adapter to a wall, a pillar, or similar location.

• Install the lower case so as to allow the upper case to be easily removed for maintenance purposes.
• Do not install outdoors or anywhere it is likely to get wet.
• Do not install it near the sensor part of the indoor unit.

Ⓕ Mounting screws

Do not fasten the screws into the indoor unit.

When attaching the Ⓔ fastening tape
• Attach it to the reverse side of the lower case.

Do not block the holes at the top and bottom.

Ⓔ Fastening tape

• Depending on the type of the wall, there is a possibility of damaging the wall, and the adapter falling.
Please install it after consulting with the client.

4. Return the adapter case to its original condition.

Close the adapter by hooking the top of the upper case on the top clip of the lower case.

Top clip of lower case

Check that the Ⓓ connection cord is securely fastened.

Push until you hear a click.

5. Turn on the power supply, wait until the initialization is complete, and check that the [POWER] lamp of the Ⓐ wireless LAN connection adapter lights up.

☐POWER

When turning on the power, always attach the upper adapter case.

Preparation Before Configuring Connection Settings [All types]

The customer is responsible for providing the following.
- Smartphone or tablet PC
  (Supported OS: Android 4.0.3 or later; iOS 7.0 or later.)
- Internet line and communicating device
  (Modem/router or a similar device)
- Wireless LAN access point
  (The corresponding channel for the wireless LAN connection adapter is 1-11.)
- [DAIKIN Mobile Controller] (No Cost)

Installation method of online controller

For Android Phones/Tablets	For iPhones/iPads
(1) Open the [Google Play]. (2) Search for [Daikin Comfort Control]. (3) Follow the directions on the screen to install.	(1) Open the [App Store]. (2) Search for [Daikin Comfort Control]. (3) Follow the directions on the screen to install.

Configuring Connection Settings (1) [All types]

Check whether the router to be used supports WPS.

If WPS is supported ⇒ Proceed to | Simple setup | **If WPS is not supported** ⇒ Proceed to | Advanced setup |

| Simple setup |

1. Check that the [POWER] lamp is continuously lit and the [RUN] lamp is blinking.
- If the [POWER] lamp is lit and the [RUN] lamp is not lit, hold down the [MODE] button on the adapter for about 2 seconds to prompt the [RUN] lamp to begin blinking. (Blinking begins in about 30 seconds.)

☐RUN

[MODE] button

2. Press the [WPS] button on the router (wireless LAN access point).
- Operation procedures for the [WPS] button vary by router (wireless LAN access point). For details, refer to the instruction manual for the router.

[WPS] button

3. Hold down the [SETUP] button on the adapter for about 2 seconds.
- The [RUN] lamp will begin to blink more rapidly, and will change to a continuous light once a connection between the router (wireless LAN access point) and the adapter has been established.
  If a connection fails to establish, repeat procedures from step 1 of "Simple setup".
  If a connection still cannot be established, follow the procedures in "Advanced setup".
  (In some cases, a connection cannot be established using the steps in "Simple setup" owing to compatibility issues.)

4. Connect the smartphone (tablet PC) and the router (wireless LAN access point).
- A connection can be established by opening the smartphone's Wi-Fi network list, selecting the [SSID] for the router and entering its password.

5. Tap the installed app [Daikin Comfort Control] to start it.
- If the connected air conditioner is listed in the units overview screen, setup is complete.
  If it is not listed, tap ↻ (refresh) in the top right corner of the units overview screen.

Note
- If an upgrade is available for your adapter, the notification icon "🔵" will be displayed on the units overview screen. Tap it to upgrade your firmware.

Configuring Connection Settings (2) | All types

Advanced setup • All steps are demonstrated using iOS.

1. **Check that the [AP] lamp is lit (continuously).**
   If the [AP] lamp is not lit, hold down the [MODE] button on the adapter for about 2 seconds to prompt the [AP] lamp to light up (continuously). (Lights in about 10 seconds.)

   ☐ AP
   [MODE] button

2. **Connect the smartphone (tablet PC) directly with the adapter via wireless LAN.**
   • Open the smartphone's Wi-Fi network list, select the [SSID] (DaikinAP *****) shown on the Ⓑ serial number sticker, or the Ⓐ wireless LAN connection adapter, and then enter the [KEY].

3. **Tap the installed app [Daikin Comfort Control] to start it.**

4. **Make the wireless connection settings.**

   (1) Tap [Configure the wireless connection].

   (2) Select your home network from the list.

   (3)
   ❶ Enter the password.
   ❷ Tap [Connect].

   (4) Follow the on-screen instructions from here onward to complete setup.

   (5) After implementing the setting above and the product and router (wireless LAN access point) are connected, the [RUN] lamp will light. If this blinks for 1 minute or longer, check the power to the router (wireless LAN access point), network name and the password and start again from the first procedure.

   * To set the wireless connection manually, tap [Advanced network settings], turn off [Automatic IP address (DHCP)], fill in the required information for the Wi-Fi router, tap [✓] and then tap [Connect] on the wireless connection screen. Follow the on-screen instructions and then continue as in step (5).

5. **Connect the smartphone (tablet PC) and the router (wireless LAN access point), and then start [Daikin Comfort Control].**
   • Refer to step 4 and step 5 of "Simple setup".

Troubleshooting

The following table provides brief descriptions of how to handle problems or uncertainties when you install the product or make connection settings. Check our website for details.

URL

http://daikincomfort.com/DuctlessWireless/FAQ

• FAQ can be viewed via smartphone (tablet PC). To access, please scan the 2D barcode.

When this happens	Explanation and where to check
[RUN] lamp does not light up (continuously).	The [RUN] lamp blinks. → Perform Simple setup or Advanced setup again. → Check that the [SSID] and password for the adapter are entered correctly. → Move the router (wireless LAN access point) closer to the adapter. → The smartphone or router (wireless LAN access point) in use may not be supported. Check our website for details.

After-sale Service

For inquiries concerning after-sale service, contact your dealer and advise them of the following details:

• Model name
• Date of installation
• Conditions at the time of failure (as precisely as possible)
• Your address, name, and telephone number

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This telecommunication equipment is in compliance with FCC/IC requirements.

FCC CAUTION Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.
This device complies with Part 15 of FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.
This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 8 inches (20cm) or more away from person's body.

Contains FCC ID:VPYLBYD
Contains IC: 772C-LBYD

3P427537-1A

5.4   <KRP413AB1S> Wiring Adaptor for Timer Clock / Remote Controller

Safety Precautions

● Read these safety precautions carefully before installing the unit, and be sure to install the unit properly.
● This manual classifies precautions to the user into the following two categories. These warnings and cautions are for your safety. Follow them.

⚠ **WARNING**	Faulty installation can result in death or serious injury.
⚠ **CAUTION**	Faulty installation can result in serious injury, damage to property, or other serious consequences.

● After installation is complete, test the unit to confirm that it is working properly, and instruct the owner its proper use.

⚠ WARNING

● Installation should be left to the dealer from whom you purchased the unit, or another qualified professionals.

● Install the unit securely according to the installation manual. Faulty installation may lead to electric shock or fire.

● Be sure to use the supplied or specified parts. Using other parts may lead to electric shock or fire.

● Install the unit securely in a location that will support its weight. If installed in a poor location or improperly installed, the unit may not work as intended.

● For electrical work, follow local electric standards and the installation manual. Faulty installation may lead to fire or electric shock.

● Do not bundle the power cord, or attempt to extend it by splicing it with another cord or by using an extension cord. Do not place any other load on the power circuit used for the unit. Improper wiring may lead to electric shock, heat generation or fire.

● Use dedicated wiring for all electrical connections, and be sure to arrange the wiring so that force applied to the wiring will not damage the terminals. Poor wiring or installation may cause electric shock, heat generation or fire.

⚠ CAUTION

● Before installation, unplug the air conditioner to ensure safety. Failure to do so may cause electric shock.

● Static electricity may damage electric components. Before connecting cables and communication lines, and operating the switches, be sure to discharge any electrical charge from your body (by, for example, touching the earth line)

● Do not install the unit in a location where it may be exposed to flammable gases. If gas leaks and build up around the unit, it may catch fire.

● Do not place the wiring close to the power cord, inter-unit cable, or pipes which generate noise. Treat the wiring with care.

1. Functions and Features

● On/Off setting
● Switching between Instantaneous Contact/Normal Contact
● Connection with five-room central controller (KRC72 for oversea model)
● Connection with fan coil remote controller
● Automatic reset after power failure
● Output of normal operation signals/malfunction signals

2. Field Wiring

For interconnecting wiring, use Daikin KDC100A12 cable (not supplied) or other similar cable. Use a vinyl-covered wire or cable with four conductors each with a thickness of 0.2 to 1.25 mm².

■ **Optional cable KDC100A12 (without connectors)**

Specifications: 0.2 mm² × 4 core (sheathed)
Outer diameter: φ5.3
Length: 100 m
Colour: Grey

Note : Keep any wiring for the control unit away from the power cord to prevent electrical noise.

Installation ①

1   Installation diagram

2   Components

①HA casing ASSY (Remote Control PCB is attached in the HA casing.)	②Wiring (approx. 0.8 m)

③Accessories
  Binding band (6 pcs.)
  • Screws for attaching to the wall (3 pcs.)	

④Installation manual	

Installation ②

Attaching HA Case ASSY

● Use the 3 supplied screws to attach the HA casing ASSY.

Indoor unit   HA casing

Install the HA casing ASSY as close to the indoor unit as possible.

① Removal of upper HA casing

（1） Insert a flat-blade screwdriver into the groove between the upper and lower HA casings.

Flat-blade screwdriver

Upper HA casing

Remote Control PC-board   Lower HA casing

（2） Lift the handle of the screwdriver upward.

② Mount and secure the lower HA casing directly on the wall with the provided screws inserted into the screw holes (a round hole and two ellipse holes) of the casing.

NOTE	Mount the HA casing in a direction where the wiring through-holes will be hidden in order to prevent infants from putting their fingers into the HA casing and the LED light on the internal PC-board from leaking outside.

③ After connecting the cables (refer to the following sections), replace the case front. Be careful not to damage the wiring in the case.

Wiring

Lower HA casing

Hook the tab to the lower HA casing.

Press the lower part of the upper HA casing and press fit it onto the lower HA casing.
Press the upper HA casing precisely until a clicking sound is heard.

Wiring ①

1. Wiring

①Connect one end of the wiring to connector S21 of the PCB in the indoor unit.
②Connect the other end of the wiring to connector S6 of the Remote Control PCB.
③Connect field wiring according to the functions assigned to each connection terminal of the Remote Control PCB.
④Secure all wires.

1   Securing wires in the HA casing ASSY

① Connection of wiring

Connect the wiring to the connector terminals.

Wiring

Lower HA casing

② Fixation of wiring

（1） Insert the provided binding band under the pillar of the HA casing and secure the covers of the wiring with the binding band.

Binding band

Wiring

Pillar

Binding band

（2） Insert the second binding band into the groove on the side of the HA casing and fix the wiring securely so that the wiring will not be disconnected.

Binding band

Binding band

Groove

A large number of wires

Make a slit with an appropriate tool, such as a cutter knife, on the thin part of the upper HA casing along the frame. Then cut the part with an appropriate tool, such as a pair of nippers.
(NOTE) Cut off only the thin part required for wiring.

Slit

Thin part

Upper HA casing

2   Securing wires in the indoor unit

● The method for securing wire varies depending on the model of the air conditioner. See your air conditioner installation manual for details.

5

Wiring ②

2. Automatic Reset After Power Failure

● This PCB stores the following data in the event of a power failure (the storage period is limitless).
①On/Off (see Note 1) ②Operation modes (see Note 2) ③Temperature setting
④Air flow rate ⑤On/Off status of remote controller
(Note 1 When SW1-2 is in Off mode, the unit will not be activated.)
(Note 2 The following settings apply to the models below.)

Mode before the power outage Room air conditioner	COOLING	HEATING
Models with Humid heating and Reheating dehumidifying functions.	DRY COOLING	HUMID HEATING
Models with Reheating dehumidifying function.		HEATING

(Note 3 Not all settings will be saved (e.g., humidity or swing settings will not be saved)).

3. Monitor Signal Output (normal operation and malfunction)

● Maximum length of the wiring is 100 m. No external power supply is required.

1 Monitor signal output for LED

■ Locally procured parts

Item	Manufacturer	Type
LED	Rohm	SLR-342
D	Rohm	1SS133
R		510 ohm 1/4W

2 Monitor signal output (normal operation and malfunction)using external relay contacts

L_1 : Operation light
L_2 : Malfunction light

Power supply for relay (Supply 12 V DC externally.)
Recommended product   OMRON S82J-01012A
(Output current of 500 mA or over)

External power supply for light

Max 100 m
Field supplied parts

■ Field procured parts (Recommended external relay contacts)

Manufacturer	Type	Coil rated voltage	Coil resistance
Omron	MY relay	12 V DC	160 ohm ± 10%
Panasonic	HC relay	12 V DC	160 ohm ± 10%

4. Connection with Remote Controller

Example connections with three kinds of remote controllers are shown bellow.
Note: These connections cannot be used in combination.

1 Remote control with switch (field supply)

● Set SW1-1 to Off and select Operation Mode 1.

<Instantaneous Contact>

● The remote controller most recently used (local or air conditioner) takes precedence.
● Use a remote controller with a pulse width of 100 msec or more.

<Normal Contact>

● Power On/Off cannot be controlled from the unit's remote controller. (Three beeps for signal reception will be heard continuously when the wireless remote controller is operated.)
● When power is restored after a power failure in this mode, On or Off is determined according to the current settings of the remote controller.

2 Five-room central controller (KRC72)

● Set SW1-1 to Off and select Operation Mode 1.
● The remote controller most recently used takes precedence.

3 Fan coil remote controller

● Set SW1-1 to On and select Operation Mode 2.
● Most settings (power On/Off, air flow rate, mode change) cannot be made using the air conditioner's remote controller.
● When power is restored after a power failure in this mode, On or Off is determined according to the current settings of the remote controller.
● When the Cooling/Heating mode is changed, use the air conditioner's remote controller to adjust the temperature.

Test Operation and Confirmation

1. When the System is Not Working

☐ Is the air conditioner working properly?
☐ Are the connectors of the wiring properly connected?
☐ Are the remote controller and field wiring properly connected?
☐ Are all switch settings correct?
☐ If there is nothing apparently wrong, conduct a diagnostic check using the following procedure.

■ **Diagnostic check**

① Defect in Remote Control PCB.
② Defect in wiring.
③ Defect in indoor unit's PCB.
④ Transmission error (between remote controller and indoor unit)

START

Is the "CPU Normal" light for the Remote Control PCB flashing? — No →

Yes ↓

Is 12 V DC being supplied to No. 4 and No. 5 on S6 of the Remote Control PCB? — No →

Yes ↓ ①

Is 12 V DC being supplied to No. 4 and No. 5 on S21 of the indoor unit? — No → ③

Yes ↓ ②

Is the malfunction light of the Remote Control PCB on? — No → ④

Yes ↓

② OR ③

2. Switch Settings and Connection Terminals

CPU normal operation monitor
(Flashes when the operation is normal)

SW1-1	Selecting the operation mode	OFF	Operation mode 1 (Used with the exception of fan coil remote controller settings)	
		ON	Operation mode 2 (Used with fan coil remote controller settings)	
SW1-2	Selecting On/Off when power is restored after a power failure	OFF	Always Off	
		ON	Off if operation was in Off mode before power failure; On if operation was in On mode before power failure	
S1 S2 S3	SW1-1: OFF (Operation mode 1)		Instantaneous contact	Normal contact
		S1 (1) - S2 (1)	OPEN	CLOSE
		S1 (1) - S1 (2)	Pulse input On/Off switching	OPEN, Not activated
				CLOSE, Activated
		S2 (2), S3	Not used	
	SW1-1: ON (Operation mode 2)	S1, S2 OPEN	Not activated	
		S1 (1) - S1 (2) CLOSE	On, airflow: L tap	
		S1 (1) - S2 (1) CLOSE	On, airflow: M tap	
		S1 (1) - S2 (2) CLOSE	On, airflow: H tap	
		S3 (With the remote controller only)	OPEN	Cooling
			CLOSE	Heating
S4	(1) - (2)	Voltage on (12 V DC), normal operation light output		
S5	(1) - (2)	Normal operation light output (power for light required)		
	(1) - (3)	Malfunction light output (power for light required)		
S6 connector	Connect with connector S21 on the PCB of the indoor unit			
S8	(+) - (−)	Relay 12 V DC power supply terminal (Field supplied parts)		

5

3P248024-2

5.5 <DCS302C71> Central Remote Controller

5.5.1 Installation Manual

Please read these "SAFETY CONSIDERATIONS" carefully before installing air conditioning equipment and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.
Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference.
This air conditioner comes under the term "appliances not accessible to the general public".

Meaning of warning, caution and note symbols.

⚠ WARNING .... Indication a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION .... Indication a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
It may also be sued to alert against unsafe practices.
⚠ NOTE .... Indication situation that may result in equipment or property-damage-only accidents.

⚠ WARNING

Ask your dealer or qualified personnel to carry out installation work. Do not try to install the machine by yourself.
Improper installation may result in water leakage, electric shocks or fire.

Perform installation work in accordance with this installation manual.
Improper installation may result in water leakage, electric shocks or fire.

Be sure to use only the specified accessories and parts for installation work.
Failure to use the specified parts may result in water leakage, electric shocks, fire or the unit falling.

Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes.
Improper installation work may result in the equipment falling and causing accidents.

Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.
An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.

Make sure that all wiring is secured, the specified wires and used, and no external forces act on the terminal connections or wires.
Improper connections or installation may result in fire.

When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the electric parts box lid can be securely fastened.
Improper positioning of the electric parts box lid may result in electric shocks, fire or the terminals overheating.

Before touching electrical parts, turn off the unit.

Ground the air conditioner. Do not connect the ground wire to gas or water pipes, lightning rod or a telephone ground wire.
Incomplete grounding may result in electric shocks.

When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R410A), such as air.

Do not reconstruct or change the settings of the protection devices.
If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may result.

Do not touch the switch with wet fingers.
Touching a switch with wet fingers can cause electric shock.

Install an leak circuit breaker, as required.
If an leak circuit breaker is not installed, electric shock may result.

Do not install the air conditioner or the remote controller in the following locations:
(a) where a mineral oil mist or an oil spray or vapor is produced, for example in a kitchen
Plastic parts may deteriorate and fall off or result in water leakage.
(b) where corrosive gas, such as sulfurous acid gas, is produced
Corroding copper pipes or soldered parts may result in refrigerant leakage.
(c) near machinery emitting electromagnetic waves
Electromagnetic waves may disturb the operation of the control system and result in a malfunction of the equipment.
(d) where flammable gases may leak, where there are carbon fiber or ignitable dust suspensions in the air, or where volatile flammables such as thinner or gasoline are handled.
Operating the unit in such conditions may result in fire.

⚠ CAUTION

Be very careful about product transportation.

Safely dispose of the packing materials.
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

Do not turn off the power immediately after stopping operation.
Always wait at least five minutes before turning off the power. Otherwise, water leakage and trouble may occur.

⚠ NOTE

Install the indoor and outdoor units, power supply wiring and connecting wires at least 3.5ft. away from televisions or radios in order to prevent image interference or noise.
(Depending on the radio waves, a distance of 3.5ft. may not be sufficient enough to eliminate the noise.)

Remote controller (wireless kit) transmitting distance can result shorter than expected in rooms with electronic fluorescent lamps.(inverter or rapid start types)
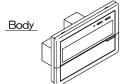Install the indoor unit as far away from fluorescent lamps as possible.

This unit is a class A product.
In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Dismantling of the unit, treatment of the refrigerant, oil and eventual other parts, should be done in accordance with the relevant local and national regulations.

❶ COMPONENTS

Check the following components are included in this optional accessory before installation.

Installation screw (M4 × 16)	4
Operation manual	1
Installation manual	1
Installation table	1

Body

When using this optional accessory an electric parts box of KJB311A is required.
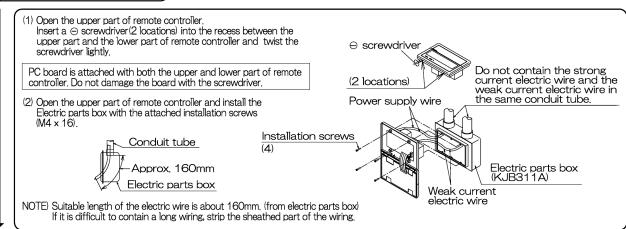For installation, a steel electric parts box to be embedded is mandatory.

❷ SYSTEM CONFIGURATION

With the central remote controller, unified operation/stop is possible with up to a maximum 64 groups of indoor units.
When using 2 central remote controllers, unified operation is possible with up to a maximum 128 groups.
With this optional accessory, setting of control modes including operation, stop, operation controlled by timer, and ON/OFF control possible/impossible by remote controller can be set individually by zones while it enables to control and display the operation state such as set temperature.
It can be connected with the external key system, host computer monitor panel, etc., through forced OFF input (no-voltage normally open contactor).
A zone is a one or more groups together. In general, the same settings are used throughout a zone.

• When using 1 central remote controller

Forced OFF input

Outdoor unit

Host computer monitor panel   Central remote controller

| Group No.1-00 | ・・・ | Group No.1-15 | Group No.2-00 | ・・・ | Group No.4-15 |

Max. of 64 groups

• When using 2 central remote controller

Outdoor unit

Host computer monitor panel   Central remote controller

Outdoor unit

| Group No.1-00 | ・・・ | Group No.1-15 | Group No.2-00 | ・・・ | Group No.4-15 |
| Group No.5-00 | ・・・ | Group No.5-15 | Group No.6-00 | ・・・ | Group No.8-15 |

Forced ON/OFF command should be connected to one of the two units.

Forced OFF input

Max. of 128 groups

The central remote controller and the separately sold remote control adapter circuit board or group remote control adapter cannot be used together. See the D-BACS design guide for details.

❸ INSTALLATION

(1) Open the upper part of remote controller.
Insert a ⊖ screwdriver (2 locations) into the recess between the upper part and the lower part of remote controller and twist the screwdriver lightly.

PC board is attached with both the upper and lower part of remote controller. Do not damage the board with the screwdriver.

(2) Open the upper part of remote controller and install the Electric parts box with the attached installation screws (M4 × 16).

Conduit tube

Approx. 160mm

Electric parts box

⊖ screwdriver

(2 locations)

Power supply wire

Do not contain the strong current electric wire and the weak current electric wire in the same conduit tube.

Installation screws (4)

Electric parts box (KJB311A)

Weak current electric wire

NOTE) Suitable length of the electric wire is about 160mm. (from electric parts box)
If it is difficult to contain a long wiring, strip the sheathed part of the wiring.

5

❹ INITIAL SETTING

Setting (1) through (3) are initialized when power is turned ON, therefore complete settings BEFORE activating the power. (The positions of connectors and switches used for settings in this section are shown in Fig. 1.)

(1) Connector for setting master controller (X1A) (Provided with connector at factory set)
- When using only 1 central remote controller, do not disconnect the connector for setting master controller. (Use the unit with the connector in the state in which it was delivered.)
- When using multiple central remote controllers, or using the central remote controller in conjunction with the optional controllers for centralized control, makes settings as indicated in the below table.

Pattern of connection of optional controllers for centralized control			Connector for setting master controller (X1A) Setting, Removed		
Central remote controller	Unified ON/OFF controller	Schedule timer	Central remote controller	Unified ON/OFF controller	Schedule timer
1 to 4	1 to 16		Set one to "Used" and all the rest to "Not used"	Set all to "Not used"	
		1			"Not used"
		1			"Not used"

(Remove all the connectors for the central remote controller, the on/off controller, and the schedule timer when using the unit together with the Ve-UP controller, the master station II, the DMS interface, the payment management unit, or the parallel interface station.)

(2) Address setting

Two central remote controllers can be used as shown in ❷ **SYSTEM CONFIGURATION**, to control anywhere up to a max. 128 groups of indoor units. In this case, group address must be set. This is done with the switch for setting each address (SS3).

SS3 setting	Indoor unit address		SS3 setting	Indoor unit address
SETTING EACH ADDRESS 5-00 ~ 8-15 1-00 ~4-15	To control indoor units from group Nos. 1-00 through 4-15		SETTING EACH ADDRESS 5-00 ~ 8-15 1-00 ~4-15	To control indoor units from group Nos. 5-00 through 8-15

(3) MAIN/SUB changeover switch setting

With two central remote controllers, centralized control (indoor units) is possible from different locations. In this kind of set-up, it is necessary to set the MAIN/SUB changeover switch.

Central remote controller (1) — Group No.1-00 · · · Group No.1-15 — Group No.2-00 · · · Group No.4-15 — Central remote controller (2)

Max. 64 groups

One of the two central remote controllers (1) · (2) is set to "MAIN" while the other is set to "SUB".

(4) Setting of the sequential operation function

The central remote controller is equipped with a sequential operation function that sequentially turns indoor units on in 2-second intervals during unified operation. (Sequential operation is factory set to "ON.") To switch sequential operation ON or OFF, set as follows.

Sequential operation "ON" (Factory set) ⟷ Sequential operation "OFF"

While holding down the unified stop button, perform forced reset.

While holding down the unified operation button, perform forced reset.

NOTE: The sequential operation function is designed to reduce the load on the power supply equipment, but does not guarantee that compressors will not be started simultaneously. You cannot therefore count on a capacity reduction effect by power supply equipment breaker selection.

(5) Forced reset switch

When changing the setting of the connector for setting master controller, etc., you can reset simply by setting it to the reset side once and returning to the normal side, without turning the power OFF. (For normal operation, set the switch to the normal side.)

Normal side (Factory set) → Reset side

Connector for setting master controller
Switch for setting each address
MAIN/SUB changeover switch
Forced reset switch

Fig. 1

❺ ELECTRIC WIRING

WIRING OUTLINE

Power supply
AC100V-240V
(50/60Hz)

Central remote controller

Outdoor unit

Manual switch

F1, F2

F1, F2 | F1, F2 | F1, F2 ・・・ F1, F2 | F1, F2

Max. 16 groups

WIRING TO THE INDOOR UNIT AND OUTDOOR UNIT

Outdoor unit
In-Out Out-Out
F1, F2 | F1, F2

Outdoor unit
In-Out Out-Out
F1, F2 | F1, F2

See the installation manual which came with the air conditioner for details on its transmission wiring specifications.

TO OUTDOOR unit

Indoor unit
IN P1F1F2

Indoor unit
IN P1F1F2

Indoor unit
IN P1F1F2

Indoor unit
IN P1F1F2

Indoor unit
IN P1F1F2

Power terminal block

Central remote controller

Power supply
(AC100V-240V)

Between AC100V and 240V

Batch remote control adapter Connector (X2A)
Separately sold batch remote control adapter.
Used for DCS302A72 connections.
See the instruction manual included with the batch remote control adapter for details.

Wiring specifications

Power supply wiring	2mm²
Transmission wiring for control	0.75 – 1.25 mm² sheathed vinyl cord or cable (balanced type) – maximum length 1000 m (total overall wiring length 2000 m)
Manual switch	10A or 15A

Wire the indoor units to the outdoor units and between all power, indoor units, and remote controllers. See the instruction manual included with the indoor and outdoor units for details.

CONTROL TERMINAL STRIP
*1 For connecting Indoor unit (F1, F2)
*2 Forced OFF input (T1, T2)
    None of the indoor units connected to the forced OFF input contact (non-voltage contact with minimal current) willoperate when it is shut off.
    Use only contactors which guarantee the minimum applicable load DC 16V, 10mA.

T1 —
T2 —   DC16V

NOTE) Use instantaneous contactor of over 200m sec. energizing time, when necessary.

*1 *2 *3
F1 F2 T1 T2 D1 D2

*3 For schedule timer (D1, D2)
    Power can be supplied to the schedule timer (DST301B61) separately sold. For details, refer to the installationmanual of the schedule timer.
Wire *2 and *3 only when necessary.

(NOTE)
Do not connect the power supply wiring (100 to 240V) to the control terminal strip. If connected by mistake, it may damage or burn electrical parts of optional controllers for centralized control and indoor unit. It may result in serious danger. Be sure to check wirings before turning the power ON.

5

❻ SETTING GROUP NO. FOR CENTRALIZED CONTROL

Set the group number of each group of the indoor unit from the remote controller. (In case of no remote controller, also connect the remote controller and set the group No. Then, remove the remote controller.)

(1) Turn ON the power of the indoor unit and central remote controller.
   (Unless the power is ON, no setting can be made.)
   Check that the installation and electrical wiring are correct before turning the power supply ON.
   (When the power supply is turned ON, all LCD appear once and the unit may not accept the operation for about one minute with the display of " _88_ ".)

(2) While in the normal mode, hold down the " [TEST] " button for a minimum of 4 seconds.
   The remote controller will enter the FIELD SET MODE.

(3) Select the MODE No. " _00_ " with the " [⬆] " button.

(4) Use the " [⬆] " button to select the group No. for each group.
   (Group numbers increase in the order of 1-00,1-01,…1-15, 2-00,…8-15.)

(5) Press " [⬜] " to set the selected group No.

(6) Press " [TEST] " to return to the NORMAL MODE.

MODE NO.

GROUP NO.

FIELD SET MODE

NOTES) ● For simplified remote controller, see the installation table.
● See the instruction manuals which came with the Ventiair and adapters (i.e., multi-purpose adapters) for details on their Group No. settings.

NOTICE Enter the group No. and installation place of the indoor unit into the installation table in the operation manual. Be sure to keep the operation manual for maintenance.

❼ TEST OPERATION (Perform a test operation in the individual screen before registering zones.)

Before starting test operation, check that the power is supplied to the indoor and outdoor units, and central remote controller.

(1) Select the display "INDIVIDUALLY"
   Press " [⬜] " button to display "INDIVIDUALLY"

(2) Select the group to be tested.
   Select the group No. with " [←] " " [→] " " [↑] " " [↓] " button.

(3) Press " [⬜] " button to select the test operation mode.
   " TEST " is displayed.
   " [HOST] " is displayed on the remote controller.

(4) Press " [⬜]" button within 10 seconds after entering into the test operation mode.
   Operation the unit for 30 minutes.
   When pressing the " [⬜] " button, the unit stops operating.

   If the operation lamp flashes, it indicates a malfunction.
   Call the group of flashing display, confirm malfunction code, and check the source of malfunction.
   (The operation manual lists all error codes, so refer to it.)

NOTES ● For test operation, refer to the installation manual of the outdoor unit.
● After turning the power supply ON, if the unit does not accept operation for two minutes or more with the display of " _88_ ", check the following points.
   ● Check that setting of the connector for setting master controller is correct.
   ● Check that the group No. for centralized control has been set.

1P124687-1A

5.5.2   Operation Manual

BEFORE USE

■ GENERAL DESCRIPTION OF SYSTEM

This central remote controller can monitor and control up to 64 indoor unit groups.
Using two central remote controllers allows monitoring and controlling of up to 128 indoor unit groups.

Main Functions
1. Batch starting and stopping of indoor units connected to the central remote controller.
2. Handling of operation settings such as start/stop, timer operation, remote controller prohibition/permission, etc., and operation status settings such as temperature.
3. Operation status monitoring of operation mode, set temperature, etc.
4. Can be connected to an external central monitor panel and key system using the forced stop input (non-voltage a connector).

- When using 1 central remote controller

- When using 2 central remote controllers

(The central remote controller and the separately sold remote control adapter circuit board or group remote control adapter cannot be used together.)

∗ GROUP OF INDOOR UNIT refers to the below.
1. A single indoor unit without remote controller

1. A single indoor unit without remote controller

2. A single indoor unit controlled by one or two remote controllers

3. Maximum of 16 indoor units, group-controlled by one or two remote controllers

1

∗ Zone control from the central remote controller
Zone control is available from the central remote controller. With it, it is possible to make unified settings for multiple groups, so setting operations are greatly simplified.

- Any setting you make within a given zone will apply to all groups in the said zone.
- A maximum of 64 zones can be set from a single central remote controller.
  (Each zone contains a maximum of 64 groups.)
- Zones can be set randomly from the central remote controller.

SAFETY CONSIDERATIONS

Please read these "SAFETY CONSIDERATIONS" carefully before installing air conditioning equipment and be sure to install it correctly.
After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference. This air conditioner comes under the term "appliances not accessible to the general public".

Meaning of danger, warning, caution and note symbols.

⚠ **DANGER** ..... Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING** .... Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** .... Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** .... Indicates situation that may result in equipment or property-damage-only accidents.

Keep these warning sheets handy so that you can refer to them if needed.
Also, if this equipment is transferred to a new user, make sure to hand over this operation manual to the new user.

— ⚠ **DANGER** —————————

- **Any abnormalities in the operation of the air conditioner such as smoke or fire could result in severe injury or death.** Turn off the power and contact your dealer immediately for instructions.
- **Do not install the unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.**
- **Safely dispose of the packing materials.** Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries. Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death due to suffocation.

— ⚠ **WARNING** —————————

- **Ask your dealer for installation of the air conditioner.** Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.
- **Ask your dealer for improvement, repair, and maintenance.** Incomplete improvement, repair, and maintenance may result in a water leakage, electric shock, and fire.
- **Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Be sure only to use accessories made by Daikin which are specifically designed for use with the equipment and have them installed by a professional.**
- **Ask your dealer to move and reinstall the air conditioner or the remote controller.** Incomplete installation may result in a water leakage, electric shock, and fire.
- **Never let the indoor unit or the remote controller get wet.** It may cause an electric shock or a fire.

2

Fig. 1

Fig. 2

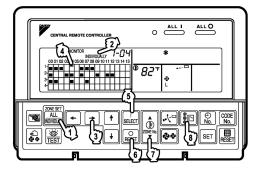**Fig. 3**

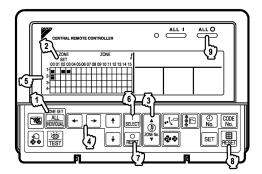

Fig. 4
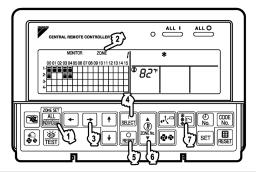
3

Fig. 5

Fig. 6
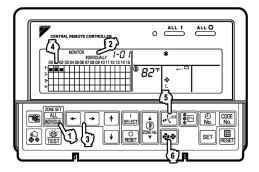

Fig. 7

Fig. 8

4

- **Never use flammable spray such as hair spray, lacquer or paint near the unit.**
  It may cause a fire.
- **Do not allow children to play on or around the unit as they could be injured.**
- **Never replace a fuse with that of wrong ampere ratings or other wires when a fuse blows out.**
  Use of wire or copper wire may cause the unit to break down or cause a fire.
- **Never inspect or service the unit by yourself.**
  Ask a qualified service person to perform this work.
- **Cut off all electric waves before maintenance.**
- **Do not wash the air conditioner or the remote controller with excessive water.**
  Electric shock or fire may result.
- **Do not touch the switch with wet fingers.**
  Touching a switch with wet fingers can cause electric shock.
- **Never touch the internal parts of the controller.**
  Do not remove the front panel because some parts inside are dangerous to touch. In addition, some parts may be damaged by touching. For checking and adjusting internal parts, contact your dealer.
- **Check the unit stand for damage on a continuous basis, especially if it had been in use for a long time.**
  If left in a damaged condition the unit may fall and cause injury.
- **Placing a flower vase or other containers with water or other liquids on the unit could result in a shock hazard or fire if a spill occurs.**

— ⚠ CAUTION ————————————

- **Avoid placing the controller in a spot splashed with water.**
  Water coming inside the machine may cause an electric leak or may damage the internal electronic parts.

- **Do not operate the air conditioner when using a room fumigation - type insecticide.**
  Failure to observe could cause the chemicals to become deposited in the unit, which could endanger the health of those who are hypersensitive to chemicals.
- **Do not turn off the power immediately after stopping operation.**
  Always wait at least five minutes before turning off the power. Otherwise, water leakage and trouble may occur.
- **The appliance is not intended for use by young children or infirm persons without supervision.**
- **The remote controller should be installed in such a way that children cannot play with it.**

— ⚠ NOTE ————————————

- **Never press the button of the remote controller with a hard, pointed object.**
  The remote controller may be damaged.
- **Never pull or twist the electric wire of the remote controller.**
  It may cause the unit to malfunction.
- **Do not place the controller exposed to direct sunlight.**
  The LCD display may get discolored, failing to display the data.
- **Do not wipe the controller operation panel with benzine, thinner, chemical dustcloth, etc.**
  The panel may get discolored or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. And wipe it with another dry cloth.
- **Dismantling of the unit, treatment of the refrigerant, oil and eventual other parts, should be done in accordance with the relevant local and national regulations.**

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CONTENTS

FEATURES AND FUNCTIONS

■ **Operation menu**
This central remote controller can operate and stop machines by either group or zone.
Batch operation and batch stop functions are also available. When used in combination with the schedule timer (optional accessory), timer operation and stop functions are available.

See page 8—12.

■ **Various operation modes.**
You can operate the system from both this unit and the remote controller, so to enable various operation control patterns. Twenty different operation modes are available including five operation patterns:
  1. Start/stop: remote controller prohibition, remote controller stop-only permission, central priority, after-press priority, remote controller permission timer
  2. Operation modes: remote controller prohibition, remote controller permission
  3. Set temperature: remote controller prohibition, remote controller permission

See page 13—15.

■ **Zone control for simpler setting procedures**
You can control a maximum of 64 groups of indoor units by using this central remote controller. You don't have to repeat the same setting operations by group because you can make each of the following settings by zone.
A functions is available for setting all groups in one batch.
  ● Operation mode
  ● Control mode
  ● Setting temperature
  ● Programming time No. (Used in conjunction with the schedule timer)

See page 8—16.

■ **Monitoring all indoor unit information**
The following information can be displayed by group.
  ● Operation information such as operation mode, set temperature, etc., for indoor units
  ● Maintenance information such as cleaning signs for filters or elements
  ● Error codes and other malfunction diagnosis information

See page 16—21.

■ **Function of refrigerant system display**
This display helps you understand, at a glance, the indoor units sharing the same outdoor unit and the particular indoor unit among them that is set as the master remote controller.

See page 20.

• Room air conditioners and multi-purpose air conditioners may also be connected by using separately-sold adapter boards.
This may limit functionality, so consult the manuals that come with each adapter board.

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NAMES AND FUNCTIONS OF THE OPERATING SECTION (Fig. 1, 2)

1	**UNIFIED OPERATION BUTTON**
	Press to operate all indoor units.
2	**UNIFIED STOP BUTTON**
	Press to stop all indoor units.
3	**OPERATION LAMP (RED)**
	Lit white any of the indoor units under control is in operation.
4	**" REF CIRCUIT " DISPLAY (REFRIGERANT SYSTEM DISPLAY)**
	This indication in the square is lit while the refrigerant system is being displayed.
5	**" ZONE SET " DISPLAY (ZONE SETTING)**
	The lamp is lit while setting zones.
6	**" MONITOR " DISPLAY (OPERATION MONITOR)**
	The lamp is lit while operation is being monitored.
7	**" ALL " " ZONE " " INDIVIDUALLY " DISPLAY**
	The status displays indicates either batch functions or which zone or individual unit (or group) are being used.
8	**OPERATION MONITOR**
	Each square displays the state corresponding to each group.
9	**" ⓑ " " 🌀 " " 💧 " " Ⓐ " " ❄ " " ☀ " " ── " DISPLAY (OPERATION MODE)**
	Displays operating state.
10	**" 📑 " " 📑 " " 📑 " " 📑 " DISPLAY (VENTILATION CLEANING DISPLAY)**
	This is displayed when a Ventiair total enthalpy heat exchanger unit or other such unit is connected.
11	**" 👁TEST " DISPLAY (INSPECTION/TEST)**
	Pressing the maintenance/test run button (for service) displays this. This button should not normally be used.
12	**" ✏/📑 " DISPLAY (TIME TO CLEAN)**
	It lights up when any individual unit (group) has reached the time for the filter or element to be cleaned.

13	**" [📄⚒] " DISPLAY (COOLING/HEATING SELECTION PRIVILEGE NOT SHOWN)**
	For zones or individual units (groups) for which this is displayed, cooling and heating cannot be selected.
14	**" [HOST⚒] " DISPLAY (UNDER HOST COMPUTER INTEGRATED CON-TROL)**
	While this display is lit up, no settings can be made. It lights up when the upper central machines are present on the same air conditioning network.
15	**" ⓑSET 88 °F " DISPLAY (PRESET TEMPERATURE)**
	Displays the preset temperature.
16	**" 🔧 U4 " DISPLAY (MALFUNCTION CODE)**
	This displays (flashes) the content of errors when an error failure has occurred. In maintenance mode, it displays the latest error content.
17	**"NOT AVAILABLE" DISPLAY (NO FUNCTION DISPLAY)**
	If a function is not available in the indoor unit even if the button is pressed, "NOT AVAILABLE" is may be displayed for a few seconds.
18	**" ⛲ " DISPLAY (FAN DIRECTION SWING DISPLAY)**
	This displays whether the fan direction is fixed or set to swing.
19	**" 🏠 " " 🌀L " " 🌀H " " 🌀HH " " Ⓐ " "FRESH UP" DISPLAY (VENTILATION STRENGTH/SET FAN STRENGTH DISPLAY)**
	This displays the set fan strength.
20	**" 🕐No. " DISPLAY (TIME NO.)**
	Displays the operation timer No. when used in conjunction with the schedule timer.

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21	**" CODE UNIT No. _IB_ " DISPLAY (OPERATION CODE AND UNIT NUMBER DISPLAY)**
	The method of operation (remote controller prohibited, central operation priority after-press operation priority, etc.) is displayed by the corresponding code. This displays the numbers of any indoor units which have stopped due to an error.
22	**" ✐ " " 📇 " DISPLAY (TIME TO CLEAN AIR CLEANER ELEMENT/ TIME TO CLEAN AIR FILTER)**
	Displayed to notify the user it is time to clean the air filter or air cleaner element of the group displayed.
23	**VENTILATION MODE BUTTON**
	This is pressed to switch the ventilation mode of the total enthalpy heat exchanger.
24	**ALL/INDIVIDUAL BUTTON**
	Pressing this button scrolls through the "all screen", "zone screen", and "individual screen".
25	**ARROW KEY BUTTON**
	This button is pressed when calling an individual indoor unit or a zone.
26	**ON/OFF BUTTON**
	Starts and stops ALL, ZONE, and INDIVIDUAL units.
27	**TEMPERATURE ADJUSTMENT BUTTON (ZONE NUMBER BUTTON)**
	This button is pressed when setting the temperature. Select the zone number if any zones have been registered.
28	**FAN DIRECTION ADJUSTMENT BUTTON**
	This button is pressed when setting the fan direction to "fixed" or "swing".
29	**OPERATION MODE SELECTOR BUTTON**
	This sets the operation mode. The dry setting cannot be done.
30	**TIME NO. BUTTON**
	Selects time No. (Use in conjunction with the schedule timer only).
31	**CONTROL MODE BUTTON**
	Selects control mode.
32	**FILTER SIGN RESET BUTTON**
	This button is pressed to erase the "clean filter" display after cleaning or replacement.

33	**SET BUTTON**
	Sets control mode and time No.
34	**FAN STRENGTH ADJUSTMENT BUTTON**
	Pressing this button scrolls through "weak", "strong", and "fast".
35	**ZONE SETTING BUTTON**
	Zone registration mode can be turned on and off by pressing the start and stop buttons simultaneously for at least four seconds.
36	**INSPECTION/TEST RUN BUTTON (FOR SERVICE)**
	Pressing this button scrolls through "inspection", "test run", and "system display". This button is not normally used.
37	**VENTILATION STRENGTH ADJUSTMENT BUTTON**
	This button is pressed to switch the ventilation strength ("fresh up") of the total enthalpy heat exchanger.

(Notes)
1. Please note that all the displays in the figure appear for explanation purposes or when the cover is open.
2. If the unit is used in conjunction with other optional central controllers, the OPERATION LAMP of the unit that is not under operation control may light up and go out a few minutes behind schedule. This shows that the signal is being exchanged, and does not indicate any failure.

OPERATION

■ Individual screen, all screen, zone screen (Fig. 3)

This controller can perform operations in the individual screen, all screen, or zone screen.
- Individual screen   The individual screen is used when performing group operations.
- All screen   The all screen is used when performing operations for all units at once.
- Zone screen   The zone screen is used when performing zone operations.

1. ☞ Select the screen by pressing the "ALL/INDIVIDUAL" button.

☞ Every time the "ALL/INDIVIDUAL" button is pressed, the selection scrolls through INDIVIDUAL → ALL → ZONE.
If nothing is done in the all or zone screens for one minute, it automatically goes to the individual screen.

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- If the zone number in the zone screen is displayed as "---," this indicates that no units are registered in a zone.
  Please perform zone registration before proceeding in the zone screen. (See page 9)

■ Batch operation and stop method (Fig. 4)

This is for operating or stopping all connected units at once.

A. What to do when operating or stopping all connected units at once.

1. Press either ☞ " ALL I " or ☞ " ALL ○ ".
- Operation can be performed from the individual screen, the all screen, or the zone screen.
- The "TEMPERATURE ADJUSTMENT" and "OPERATION MODE SELECTOR" buttons cannot be used.
  To set the temperature and operation mode, use B. batch operation.

B. Batch Operation

1. ☞ Press the "ALL/INDIVIDUAL button" to enter the all screen.

The "☐" display lights up on all registered units.

2. ☞ Press the "SELECT" button.

The "▣" display lights up on all connected units.

☞ Press the "RESET" button.

The "▣" display goes off on all connected units.
Operation and stop in the batch screen are done the same as with the batch operation and batch stop buttons.

3. ☞ Press the "TEMPERATURE ADJUST-MENT" button.
The temperature rises 1° every time the (▲) button is pressed.
The temperature drops 1° every time the (▼) button is pressed.

Set to "--" when you do not wish to use batch setting for the temperature setting.
Setting to 1° above or below the temperature setting range displays "--".

4. ☞ Call up the desired mode by pressing the "OPERATION MODE SELECTOR" button.

Set to "--" when you do not wish to use batch setting for the operation setting.

■ Group operation and stop method (Fig. 5)

This is for operating or stopping connected units in groups.

[Group operation]

1. Press the ☞ "ALL/INDIVIDUAL button" to enter the ☞ individual screen.
The unit will enter the individual screen automatically if nothing is done for one minute.

2. ☞ Using the arrow keys, ☞ move the "☐" to select the units to operate or stop.
Keeping the button pressed down will move it rapidly.
The "☐" in this screen has selected unit 1-04.

3. ☞ Press the "SELECT" button.

The "▣" display lights up in the group.

☞ Press the "RESET" button.

The "▣" display goes off in the group.

4. ☞ Press the "TEMPERATURE ADJUST-MENT" button.
The temperature rises 1° every time the (▲) button is pressed.
The temperature drops 1° every time the (▼) button is pressed.
Temperature adjustment cannot be done if the selected group's air conditioners are in fan mode.

5. ☞ Call up the desired mode by pressing the "OPERATION MODE SELECTOR" button.

■ Registering zones (Fig. 6)

It is possible to set multiple groups as one zone and control each zone separately.
No zones are registered when the unit is shipped from the factory.
Zone registration can be done in the individual screen, all screen, or zone screen.

[Registration]

1. ☞ Pressing the "ALL/INDIVIDUAL" button for four seconds. ☞ Displays ZONE SET.
Zone Number 1 will be displayed, and if there are any groups already registered in the displayed zone, a "▣" will light up on the operation monitor.

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2. ☞Select the Zone Number to be registered using the "ZONE NUMBER" button.
Keeping the button pressed down will move it rapidly.

3. ☞" ☐ " to the group you wish to ☞register using the arrow keys.
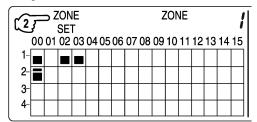Keeping the button pressed down will move it rapidly.

4. ☞Press the "SELECT" button to register that group to the zone.

The " ▣ " display lights up on all the selected units.

☞Pressing the "RESET" button removes the group from that zone, and " ▣ " goes off.

Repeat steps 3 and 4 until all the units you wish to register to the zone have been added.

```
ZONE          ZONE          /
  SET
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
1-▣  ▣ ▣
2-▣
3-
4-
```

In this example, a screen is shown with units 1-00, 1-02, 1-03, and 2-00 registered to Zone Number 1.

5. Repeat steps 2 to 4 to register to the next zone.

6. Once zone registration is complete, ☞press the "ALL/INDIVIDUAL" button to turn off "ZONE SET" display and return to the individual screen.
The display returns to the normal screen if nothing is done for one minute when in zone registration mode.
(NOTE)
• It is impossible to register one group to several different zones.
If this is done, the last zone registered to will be valid.

[Batch deletion of zone registration]

1. ☞Pressing the " ALL ○ " for at least four seconds while ☞pressing the "FILTER SIGN RESET" button when ☞"ZONE SET" is displayed will delete all zone registrations.
The zone registrations for all units will be lost.

■**Zone operation and stop method (Fig. 7)**
This is for operating or stopping connected units in zones.

[Zone operation]

1. ☞Press the "ALL/INDIVIDUAL button" to enter the zone screen.

2. ☞Using the arrow keys, select the zone number to operate or stop.

Pressing ⬅ and ↓ reduces the zone number while ➡ and ↑ raise the number.
Keeping the button pressed down will move it rapidly.
• If the zone number is displayed as "---," this indicates that no units are registered in a zone. Please perform zone registration before using a zone. (See page 9)

3. ☞Press the "SELECT" button.

The " ▣ " display lights up in the group.

☞Press the "RESET" button.

The " ▣ " display goes off in the group.

4. ☞Press the "TEMPERATURE ADJUSTMENT" button.

The temperature rises 1° every time the (▲) button is pressed.
The temperature drops 1° every time the (▼) button is pressed.
Set to " ▬▬ " when you do not wish to use zone setting for the temperature setting.
Setting to 1° above or below the temperature setting range displays " ▬▬ ".

5. ☞Call up the desired mode by pressing the "OPERATION MODE SELECTOR" button.

Set to " ▬▬ " when you do not wish to use zone setting for the operation mode.

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■ **Changing the fan direction and fan strength (Fig. 8)**

This changes the fan direction and strength settings in the air conditioner.
Changing the fan direction and strength is done in the individual screen.

[Registration]

1. ☞ **Press the "ALL/INDIVIDUAL button" to enter the ☞ individual screen.**
   The unit will enter the individual screen automatically if nothing is done for one minute.

2. ☞ **Using the arrow keys, ☞ move the " ▛ " to select the units to fan direction adjustment or fan strength adjustment.**
   Keeping the button pressed down will move it rapidly.

3. ☞ **Press the "FAN DIRECTION ADJUST-MENT" button.**
   This sets "fixed" or "swing" for the fan direction.

   ☞ **Press the "FAN STRENGTH ADJUST-MENT" button.**
   Pressing this button scrolls through " L ", " H ", and " HH ".
   Depending on the indoor unit, only " L " and " H " may be available.

The functions included in the indoor units may vary. Pressing a button for a function which is not available will cause "NOT AVAILABLE" to be displayed.

■ **Changing the ventilation mode and ventilation strength (Fig. 9)**

This changes the ventilation mode and strength settings in the total enthalpy heat exchanger.
Changing the ventilation mode and strength is done in the individual screen.

[Registration]

1. ☞ **Press the "ALL/INDIVIDUAL button" to enter the ☞ individual screen.**
   The unit will enter the individual screen automatically if nothing is done for one minute.

2. ☞ **Using the arrow keys, ☞ move the " ▛ " to select the units to ventilation mode or ventilation strength adjustment.**
   Keeping the button pressed down will move it rapidly.

3. ☞ **Press the "VENTILATION MODE" button.**
   It will scroll through " A " → " ✕ " → " ✓ " → " A ".

   ☞ **Press the "VENTILATION STRENGTH ADJUSTMENT" button.**
   It will scroll through " L " → " H " → " L FRESH UP " → " H FRESH UP " → " L ".
   The fresh up function may not be available depending on the connected unit model.

The functions included in the indoor units may vary.
Pressing a button for a function which is not available will cause "NOT AVAILABLE" to be displayed.

• **Ventilation Mode and Amount**
   If these are changed using the remote controller depending on the unit model, they cannot be displayed on the central remote controller.
   To monitor the ventilation mode and amount, check the values on the remote controller.

■ **Timer Number Setting (Fig. 10)**

(Only when used with the schedule timer)
Using this together with the schedule timer makes it possible to set on and off times four times a day.

[Registration]

1. ☞ **Pressing the "TIMER NO." button causes the number set for timer number 1 to blink.**
   If no timer setting has been made " - " will be displayed.
   Select the desired timer number by pressing the ☞ "TIMER NO." button.

2. ☞ **Once the desired timer number is displayed, press the "SET" button.**
   Press the ☞ "SET" button within 10 seconds after the timer number is displayed.
   The display will return to how it was after 10 seconds.
   The display for timer number 1 will stop blinking and then timer number 2 will start blinking.

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3. ☞ **Select the desired timer number by pressing the "TIMER NO." button.**

Once the desired timer number is displayed, ☞ press the "SET" button.
The display for timer number 2 will stop blinking.

The " 🕐 No. " display will disappear after 3 seconds.

Select " − " in the timer number when you do not wish to set a timer number.
It is possible to set only one timer number.
(The times for turning the unit(s) on and off twice a day can be set with a single timer number.)

• **Timer Number Setting**

Group control: select the unit in the individual screen and set the timer number.

Batch control: set the timer numbers for all connected units.

Zone control: set the timer numbers for all zone-registered units.
Call up the zones which you wish to set in the zone screen and set the timer numbers.

• **Since the timer number will be set to after-press priority, the timer number in the last screen set will be valid for the connected units.**

Example 1
Setting timer number 1 for unit 1-00 to "1" and timer number 2 to "2" in the individual screen and then setting timer number 1 to "3" and timer number 2 to "4" in the batch screen causes the timer numbers for all units to be set, so timer number 1 for unit 1-00 will be "3" and timer number 2 will be "4".

Example 2
To prevent leaving units on, timer number 1 is set to "5" in the batch screen.
Setting timer number 1 in zone number 1 to " − " in the zone screen after that will change the timer number for zone number 1, so the setting to prevent leaving the units on will be lost for zone number 1 only.

If a timer number is set incorrectly by accident, redo the setting in the desired screen.

• **What happens when the timer number on time and off time are set to the same time**

When the on time and off time are set to the same time for the same timer number, operation does not change.
When the on time and off time are set to the same time for different timer numbers, the off time is given priority.

When using timer operation, make sure the times do not overlap when setting the program of the schedule timer.

■ **Setting the Operation Code (Fig. 11)**

[Registration]

1. ☞ **Pressing the "CONTROL MODE" button causes the currently set operation code to blink.**
Call up the desired code number by pressing the ☞ "CONTROL MODE" button.
Scroll through the code numbers.

2. ☞ **Once the code number is displayed, press the "SET" button.**
The display will stop blinking.
The operation code display will disappear after 3 seconds.

[The Operation Code Setting]

Group control: select the unit in the individual screen and set the operation code.

Batch control: set the operation code for all connected units.

Zone control: set the operation code for all zone-registered units.
Call up the zones which you wish to set in the zone screen and set the operation code.

Since the operation code will be set for after-press priority, setting the operation code in the zone and individual screens after setting the operation code in the batch screen, will cause the operation codes set afterwards to be valid.
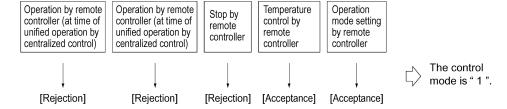
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OPERATION MODE

The following five operation control modes can be selected along with the temperature setting and operation mode by remote controller, for a total of twenty different modes. These twenty modes are set and displayed with control modes of 0 to 19. (For further details, see **EXAMPLE OF OPERATION SCHEDULE** on the next page.)

- ON/OFF control impossible by remote controller..... Use this mode when operating and stopping from the central remote controller only. (ON/OFF control by the remote controller is disabled.)

- Only OFF control possible by remote controller ...... Use this mode when executing the operation only by the central remote controller, and executing only the stop by remote controller.

- Centralized .... Use this mode when executing the operation only by the central remote controller, and executing start/stop freely by remote controller during the preset hours.

- Individual .... Use this mode when executing start/stop both by central remote controller and remote controller.

- Timer operation possible by remote controller......... Use this mode when executing start/stop by remote controller during the preset hours, and not starting operation by the central remote controller at the programmed time of system start.

[HOW TO SELECT THE CONTROL MODE]

- Select whether to accept or to reject the operation from the remote controller regarding the operation, stop, temperature setting and operation mode setting, respectively, and determine the particular control mode from the rightmost column of the table below.
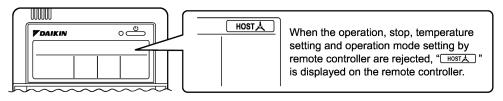
Example

Operation by remote controller (at time of unified operation by centralized control)	Operation by remote controller (at time of unified operation by centralized control)	Stop by remote controller	Temperature control by remote controller	Operation mode setting by remote controller
[Rejection]	[Rejection]	[Rejection]	[Acceptance]	[Acceptance]

⇨ The control mode is " 1 ".

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Operation mode	Control by remote controller					Control mode
	Operation		Stop	Temperature control	Operation mode setting	
	Unified operation, individual operation by central remote controller, or operation controlled by timer	Unified stop, individual stop by central remote controller, or timer stop				
ON/OFF control impossible by remote controller	Rejection (Example)	Rejection (Example)	Rejection (Example)	Rejection	Acceptance	0
					Rejection	10
				Acceptance (Example)	Acceptance (Example)	1 (Example)
					Rejection	11
Only OFF control possible by remote controller			Acceptance	Rejection	Acceptance	2
					Rejection	12
				Acceptance	Acceptance	3
					Rejection	13
Centralized	Acceptance			Rejection	Acceptance	4
					Rejection	14
				Acceptance	Acceptance	5
					Rejection	15
Individual		Acceptance		Rejection	Acceptance	6
					Rejection	16
				Acceptance	Acceptance	7
					Rejection	17
Timer operation possible by remote controller	Acceptance (During timer at ON position only)	Rejection (During timer at OFF position)		Rejection	Acceptance	8
					Rejection	18
				Acceptance	Acceptance	9
					Rejection	19

Note) Do not select the timer operation possible without the remote controller. In this case, timer operation is disabled.

HOST

When the operation, stop, temperature setting and operation mode setting by remote controller are rejected, " HOST " is displayed on the remote controller.

EXAMPLE OF OPERATION SCHEDULE
Operation schedule is possible only in conjunction with the schedule timer (optional accessory).
Liquid crystal display of schedule timer

ON/OFF control impossible by remote controller

SET1 ON OFF
AM PM
8:45 ► 5:00
SET2 ON OFF
AM PM
-:- - ► -:- -

Centralized → Operation controlled by timer → Programmed to operate at 8:45 → Stop controlled by timer → Programmed to stop at 5:00 → Individual operation except to the preset hours → Operation

Remote controller → Start/stop by remote controller cannot be made.

Centralized → Individual stop → Forced and unified stop. Power reminder stops. → Stop ------ Stop

Only OFF control possible by remote controller

| SET1 | ON | ◯ OFF |
| AM | | PM |
| *8:45* ► *5:00* |

| SET2 | ON | ◯ OFF |
| PM | | PM |
| *5:20* ► *10:00* |

Centralized ⟹

Remote controller ⟹

Operation controlled by timer

Programmed to operate at 8:45 → Stop - - - Programmed to stop at 5:00

Timer stops even if you forget to turn off the unit.

Operation controlled by timer

Programmed to stop at 5:00 - - - Programmed to operate at 5:20

Only stopping possible by the remote controller.

Centralized ⟹

Individual operation once the unit is stopped.

Timer stops. Power reminder stops.

Stop - - - Operation - Stop - - - Programmed to stop at 10:00

Remote controller ⟹

Only stopping possible by the remote controller.

Centralized

| SET1 | ON | ◯ OFF |
| AM | | PM |
| *8:45* ► *7:00* |

| SET2 | ON | OFF |
| | | |
| –:– – ► –:– – |

Centralized ⟹

Remote controller ⟹

Operation controlled by timer

Programmed to operate at 8:45 → Stop - - - Operation - Stop - - - Programmed to stop at 7:00

Timer stops.

Start/stop is possible by the remote controller during the hours programmed for timer operation.

Individual

| SET1 | ON | ◯ OFF |
| AM | | PM |
| *9:00* ► *5:00* |

| SET2 | ON | ◯ OFF |
| | | PM |
| –:– – ► *10:00* |

Centralized ⟹

Remote controller ⟹

Operation starts without fail at the timer-programmed time.

Operation - Programmed to operate at 9:00 - Stop - - - Operation

Start/stop is possible by the remote controller at any time regardless of the hours programmed by the timer.

Centralized ⟹

Remote controller ⟹

Stops temporarily at the timer-programmed stop time.

Timer stops.

Stop - - - Programmed to stop at 5:00 - - - Operation - Stop - - - Programmed to stop at 10:00

Start/stop is possible by the remote controller at any time regardless of the hours programmed by the timer.

Timer operation possible by remote controller

| SET1 | ON | ◯ OFF |
| AM | | PM |
| *8:30* ► *5:00* |

| SET2 | ON | ◯ OFF |
| PM | | PM |
| *5:20* ► *10:00* |

Centralized ⟹

Remote controller ⟹

Timer operation possible by remote controller at preset times.

Stops for a time at timer-programmed time.

8:30 - - - Operation - Stop - - - Programmed to stop at 5:00

Startn/stop is possible by the remote controller during the hours programmed for timer operation.

Centralized ⟹

Remote controller ⟹

Timer operation possible by remote controller at preset times.

Timer stops. Power reminder stops.

Programmed to operate at 5:20 - - - Operation - Stop - - - Programmed to stop at 10:00

Start/stop is possible by the remote controller during the hours programmed for timer operation.

— Air conditioner now operating.
- - - - Air conditioner now stopping.
▭ Command by central remote controller
⬭ Command by remote controller

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■ Setting operation mode (Fig. 12)

[Registration]

1. ☞ **Press the OPERATION MODE SELEC-TOR BUTTON. Each time you press this button, the display rotates as shown on the below list.**

• **List of operations which can be set**
In the below list, " ○ " refers to the acceptable setting, while " × " refers to the not acceptable setting.

Display	A: Zones and groups with no "⬚" display.	
	Setting	Contents of setting
⊕	×	
🌀	○	Can be set in individual zones or groups
⟨A⟩	○ *1	Can be set in individual zones or groups
❄	○	Can be set in individual zones or groups
☀	○	Can be set in individual zones or groups
🔧or✂or🧹	○ *1	Can be set in individual zones or groups *3
⬅▣	○ *1	Can be set in individual zones or groups
- -	○	Select this display if you don't wish to set by zone.

Display	B: Zones and groups with a "⬚" display.	
	Setting	Contents of setting
⊕	○	To be set by zone *2
🌀	○	Can be set in individual zones or groups
⟨A⟩	×	
❄	×	The displays are shown by group *4
☀	×	The displays are shown by group *4
🔧or✂or🧹	○ *1	Can be set in individual zones or groups *3
⬅▣	○ *1	Can be set in individual zones or groups
- -	○	Select this display if you don't wish to set by zone.

∗1: Setting may not be acceptable depending on the type of indoor unit with which this unit is connected.

∗2: In zone control, the units run in temperature adjustment mode (heating or cooling) for the outdoor system for the groups registered to those zones. Heating or cooling selection is not available.

∗3: 🔧 or ✂ or 🧹
Changing the ventilation mode cannot be done in the zone screen. Changing the ventilation mode should be done in the individual screen.

∗4: In group control, the units run in temperature adjustment mode (heating or cooling) for the group outdoor system. Heating or cooling selection is not available.

• **The Zone consists of the following two cases.**

A. Zone without display "⬚"
The group with master remote controller setting exists in this zone.
Setting the master remote controller enables cool/heat selection.
Operations other than cool/heat operations can also be set for some operations. For further details, see the list on the left.

B. Zone with display "⬚"
No group with master remote controller setting exists in this zone.
The cool/heat selection is not available because the master remote controller has not been set.
Some operations other than cool/heat operations can be set. For further details, see the list in the left.

See page 20 if the display "⬚" is flashing.

• Fan operation can be performed for each zone using the central remote controller even if there is no cooling/heating selection right during cooling or heating. Also, if a Ventiair is connected in the zone, ventilation and ventilation cleaning operation is possible. See the included operating manuals for details.

• When the indoor unit is in heat operation, change the setting to FAN operation through the central remote controller; then, you can switch the fan speed to the extremely low fan speed. Warm air may blow if any other indoor unit belonging to the same system is in heat operation.

• The indoor fan stops during defrost/hot start.

• DRY cannot be set from the central remote controller.

■ Group monitoring (Fig. 13)

Utilize the group monitor function in each of the following cases:
1. Check the malfunction code.
(See the next page.)
2. Check the group that requires cleaning of the air filter and air cleaner element. (See page 21.)
3. Change the setting of the master remote controller. (See page 20.)
4. Check the group(s) sharing the same outdoor unit. Or, check the particular group(s) with the master remote controller setting. (See page 20.)
5. Check the conditions of other individual groups.

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When in zone screen

The zone screen will revert to the individual screen automatically if nothing is done in it for one minute.

[Registration]

1. ☞Press the "ALL/INDIVIDUAL" button to switch to the ☞"INDIVIDUAL" screen.

2. ☞Using the arrow key, ☞move the " ☐ " to select the unit to be monitored.

Keeping the button pressed down will move it rapidly.

☞The " ☐ " lights up and the status of that unit is displayed in the LCD. The cursor in the screen Fig. 13 has selected unit 2-06.

■ **Error diagnosing function (Fig. 14)**

This central remote controller is provided with a diagnosing function, for when an indoor unit stops due to malfunction. In case of actuation of a safety device, disconnection in transmission wiring for control or failure of some parts, the operation lamp, inspection display and unit No. start to flash; then, the malfunction

code is displayed. Check the contents of the display, and contact your DAIKIN dealer because the above signs can give you the idea on the trouble area.

The display " ▬ " flashes under the group No. where the indoor unit that has stopped due to malfunction.

[Registration]

1. ☞Press the ARROW KEY BUTTON to call up the group that has stopped due to malfunction.

☞The unit No. ☞the malfunction code is flashing because of an error failure.

Operation lamp	Maintenance display	Unit No.	Malfunction code	Error content
☼	●	☀	**64**	Indoor air thermistor error
☼	●	☀	**65**	Outdoor air thermistor error
☼	●	☀	**68**	HVU error (Ventiair dust-collecting unit)
☼	●	☀	**6A**	Dumper system error
☀	☀	☀	6A	Dumper system error + Thermistor error
☼	●	☀	**6F**	Simple remote controller error
☼	●	☀	**6H**	Door switch (Ventiair dust-collecting unit), relay harness fault (Ventiair dust-collecting/humidifier unit)
☀	☀	☀	94	Ventiair internal transmission error (between total enthalpy – fan unit)
☀	☀	☀	A0	Indoor unit · external safety device error
☀	☀	☀	A1	Indoor unit · BEV unit (Sky-Air connection unit) PC board assembly fault
☼	●	☀	**A1**	Indoor unit · PC board assembly fault
☀	☀	☀	A3	Indoor unit · Drain level error (33H)
☀	☀	☀	A6	Indoor unit · Fan motor (51F) lock, overload
☼	●	☀	**A7**	Indoor unit · Fan direction adjustment motor (MA) error
☀	☀	☀	A9	Indoor unit · BEV unit, electric expansion valve motor (20E) error
☼	●	☀	**AF**	Indoor unit · Malfunctioning drain
☼	●	☀	**AH**	Indoor unit · Dust-collector error
☀	☀	☀	AJ	Indoor unit · Insufficient capacity setting, address setting fault

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			Code	Description
✲	✲	✲	C4	Indoor unit · Liquid piping thermistor (Th2) Error (faulty connection, cut wire, short circuit, fault)
✲	✲	✲	C5	Indoor unit · BEV unit, gas piping thermistor (Th3) Error (faulty connection, cut wire, short circuit, fault)
✲	✲	✲	C9	Indoor unit · Intake air thermistor (Th1) Error (faulty connection, cut wire, short circuit, fault)
✲	✲	✲	CA	Indoor unit · Outlet air thermistor (Th4) Error (faulty connection, cut wire, short circuit, fault)
☼	●	☼	**CJ**	Indoor unit · remote controller sensor error
✲	✲	✲	E0	Outdoor unit · Safety device operation
✲	✲	✲	E1	Outdoor unit · PC board assembly fault
☼	●	✲	**E1**	Outdoor unit · PC board assembly fault
✲	✲	✲	E3	Outdoor unit · High-pressure switch fault
✲	✲	✲	E4	Outdoor unit · Low-pressure switch fault
✲	✲	✲	E9	Outdoor unit · Electric expansion valve motor (20E) error
☼	●	✲	**EC**	Heat source unit · Intake water temperature inter-lock operation (fan operation)
✲	✲	✲	EF	Outdoor unit · Ice thermal storage unit error
✲	✲	✲	F3	Outdoor unit · Discharge piping temperature error
☼	●	✲	**H3**	Outdoor unit · High-pressure switch operation
✲	✲	✲	H4	Outdoor unit · Low-pressure switch operation
✲	✲	✲	H9	Outdoor unit · Outdoor air thermistor (Th1) Error (faulty connection, cut wire, short circuit, fault)
☼	●	✲	**H9**	Outdoor unit · Outdoor air thermistor (Th1) Error (faulty connection, cut wire, short circuit, fault)
☼	●	✲	**HC**	Outdoor unit · Water temperature sensor system error
☼	●	✲	**HF**	Ice thermal storage unit error, ice thermal storage controller error, error in outdoor unit during ice thermal storage operation
✲	✲	✲	HJ	Outdoor unit · water system fault
✲	✲	✲	J1	Outdoor unit · pressure sensor error
✲	✲	✲	J3	Outdoor unit · Discharge piping thermistor (Th3) Error (faulty connection, cut wire, short circuit, fault)
☼	●	✲	**J3**	Outdoor unit · Discharge piping thermistor (Th3) Error (faulty connection, cut wire, short circuit, fault)
✲	✲	✲	J5	Outdoor unit · Intake piping thermistor (Th4) Error (faulty connection, cut wire, short circuit, fault)
✲	✲	✲	J6	Outdoor unit · Heat exchange thermistor (Th2) error
☼	●	✲	**J6**	Outdoor unit · Heat exchange thermistor (Th2) error Error (faulty connection, cut wire, short circuit, fault)
✲	✲	✲	J7	Outdoor unit · Header thermistor (Th6) error
✲	✲	✲	JA	Outdoor unit · Discharge piping pressure sensor error
✲	✲	✲	JC	Outdoor unit · Intake piping pressure sensor error
✲	✲	✲	JF	Outdoor unit · Oil temperature sensor (Th5) system error
☼	●	✲	**JH**	Outdoor unit · Oil temperature sensor (Th5) system error
✲	✲	✲	L0	Outdoor unit · Inverter system fault
✲	✲	✲	L4	Outdoor unit · Inverter cooler fault
✲	✲	✲	L5	Outdoor unit · Ground circuit for compressor motor, short circuit, or power unit short circuit

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✲	✲	✲	L6	Outdoor unit · Ground circuit for compressor motor, short circuit
☼	✲	✲	L8	Outdoor unit · Compressor overload, compressor motor wire disconnection
✲	✲	✲	L9	Outdoor unit · Compressor lock
✲	✲	✲	LA	Outdoor unit · Power unit error
✲	✲	✲	LC	Outdoor unit · Transmission error between inverter and outdoor control unit
☼ or ●	✲	✲	M1	Central controller: PC board fault
☼ or ●	✲	✲	M8	Transmission error between central controllers
☼ or ●	✲	✲	MA	Central controller: Incorrect combination
☼ or ●	✲	✲	MC	Central controller: Address setting fault
✲	●	✲	**P0**	Insufficient gas (thermal storage)
✲	✲	✲	P1	Outdoor unit · Power voltage imbalance, phase loss
✲	✲	✲	P4	Outdoor unit · Power unit temperature sensor error
☼	●	✲	**U0**	Pressure drop due to insufficient refrigerant, electric expansion valve fault, etc.
✲	✲	✲	U1	Reversed or lost phase
✲	✲	✲	U2	Power voltage error, momentary electrical stoppage
✲	✲	✲	U4	Transmission error between indoor unit/BEV unit and outdoor/BS unit, Transmission error between outdoor unit and BS unit
✲	✲	✲	U5	Transmission error between remote controller and indoor control unit
●	☼	●	U5	Remote controller board fault or remote controller setting fault
✲	✲	✲	U6	Transmission error between indoor units
✲	✲	✲	U7	Transmission error between outdoor units Transmission error between outdoor unit and ice thermal storage unit
☼	●	✲	**U7**	Transmission error between outdoor units (cooling/heating batch, low-noise operation)
✲	✲	●	U8	Transmission error between master remote controller and slave remote controller (slave remote controller error) Incorrect combination of indoor unit and remote controller within a single system (model)
✲	✲	✲	U9	Transmission error between indoor unit/BEV unit and outdoor unit within a single system Transmission error between BS unit and indoor unit/BEV unit and outdoor unit within a single system
✲	✲	✲	UA	Incorrect combination of indoor, BS, and outdoor units within a single system (model, number of units, etc.) Incorrect combination of indoor unit and remote controller (remote controller in question) BS unit connection position fault
☼	●	☼	**UC**	Central control group numbers overlap
✲	✲	✲	UE	Transmission error between indoor unit and central controller
✲	✲	✲	UF	Unset system, incorrect settings between BEV unit and indoor unit
✲	✲	✲	UH	System fault

■ error codes (in outline font) do not display "maintenance" and the system will run, but please check the content of the display and contact your dealer.

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■ Setting master remote controller (Fig. 15)

You must set the master remote controller of the operation mode for one of the indoor units, if two or more such indoor units with the remote controller are connected with the outdoor unit where the operation modes such as cool/heat operation and FAN operation can be set by remote controller and central remote controller.

1. Preparations
When you want to fix settings

- **Check the particular group with the master remote controller setting for the refrigerant system you wish to reset. (See the below.)**

- **Call up the group without the display "[🔲]" (See page 16.)**

  ☞ **Hold the OPERATION MODE SELECTOR BUTTON down for about four seconds while the above group is being called up.**

  The display "[🔲]" flashes on the liquid crystal display of the remote controller for all the groups sharing the same outdoor unit or BS unit.

  When you turn on the power switch for the first time, the display "[🔲]" flashes.

2. Setting selection right

Pall up the desired group to set the master remote controller, and ☞ press the OPERATION MODE SELECTOR BUTTON. The master remote controller is set for this group, and the display "[🔲]" goes out. The display "[🔲]" appears for the other groups.
Setting is finished now.

When switching operation
● **In case of operation switch**
Call up the zone including the group with the setting of master remote controller.

(Zone without the display "[🔲]")

☞ **Press the OPERATION MODE SELECTOR BUTTON several times, and switch to the desired operation mode.**
Each time you press it, the display is switched to "🌀" "❄" "☀" and "━" in sequence.

NOTE

- However, the displays "[A]" "◁▤" and "VENTILATION MODE" may apper in some zones, depending on the type on indoor unit with which they are connected.
  (VENTILATION MODE)

  🔳 or 🔀 or ✈

[System Display]

1. Test run mode is necessary to display the system display.
2. In order to turn on test run mode, select the appropriate air conditioner on the individual screen with the cursor and then set its operation mode to either cooling or heating. (It makes no difference if the air conditioner is running or not running while this operator is being performed.)
3. Press the "inspection/test run" button twice to put it into test run mode.
4. Pressing the "inspection/test run" button for four or more seconds in test run mode will display ☞ the "REF CIRCUIT."

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Call the unit whose system you wish to look up using the arrow keys.

The " ▣ " on all groups in the same system as the displayed group will light up.

Of those, the " ▣ " display in all groups which have cooling/heating selection privilege will blink.

In this example, individual units 1-00, 1-03, 1-05, 1-06, 1-07, 2-02, and 2-03 are in the same system, and 1-05 has the cooling/heating selection privilege.

To look up other systems, call up all the units you wish to look up using the arrow keys.

Pressing the inspection/test run button one more time gets rid of the system display and ends it.

The unit will enter the individual screen automatically if nothing is done for one minute in the system display screen.

This function may not be available for all connected outdoor units, in which case "REF CIRCUIT" will blink. It will also not be correctly displayed if DIII-NET extension ADP is used.

■ Display of time to clean (Fig. 16)

This central remote controller displays the time to clean the air filter or air cleaner element for each group or any given group by utilizing two types of signs. The display " ⬡/⬡ " tells the time to clean the air filter or the air cleaner element of some group.

If a cleaning sign is displayed
A filter or element in some group is ready to be cleaned.

1. ☞ **Press the ARROW KEY BUTTON, and search the groups displaying " ⬡ " or " ⬡ " (The group may be plural.)**

> **Clean or change the air filter or air cleaner element.**
> For further details, see the operation manual attached to each indoor unit. (Clean or change the air filter or air cleaner element of all the groups displaying " ⬡ " or " ⬡ ".)

2. ☞ **Press the FILTER SIGN RESET BUTTON, and the display " ⬡/⬡ " disappears. (Including all the groups where the air filter has been cleaned.)**

NOTE
Be sure to check the display ☞ " ⬡/⬡ " has disappeared at this point. The appearance of the above display is a sign that the air filter or air cleaner element of some group still needs cleaning.

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INSTALLATION TABLE

When installing the equipment, mark the zone No. of each group and installation location in the below table.

Setting group No.
(Setting is not possible unless power is activated to both the central remote controller and indoor unit.)

Operated by remote controller
1. Activate power to both the central remote controller and indoor unit.
2. While in the normal mode, hold down the " 🗓 " button for a minimum of 4 seconds. The unified ON/OFF controller will enter the FIELD SET MODE.
3. Select the MODE No. " *00* " with the " 🔘 " button.
4. Use the " 🔘 " button to select the group No. for each group. (Group No. increases in the order of 1-00, 1-01 ... 1-15, 2-00, ... 8-15.)
5. Press " 🔲 " to set the selected group No.
6. Press " 🗓 " to return to the NORMAL MODE.

Operated by simplified remote controller
1. Activate power to both the central remote controller and indoor unit.
2. Remove the upper part of the remote controller.
3. Press the BS6 BUTTON (field set) on the PC board. The controller will enter the FIELD SET MODE.
4. Select the MODE No. " *00* " with the BS2 BUTTON and BS3 BUTTON (temperature setting).
5. Use the BS9 BUTTON (set A) and BS10 BUTTON (set B) to select the group No. for each group. (Group No. increases in the order of 1-00, 1-01 ... 1-15, 2-00, ... 8-15.)
6. Press BS7 BUTTON (set/cancel) to set the selected group No.
7. Press BS6 BUTTON (field set) to return to the NORMAL MODE.

Zone No.																
Group No.	–00	–01	–02	–03	–04	–05	–06	–07	–08	–09	–10	–11	–12	–13	–14	–15
Indoor unit Quantity of units Controlled by																
Location																
Zone No.																
Group No.	–00	–01	–02	–03	–04	–05	–06	–07	–08	–09	–10	–11	–12	–13	–14	–15
Indoor unit Quantity of units Controlled by																
Location																

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Zone No.																
Group No.	−00	−01	−02	−03	−04	−05	−06	−07	−08	−09	−10	−11	−12	−13	−14	−15
Indoor unit Quantity of units Controlled by																
Location																
Zone No.																
Group No.	−00	−01	−02	−03	−04	−05	−06	−07	−08	−09	−10	−11	−12	−13	−14	−15
Indoor unit Quantity of units Controlled by																
Location																

OPTIONAL ACCESSORIES

You can perform the normal operation, take off the malfunction contact point and unified start/stop by contact point, all by connecting this unit with the unification adaptor for computerized control. For further details, ask your DAIKIN dealer.

(a) Unification adaptor for computerized control　(b) Central remote controller

DOUBLE CENTRAL REMOTE CONTROLLERS

With two central remote controllers, centralized control (indoor units) is possible from different locations.

(a)　Central remote controller　　(b)　Group No. 1 – 00　　(c)　Group No. 1 – 15　　(d)　Group No. 2 – 00
(e)　Group No. 4 – 15　　　(f)　A maximum of 64 groups

Note)
• For control alignment and settings for double central remote controllers, contact your dealer.

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SPECIFICATIONS

■ Specifications

Power supply	1 ~ 50/60Hz, 100V – 240V
Power consumption	Max. 8W
Forced ON/OFF input	Continuous "a" contact Contact current: approximately 10mA
Size	180 (W) × 120 (H) × 64.5 (D)
Weight	420g

■ Outline drawings

When using this unit an electric parts box of KJB311A is required.
For installation, a steel electric parts box to be embedded is mandatory.

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Fig. 9

Fig. 10

Fig. 11

5

Fig. 12

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Fig. 13

Operation lamp

Fig. 14

Fig. 15

Fig. 16

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5.6   <DCS301C71> Unified ON/OFF Controller

5.6.1   Installation Manual

Please read these "SAFETY CONSIDERATIONS" carefully before installing air conditioning equipment and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.
Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference.
This air conditioner comes under the term "appliances not accessible to the general public".

Meaning of warning, caution and note symbols.

⚠ **WARNING....** Indication a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ **CAUTION......** Indication a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be sued to alert against
                    unsafe practices.
⚠ **NOTE.............** Indication situation that may result in equipment or property-damage-only accidents.

⚠ WARNING

Ask your dealer or qualified personnel to carry out installation work. Do not try to install the machine by yourself.
Improper installation may result in water leakage, electric shocks or fire.

Perform installation work in accordance with this installation manual.
Improper installation may result in water leakage, electric shocks or fire.

Be sure to use only the specified accessories and parts for installation work.
Failure to use the specified parts may result in water leakage, electric shocks, fire or the unit falling.

Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes.
Improper installation work may result in the equipment falling and causing accidents.

Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.
An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.

Make sure that all wiring is secured, the specified wires and used, and no external forces act on the terminal connections or wires.
Improper connections or installation may result in fire.

When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the electric parts box lid can be securely fastened.
Improper positioning of the electric parts box lid may result in electric shocks, fire or the terminals overheating.

Before touching electrical parts, turn off the unit.

Ground the air conditioner. Do not connect the ground wire to gas or water pipes, lightning rod or a telephone ground wire.
Incomplete grounding may result in electric shocks.

When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R410A), such as air.

Do not reconstruct or change the settings of the protection devices.
If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may result.

Do not touch the switch with wet fingers.
Touching a switch with wet fingers can cause electric shock.

Install an leak circuit breaker, as required.
If an leak circuit breaker is not installed, electric shock may result.

Do not install the air conditioner or the remote controller in the following locations:
    (a) where a mineral oil mist or an oil spray or vapor is produced, for example in a kitchen
        Plastic parts may deteriorate and fall off or result in water leakage.
    (b) where corrosive gas, such as sulfurous acid gas, is produced
        Corroding copper pipes or soldered parts may result in refrigerant leakage.
    (c) near machinery emitting electromagnetic waves
        Electromagnetic waves may disturb the operation of the control system and result in a malfunction of the equipment.
    (d) where flammable gases may leak, where there are carbon fiber or ignitable dust suspensions in the air, or where volatile flammables such as thinner or gasoline are handled.
        Operating the unit in such conditions may result in fire.

⚠ CAUTION

Be very careful about product transportation.

Safely dispose of the packing materials.
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

Do not turn off the power immediately after stopping operation.
Always wait at least five minutes before turning off the power. Otherwise, water leakage and trouble may occur.

⚠ NOTE

Install the indoor and outdoor units, power supply wiring and connecting wires at least 3.5ft. away from televisions or radios in order to prevent image interference or noise.
    (Depending on the radio waves, a distance of 3.5ft. may not be sufficient enough to eliminate the noise.)

Remote controller (wireless kit) transmitting distance can result shorter than expected in rooms with electronic fluorescent lamps.
 (inverter or rapid start types)
Install the indoor unit as far away from fluorescent lamps as possible.

This unit is a class A product.
In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Dismantling of the unit, treatment of the refrigerant, oil and eventual other parts, should be done in accordance with the relevant local and national regulations.

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➊ COMPONENTS

Check the following components are included in this optional accessory before installation.

Installation screw (M4 x 16)	2
Operation manual	1
Installation manual	4
Installation table	4
Switch display sticker	1

Body

When using this optional accessory an electric parts box of KJB212A is required.
For installation, a steel electric parts box to be embedded is mondatory.

➋ SYSTEM CONFIGURATION

This unified ON/OFF controller enables individual and unified operation/stop for a maximum of 16 groups of indoor units.
With 2 to 8 unified ON/OFF controllers, individual and unified control is possible with up to a maximum 128 groups of indoor units.

● When using 1unified ON/OFF controller

Forced OFF input

Host computer monitor panel

Unified ON/OFF controller

Outdoor unit

Group No. 1–00 ··· Group No. 1–15

Max. 16 groups

(This optional accessory can not be used in conjunction with wiring adapter for electrical appendices (optional accessory).)

● When using 2 to 8 unified ON/OFF controllers

Forced OFF input

Host computer monitor panel

Stops with input to any single unified ON/OFF controller.

Unified ON/OFF controller

Outdoor unit

Group No. 1–00 ··· Group No. 1–15
Group No. 2–00 ··· Group No. 2–15
Group No. 8–00 ··· Group No. 8–15

Max. 128 groups

The goups of indoor units are as follows:

1 One indoor unit without remote controller

Without remote controller

2 One indoor unit controlled by one or two remote controllers

One remote controller   or   Two remote controllers

3 A maximum of 16 indoor units controlled in groups by one or two remote controllers

Remote controller   Max. 16 units   or   Two remote controllers   Max. 16 indoor units

➌ INSTALLATION

1 Open the upper part of remote controller.
Insert a ⊖ screwdriver (2 locations) into the recess between the upper part and the lower part of remote controller and twist the screwdriver lightly.

PC board is attached with both the upper and lower part of remote controller. Do not damage the board with the screwdriver.

2 Open the upper part of remote controller and install the electric parts box (part to be procured in the field) with the attached installation screws (M4 x 16).

NOTE) Suitable length of the electric wire is about 160mm from the inlet of the electric parts box. If it is difficult to contain a long wiring, strip the sheathed part of the wiring.

⊖screwdriver

(2 locations)

Installation screws (2 screws)

Conduit tube

About 160mm

Electric parts box

Do not contain the power supply and the transmission wiring in the same conduit tube.

Wiring for transmission

Power supply wiring

Electric parts box (Part to be procured in the field)

④ INITIAL SETTING

Setting ① through ③ are initialized when power is turned ON, therefore complete settings BEFORE activating the power.

1 Connector for setting master controller (X1A) (Provided with connector at factory set)
 • When using 1 unified ON/OFF controller, do not disconnect the connector for setting master controller. (Use the unit with the connector in the state in which it was delivered.)
 • When using multiple unified ON/OFF controllers, or using the unified ON/OFF controller in conjunction with other optional controllers for centralized control, makes settings as indicated in the right table.

Pattern of connection of optional controllers for centralized control			Connector for setting master controller (X1A) Settings		
Unified ON/OFF controller	Central remote controller	Schedule timer	Unified ON/OFF controller	Central remote controller	Schedule timer
1 to 16			Set one to "Used" and all the rest to "Not used".		
	1 to 4		Set all to "Not used".	(Note)	
		1	Set one to "Used" and all the rest to "Not used".		"Not used"
	1 to 4	1	Set all to "Not used".	(Note)	"Not used"

(Note) For instructions on how to set the connector for setting master controller on the central remote controller, see the installation manual provided with the central remote controller.

2 Switch for setting each address (DS1)
 These switches are used to set group control address.
 Groups Nos. 1–00 through 1–15 are grouped in the same control group when the unit is shipped from the factory.

Each Address	1-00 ~ 1-15	2-00 ~ 2-15	3-00 ~ 3-15	4-00 ~ 4-15	5-00 ~ 5-15	6-00 ~ 6-15	7-00 ~ 7-15	8-00 ~ 8-15
DS1 setting	DS1 (Factory setting)	DS1	DS1	DS1	DS1	DS1	DS1	DS1

NOTE)
■ indicates the position of switches.

After setting, attach the number seal applicable to respective control range of the attached switch display sticker, as shown in the diagram below.

(Example)
In the case of 1-00 to 1-15, attach ①.

(To hold reset)

Connector for setting master controller
Forced reset switch
Switch for setting each address
Control mode selector
MAIN/SUB changeover switch

3 MAIN/SUB changeover switch setting
 With two unified ON/OFF controllers, centralized control (indoor units) is possible from different locations. In this kind of set-up, it is necessary to set the MAIN/SUB changeover switch.
 One of the two unified ON/OFF controllers (1)·(2) is set to "MAIN" while the other is set to "SUB".

Outdoor unit

Group No. 1–00 · · · Group No. 1–15

Unified ON/OFF controller (1)   Max. of 16 groups   Unified ON/OFF controller (2)

4 Setting of the sequential operation function
 The unified ON/OFF controller is equipped with a sequential operation function that sequentially turns indoor units on in 2-second intervals during unified operation. (Sequential operation is factory set to "ON.")
 To switch sequential operation ON or OFF, set as follows.

Sequential operation "ON" (Factory set)

While holding down the unified stop button, perform forced reset.
While holding down the unified operation button, perform forced reset.

Sequential operation "OFF"

NOTE: The sequential operation function is designed to reduce the load on the power supply equipment, but does not guarantee that compressors will not be started simultaneously. You cannot therefore count on a capacity reduction effect by power supply equipment breaker selection.

5 Control mode selector (DS2)
 The following four patterns of control mode can be set.

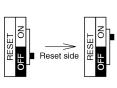| Control mode	Individual	Centralized	Timer operation possible by remote controller	ON/OFF control impossible by remote controller
Content	Operation/stop is controlled by both unified ON/OFF controller and remote controller.	After operated by unified ON/OFF controller, operation/stop is freely controlled by remote controller until stopped by unified ON/OFF controller.	When used in conjunction with schedule timer, operation/stop is controlled freely by remote controller during the set time but operation is not available when schedule timer is ON.	Operation/stop is controlled by unified ON/OFF controller only. (This unit can not be operated/stopped by remote controller.)
DS2 setting	(Factory set) DS2	DS2	DS2	DS2

NOTES) • ■ indicates the position of switches.
        • Set control mode before turning power supply ON.
        • When used in conjunction with central remote controller, the control modes of the central remote controller has the priority.

6 Forced reset switch (SS1)
 When changing the setting of the connector for setting master controller, etc., you can reset simply by setting it to the reset side once and returning to the normal side, without turning the power OFF. (For normal operation, set the switch to the normal side.)
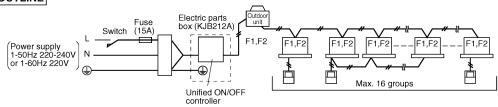
Normal side
(Factory set)

Reset side

5

5 ELECTRIC WIRING

GENERAL INSTRUCTIONS

• All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
• Use copper conductors only.
• All field wiring and components must be provided by licensed electrician.
• Unit shall be grounded in compliance with the applicable local and national codes.
• Fit the power supply wiring with a fuse and a switch.
• After wiring work, check power to the equipment shuts OFF when switch is shut OFF.

WIRING OUTLINE

Wiring specification

	Type	Size
Power supply wiring	H05VV-U3G	(NOTE 1)
Transmission wiring	Sheathed wire (2 wire) (NOTE 2)	0.75 – 1.25mm²

NOTES) 1. The size of power supply wiring must comply with the applicable national and local codes.
2. Allowable length of transmission wiring is as follows.
Max. 1000m (Total wiring length: 2000m)

Connect the wiring between indoor and outdoor units, indoor/outdoor units and power supply, and indoor units and remote controllers.
For details, refer to the installation manuals of indoor and outdoor units.

WIRING TO THE INDOOR UNIT AND OUTDOOR UNIT

NOTE) 1. When not using the optional accessory applicable to EMI (KEK26-1),
connect the power supply wiring directly to the unified ON/OFF controller.

CONTROL TERMINAL STRIP

∗1 For connecting indoor unit (F1, F2)
∗2 Forced OFF input (T1, T2)
While the forced OFF input (no voltage contactor, for micro current) is ON (energized), all the connected indoor units are stopped and can not be operated.
Use only contactors which guarantee the minimum applicable load ⎓16V, 10mA.

NOTE) Use instantaneous contactor of over 200msec. energizing time, when necessary.

∗3 For schedule timer (D1, D2)
Power can be supplied to the schedule timer (DST301B51•61 optional accessory). For details, refer to the installation manual of the schedule timer.
Wire ∗2 and ∗3 only when necessary.

(NOTE)
Do not connect the power supply wiring (220 to 240V) to the control terminal strip. If connected by mistake, it may damage or burn electrical parts of optional controllers for centralized control and indoor unit. It may result in serious danger. Be sure to check wirings before turning the power ON.

6 SETTING GROUP NO. FOR CENTRALIZED CONTROL

Set the group number of each group of the indoor unit from the remote controller. (In case of no remote controller, also connect the remote controller and set the group No. Then, remove the remote controller.)

1   Turn ON the power of the indoor unit and unified ON/OFF controller. (Unless the power is ON, no setting can be made.)
    Check that the installation and electrical wiring are correct before turning the power supply ON.
    When the power supply is turned ON, all LCD appear once and the unit may not accept the operation for about one minute with the display of " ⬚ " flashing (an interval of ON, ON, and OFF).

2   While in the normal mode, hold down the " TEST " button for a minimum of 4 seconds.
    The remote controller will enter the FIELD SET MODE.

3   Select the MODE No. " _00_ " with the " ⬆⬇ " button.

4   Use the " ⊕ " button to select the group No. for each group.
    (Group numbers increase in the order of 1-00, 1-01, ... 1-15, 2-00, ... 8-15.)

5   Press " ⊏⌿⊐ " to set the selected group No.

6   Press " TEST " to return to the NORMAL MODE.

NOTES)   • For simplified remote controller, see the installation table.
         • For setting group No. of HRV and wiring adaptor for other air conditioners,
           etc., refer to the instruction manual attached.

| NOTICE | Enter the group No. and installation place of the indoor unit into the attached installation table.
             Be sure to keep the installation table with the operation manual for maintenance.

GROUP NO.   MODE NO.   FIELD SET MODE

7 CONFIRMING OPERATION

Before starting test operation, supply power to the indoor units, outdoor units, and unified ON/OFF controller and press the ON/OFF BUTTON.
If the operation lamp flashes, it indicates a malfunction in the indoor unit of the applicable group.
If the display of " ⬚ " flashes, it indicates a malfunction in the optional controllers for centralized control. Check for such malfunctions.

| NOTES | ∘ For test operation of indoor and outdoor units, refer to the installation manual attached with the outdoor unit.
            ∘ After turning the power supply ON, if the unit does not accept operation for two minutes or more with the display of " ⬚ " flashing, check the following points.
              • Check that setting of the connector for setting master controller is correct.
              • Check that the group No. for centralized control has been set.

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5

5.6.2   Operation Manual

Please read these "SAFETY CONSIDERATIONS" carefully before installing air conditioning equipment and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.
Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference.
This air conditioner comes under the term "appliances not accessible to the general public"

Meaning of warning, caution and note symbols.

⚠ **WARNING** ..... Indication a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ..... Indication a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be sued to alert against unsafe practices.

⚠ **NOTE** .... Indication situation that may result in equipment or property-damage-only accidents.

Keep these warning sheets handy so that you can refer to them if needed.
Also, if this equipment is transferred to a new user, make sure to hand over this operation manual to the new user.

⚠ WARNING

In order to avoid electric shock, fire or injury, or if you detect any abnormality such as smell of fire, turn off power and call your dealer for instructions.

Ask your dealer for installation of the air conditioner.
Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.

Ask your dealer for improvement, repair, and maintenance.
Incomplete improvement, repair, and maintenance may result in a water leakage, electric shock, and fire.

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment.
Be sure only to use accessories made by Daikin which are specifically designed for use with the equipment and have them installed by a professional.

Ask your dealer to move and reinstall the air conditioner or the remote controller.
Incomplete installation may result in a water leakage, electric shock, and fire.

Never let the indoor unit or the remote controller get wet.
It may cause an electric shock or a fire.

Never use flammable spray such as hair spray, lacquer or paint near the unit.
It may cause a fire.

Never replace a fuse with that of wrong ampere ratings or other wires when a fuse blows out.
Use of wire or copper wire may cause the unit to break down or cause a fire.

Never inspect or service the unit by yourself.
Ask a qualified service person to perform this work.

Cut off all electric waves before maintenance.

Do not wash the air conditioner or the remote controller with excessive water.
Electric shock or fire may result.

Do not install the air conditioner or the remote controller at any place where flammable gas may leak out.
If the gas leaks out and stays around the air conditioner, a fire may break out.

Do not touch the switch with wet fingers.
Touching a switch with wet fingers can cause electric shock.

⚠ CAUTION

After a long use, check the unit stand and fitting for damage.
If they are left in a damaged condition, the unit may fall and result in injury.

Do not allow a child to mount on the unit or avoid placing any object on it.
Falling or tumbling may result in injury.

Do not let children play on and around the unit.
If they touch the unit carelessly, it may result in injury.

Do not place a flower vase and anything containing water.
Water may enter the unit, causing an electric shock or fire.

Never touch the internal parts of the controller.
Do not remove the front panel. Some parts inside are dangerous to touch, and a machine trouble may happen.
For checking and adjusting the internal parts, contact your dealer.

Avoid placing the controller in a spot splashed with water.
Water coming inside the machine may cause an electric leak or may damage the internal electronic parts.

Do not operate the air conditioner when using a room fumigation - type insecticide.
Failure to observe could cause the chemicals to become deposited in the unit, which could endanger the health of those who are hypersensitive to chemicals.

Safely dispose of the packing materials.
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

Do not turn off the power immediately after stopping operation.
Always wait at least five minutes before turning off the power. Otherwise, water leakage and trouble may occur.

The appliance is not intended for use by young children or infirm persons without supervision.

The remote controller should be installed in such away that children cannot play with it.

⚠ NOTE

Never press the button of the remote controller with a hard, pointed object.
The remote controller may be damaged.

Never pull or twist the electric wire of the remote controller.
It may cause the unit to malfunction.

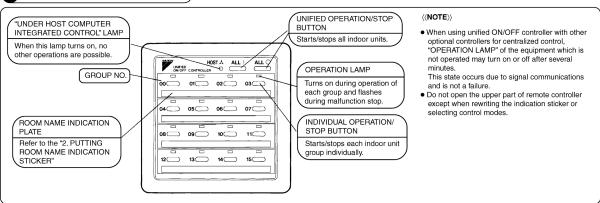**Do not place the controller exposed to direct sunlight.**
The LCD display may get discolored, failing to display the data.

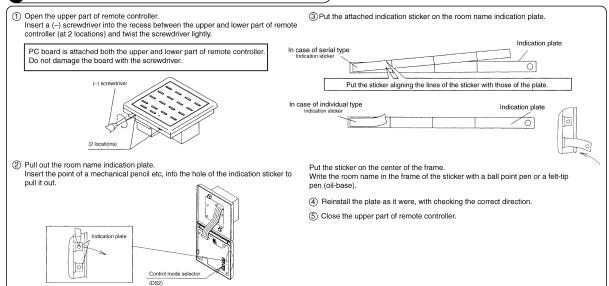**Do not wipe the controller operation panel with benzine, thinner, chemical dustcloth, etc.**
The panel may get discolored or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. And wipe it with another dry cloth.

Dismantling of the unit, treatment of the refrigerant, oil and eventual other parts, should be done in accordance with the relevant local and national regulations.

❶ NAMES AND FUNCTIONS

"UNDER HOST COMPUTER INTEGRATED CONTROL" LAMP
When this lamp turns on, no other operations are possible.

GROUP NO.

ROOM NAME INDICATION PLATE
Refer to the "2. PUTTING ROOM NAME INDICATION STICKER"

UNIFIED OPERATION/STOP BUTTON
Starts/stops all indoor units.

OPERATION LAMP
Turns on during operation of each group and flashes during malfunction stop.

INDIVIDUAL OPERATION/STOP BUTTON
Starts/stops each indoor unit group individually.

《**NOTE**》
● When using unified ON/OFF controller with other optional controllers for centralized control, "OPERATION LAMP" of the equipment which is not operated may turn on or off after several minutes.
This state occurs due to signal communications and is not a failure.
● Do not open the upper part of remote controller except when rewriting the indication sticker or selecting control modes.

❷ PUTTING ROOM NAME INDICATION STICKER

① Open the upper part of remote controller.
Insert a (–) screwdriver into the recess between the upper and lower part of remote controller (at 2 locations) and twist the screwdriver lightly.

PC board is attached both the upper and lower part of remote controller.
Do not damage the board with the screwdriver.

(–) screwdriver

(2 locations)

② Pull out the room name indication plate.
Insert the point of a mechanical pencil etc, into the hole of the indication sticker to pull it out.

Indication plate

Control mode selector
(DS2)

③ Put the attached indication sticker on the room name indication plate.

In case of serial type
Indication sticker   Indication plate

Put the sticker aligning the lines of the sticker with those of the plate.

In case of individual type
Indication sticker   Indication plate

Put the sticker on the center of the frame.
Write the room name in the frame of the sticker with a ball point pen or a felt-tip pen (oil-base).

④ Reinstall the plate as it were, with checking the correct direction.

⑤ Close the upper part of remote controller.

❸ SELECTING CONTROL MODES

The following four patterns of control mode can be set.

Control mode	Individual	Centralized	Timer operation possible by remote controller	ON/OFF control impossible by remote controller
Content	Operation/stop is controlled by both unified ON/OFF controller and remote controller.	After operated by unified ON/OFF controller, operation/stop is freely controlled by remote controller until stopped by unified ON/OFF controller.	When used in conjunction with schedule timer, operation/stop is controlled freely by remote controller during the set time but operation is not available when schedule timer is ON.	Operation/stop is controlled by unified ON/OFF controller only. Indoor units can not be operated/stopped by remote controller.
DS2 setting	CONTROL MODE (Factory set)	CONTROL MODE	CONTROL MODE	CONTROL MODE

NOTE: • ▮ indicates the position of switches.
• Set control modes before turning power supply on.
• When used in conjunction with central remote controller, the control modes of the central remote controller has the priority.

❹ DISPLAY OF MALFUNCTION

Flashing of lamps indicates malfunctions. Contact your Daikin dealer.
When turning power supply on, all lamps may light and UNDER HOST COMPUTER INTEGRATED CONTROL lamp may flash and not accept the operation for about on minute. These conditions are not malfunctions.

States of lamps	Contents of malfunctions
Flashing of operation lamp	Indicates malfunctions in the indoor unit in the group where the operation lamp is flashing.
Flashing of UNDER HOST COMPUTER INTEGRATED CONTROL lamp	Indicates malfunctions in optional controllers for centralized control.

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5.7 <DST301BA61> Schedule Timer Controller

Enables you to connect and control weekly schedule for up to 128 indoor units all together.
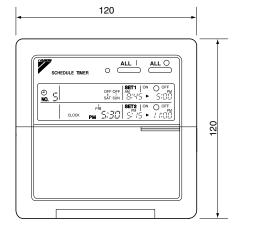
- Simultaneous control of up to 128 indoor units is managed by a week schedule.
- The start and stop time for twice a day can be set for the week in increments of 1 minute.
- By combining with a central remote controller and schedule timer, you can construct a system that matches the size and use of the building.
- If used together with a central remote controller, you can set up to 8 schedule patterns which can be distributed among zones as desired using the central remote controller.
- Is equipped with a compensation function for power failure up to 48 hours.
- Features thin design of a mere 16 mm in thickness. (Uses JIS recessed box for 2.)
- Wiring can be up to 1 km in length. Applicable wiring methods include bus and star in addition to crossover type.
- Can be used in combination with other D-BACS equipment.

5.7.1 Specifications / Dimensions

SPECIFICATIONS

■ Specifications

Display of time	12-hour digital display
Clock cycle type	Quartz clock type
Clock accuracy	Within ±30 sec./month (environmental temperature from 15˚C to 35˚C)
Timer programming	Two pairs of programmed time for both system start and system off can be set in units of minute for each day of the week
Power failure compensation time	Approximately 48 hours for a single occurrence of power failure (clock with No. of programmed time)
Size	120 (W) × 120 (H) × 53 (D) mm (Width/Height/Depth)
Weight	Approximately 210g

■ Outline drawings

Specifications and appearance subject to change without notice.

5.7.2 Installation Manual

Please read these "SAFETY CONSIDERATIONS" carefully before installing air conditioning equipment and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference.
This air conditioner comes under the term "appliances not accessible to the general public".

Meaning of warning, caution and note symbols.

⚠ **WARNING** ......Indication a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ **CAUTION** ....Indication a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
⚠ **NOTE** .... Indication situation that may result in equipment or property-damage-only accidents.

⚠ WARNING

Ask your dealer or qualified personnel to carry out installation work. Do not try to install the machine by yourself.
Improper installation may result in water leakage, electric shocks or fire.

Perform installation work in accordance with this installation manual.
Improper installation may result in water leakage, electric shocks or fire.

Be sure to use only the specified accessories and parts for installation work.
Failure to use the specified parts may result in water leakage, electric shocks, fire or the unit falling.

Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes.
Improper installation work may result in the equipment falling and causing accidents.

Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.
An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.

Make sure that all wiring is secured, the specified wires and used, and no external forces act on the terminal connections or wires.
Improper connections or installation may result in fire.

When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the electric parts box lid can be securely fastened.
Improper positioning of the electric parts box lid may result in electric shocks, fire or the terminals overheating.

Before touching electrical parts, turn off the unit.

Ground the air conditioner. Do not connect the ground wire to gas or water pipes, lightning rod or a telephone ground wire.
Incomplete grounding may result in electric shocks.

When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R410A), such as air.

Do not reconstruct or change the settings of the protection devices.
If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may result.

Do not touch the switch with wet fingers.
Touching a switch with wet fingers can cause electric shock.

Install an earth leak circuit breaker, as required.
If an earth leak circuit breaker is not installed, electric shock may result.

Do not install the air conditioner or the remote controller in the following locations:
   (a) where a mineral oil mist or an oil spray or vapor is produced, for example in a kitchen
       Plastic parts may deteriorate and fall off or result in water leakage.
   (b) where corrosive gas, such as sulfurous acid gas, is produced
       Corroding copper pipes or soldered parts may result in refrigerant leakage.
   (c) near machinery emitting electromagnetic waves
       Electromagnetic waves may disturb the operation of the control system and result in a malfunction of the equipment.
   (d) where flammable gases may leak, where there are carbon fiber or ignitable dust suspensions in the air, or where volatile flammables such as thinner or gasoline are handled.
       Operating the unit in such conditions may result in fire.

CISPR 22 Class A Warning.
This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

5

⚠ CAUTION

Be very careful about product transportation.

Safely dispose of the packing materials.
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

Do not turn off the power immediately after stopping operation.
Always wait at least five minutes before turning off the power. Otherwise, water leakage and trouble may occur.

⚠ NOTE

Install the indoor and outdoor units, power supply wiring and connecting wires at least 3.5ft. away from televisions or radios in order to prevent image interference or noise.
(Depending on the radio waves, a distance of 3.5ft. may not be sufficient enough to eliminate the noise.)

Remote controller (wireless kit) transmitting distance can result shorter than expected in rooms with electronic fluorescent lamps. (inverter or rapid start types)
Install the indoor unit as far away from fluorescent lamps as possible.

This unit is a class A product.
In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Dismantling of the unit, treatment of the refrigerant, oil and eventual other parts, should be done in accordance with the relevant local and national regulations.

1 ACCESSORIES

Check the following accessories are included in the kit before installation.

Body	1	Installation screws (M4 × 16)	2
Operation manual	1	Attached electric wire (for individual use)	1
Installation manual*	4	Crimp style terminal (for individual use)	2

For Installation, a electrical box to be embedded is necessary (part to be procured in the field/with covers).
* DST301BA61 includes only one installation manual.

2 INSTALLATION AND INITIAL SETTING

1. Remove the upper part of the remote controller.
- Insert a (–) screwdriver (2 locations) into the recess between the upper part and the lower part of the remote controller and twist the screwdriver lightly.

  The PC board is attached with the upper part of the remote controller. Do not damage electric parts with a screwdriver, etc.

(–) screwdriver

(2 locations)

Lower part of the remote controller

Installation screw
(2 screws)

Electrical box
(part to be procured in the freld.)

- Attach the lower part to the electrical box (part to be procured in the field) with the provided installation screws.

  Select a flat face as a installation place. Do not tighten the installation screws excessively not to damage the lower part of the remote controller.

  For part to be procured in the field electrical box, use KJB212AA (optional accessory).

2. Initial setting

① Setting connector for individual use (X1A) (Factory set : OFF) (Set for individual use only)
- For individual use of schedule timer
  Insert the connector attached with the body case on the PC board.
- For combined use with other optional controllers for centralized control
  Do not change the factory setting.

② Control mode selector (SS2) (Set for individual use only)
By changing the switch, setting mode of individual and centralized operation is available.
  Note)   When used with other optional controllers, control mode of central remote controller and unified ON/OFF controller have the priority.

CENT.	**INDIV.**
CONTROL MODE	

Individual
(Factory set)

CENT.	**INDIV.**
CONTROL MODE	

Centralized

③ Setting of the sequential operation function
The schedule timer is equipped with a sequential operation function that sequentially turns indoor units on in 2-second intervals during unified operation.
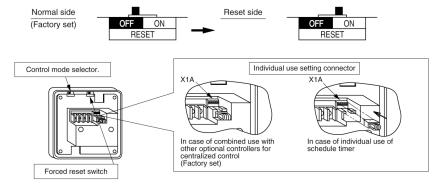(Sequential operation is factory set to "ON.")
To switch sequential operation ON or OFF, set as follows.

While holding down the unified stop button, perform forced reset.

Sequential operation
"ON"
(Factory set)

While holding down the unified operation button, perform forced reset.

Sequential operation
"OFF"

  Note)   The sequential operation function is designed to reduce the load on the power supply equipment, but does not quarantee that compressors will not be started simultaneously. You cannot therefore count on a capacity reduction effect by power supply equipment breaker selection.
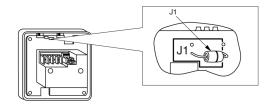
5

④ Forced reset switch (SS1)
When changing the setting of the connector for individual use, etc., the switch can be reset simply by setting it to the reset side once and returning to the normal side. This procedure enables to reset without turning off the power. (Set the normal side at normal operation.)

Normal side (Factory set) → Reset side

Control mode selector.

Individual use setting connector

X1A

X1A

In case of combined use with other optional controllers for centralized control (Factory set)

In case of individual use of schedule timer

Forced reset switch

⑤ Setting for special function
When you want to have a programmed operation of a part of indoor units by using only schedule timer, cut off JP1 and supply the power again.
You can have a programmed operation of the indoor units set the address for central control by local remote controller.

J1

3. Transmission wiring

• In case of individual use of schedule timer
Connect terminals of the schedule timer (F1. F2) with terminals of the indoor unit (F1. F2).
Connect terminals of the schedule timer (D1. D2) and the connector on the indoor unit PC board, using the attached electric wire and crimp style terminals.
Prevent the connection part of crimp style terminal from getting out of the electric parts box of indoor unit.

• In case of combined use with other optional controllers for centralized control
Connect terminals of the schedule timer (F1, F2, D1, D2) and the terminals of the central remote controller (or unified ON/OFF controller).

To schedule timer D1 and D2 — Attached electric wire — To the connector on indoor unit PC board

Crimp style terminal
Crimp style terminal
Field wiring — Use a proper tool to securely clamp crimp style terminals.

Attached wire
To other indoor unit

D1 D2 F1 F2
Schedule timer

F1 F2
CN
Indoor unit

The connection adapter may be separately necessary for the connection with Sky Air.

VRV : To X18A
To X35A
(Only For FXF-L type)
SKY : To X35A

To other outdoor unit

Wiring specifications

	F1, F2	D1, D2
Wiring	Sheathed wire (2-wire)	Sheathed wire (2-wire)
Gauge	$0.75 \sim 1.25\text{mm}^2$	$0.75 \sim 1.25\text{mm}^2$
Length	Max. 1000m	Max. 150m

D1 D2 F1 F2
Schedule timer

F1 F2 T1 T2 D1 D2
Central remote controller(unified ON/OFFcontroller)

NOTES:
1. Electrical box and transmission wiring are not attached.
2. Do not touch the PC board with your hand.
3. Keep transmission wiring at least 50 mm away from power supply wiring to avoid malfunctions.

4. Install the upper part of the remote controller as before.

Fit the lower claw first.

3 SETTING GROUP NO. FOR CENTRALIZED CONTROL

Set the group number of each group of the indoor unit from the remote controller. (In case of no remote controller, also connect the remote controller and set the group No. Then, remove the remote controller.)

(1) Turn ON the power of the indoor unit and SCHEDULE TIMER.
     (Unless the power is ON, no setting can be made.)
     Check that the installation and electrical wiring are correct before turning the power supply ON.
     (When the power supply is turned ON, all LCD appear once and the unit may not accept the operation for about one minute with the display of "88".)

(2) While in the normal mode, hold down the "TEST" button for a minimum of 4 seconds.
     The remote controller will enter the FIELD SET MODE.

(3) Select the MODE No. "00" with the " " button.

(4) Use the " " button to select the group No. for each group.

     (Group numbers increase in the order of 1-00,1-01,···1-15, 2-00,···8-15.)

(5) Press " " to set the selected group No.

(6) Press "TEST" to return to the NORMAL MODE.

NOTES)   • In case of individual use of schedule timer
             Group number setting is not necessary. It is automatically set when turning power supply ON.
         • See the instruction manuals which came with the Ventiair and adapters (i.e., multi-purpose adapters) for details on their Group No. settings.

NOTICE   Be sure to keep the operation manual for maintenance.

4 TEST OPERATION

Refer to the installation manual attached to the outdoor unit.

In case the schedule timer is used individually and the wiring is changed after the system has been operated, reset the power after energizing for more than five minutes.
It may not be possible to control the unit from the schedule timer.

3P162015-1A
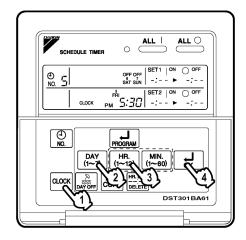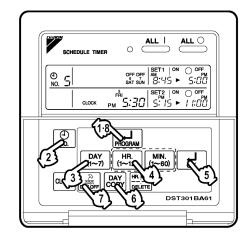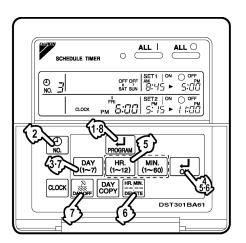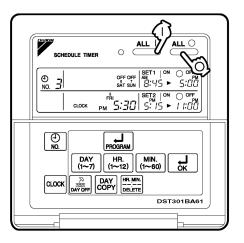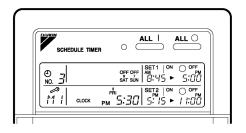
5.7.3   Operation Manual

3

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[2]

SAFETY CONSIDER-ATIONS

Please read these " SAFETY CONSIDER-ATIONS " carefully before installing air conditioning equipment and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.
Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference.
This air conditioner comes under the term " appliances not accessible to the general public ".

Meaning of warning, caution and note symbols.

⚠ WARNING .... Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION .... Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ NOTE .... Indicates situation that may result in equipment or property-damage-only accidents.

Keep these warning sheets handy so that you can refer to them if needed.
Also, if this equipment is transferred to a new user, make sure to hand over this operation manual to the new user.

— ⚠ WARNING —

In order to avoid electric shock, fire or injury, or if you detect any abnormality such as smell of fire, turn off power and call your dealer for instructions.

Ask your dealer for installation of the air conditioner.
Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.

Ask your dealer for improvement, repair, and maintenance.
Incomplete improvement, repair, and maintenance may result in a water leakage, electric shock, and fire.

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Be sure only to use accessories made by Daikin which are specifically designed for use with the equipment and have them installed by a professional.

Ask your dealer to move and reinstall the air conditioner or the remote controller.
Incomplete installation may result in a water leakage, electric shock, and fire.

Never let the indoor unit or the remote controller get wet.
It may cause an electric shock or a fire.

Never use flammable spray such as hair spray, lacquer or paint near the unit.
It may cause a fire.

Never replace a fuse with that of wrong ampere ratings or other wires when a fuse blows out.
Use of wire or copper wire may cause the unit to break down or cause a fire.

Never inspect or service the unit by yourself.
Ask a qualified service person to perform this work.

Cut off all electric waves before maintenance.

Do not wash the air conditioner or the remote controller with excessive water.
Electric shock or fire may result.

Do not install the air conditioner or the remote controller at any place where flammable gas may leak out.
If the gas leaks out and stays around the air conditioner, a fire may break out.

Do not touch the switch with wet fingers.
Touching a switch with wet fingers can cause electric shock.

CISPR 22 Class A Warning:
This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

1

⚠ CAUTION

After a long use, check the unit stand and fitting for damage.
If they are left in a damaged condition, the unit may fall and result in injury.

Do not allow a child to mount on the unit or avoid placing any object on it.
Falling or tumbling may result in injury.

Do not let children play on and around the unit.
If they touch the unit carelessly, it may result in injury.

Do not place a flower vase and anything containing water.
Water may enter the unit, causing an electric shock or fire.

Never touch the internal parts of the controller.
Do not remove the front panel. Some parts inside are dangerous to touch, and a machine trouble may happen.
For checking and adjusting the internal parts, contact your dealer.

Avoid placing the controller in a spot splashed with water.
Water coming inside the machine may cause an electric leak or may damage the internal electronic parts.

Do not operate the air conditioner when using a room fumigation - type insecticide.
Failure to observe could cause the chemicals to become deposited in the unit, which could endanger the health of those who are hypersensitive to chemicals.

Safely dispose of the packing materials.
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

Do not turn off the power immediately after stopping operation.
Always wait at least five minutes before turning off the power. Otherwise, water leakage and trouble may occur.

The appliance is not intended for use by young children or infirm persons without supervision.

The remote controller should be installed in such away that children cannot play with it.

⚠ NOTE

Never press the button of the remote controller with a hard, pointed object.
The remote controller may be damaged.

Never pull or twist the electric wire of the remote controller.
It may cause the unit to malfunction.

Do not place the controller exposed to direct sunlight.
The LCD display may get discolored, failing to display the data.

Do not wipe the controller operation panel with benzine, thinner, chemical dustcloth, etc.
The panel may get discolored or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. And wipe it with another dry cloth.

Dismantling of the unit, treatment of the refrigerant, oil and eventual other parts, should be done in accordance with the relevant local and national regulations.

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2

CONTENTS

FEATURES AND FUNCTIONS

■ **Operation controlled by programmed time**
Operating time and stopping time can be set to the minute by each day of the week. The operating and stopping patterns can also be set in schedule according to the time slot given twice a day in tune with the uses.

See page 5—9.

■ **Unified Operation/Stop**
By using this schedule timer, the unified operation/stop of the indoor unit can be executed manually regardless of the No. of programmed time in operation.

See page 9.

• **When used in conjunction with central remote controller (Optional Accessory)**
The operation controlled by programmed time can be set for up to eight different patterns (timer No. 1 – 8). Each schedule pattern can be also selected.

3

NAMES AND FUNCTIONS OF OPERATING SECTION (Fig. 1, 2)

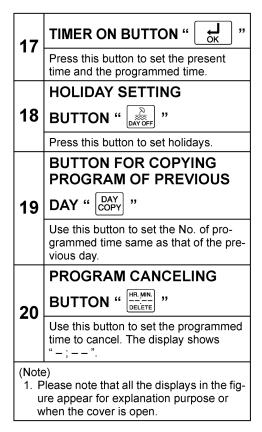| 1	**UNIFIED OPERATION BUTTON " ALL "**
	Press this button to perform the unified operation regardless of the No. of programmed time.
2	**UNIFIED STOP BUTTON** **" ALL ○ "**
	Press this button to perform the unified stop regardless of the No. of programmed time.
3	**OPERATION LAMP (RED)**
	The light turns on during the operation of the indoor unit.
4	**DISPLAY " ⊕ NO. 8 " (TIME NO.)**
	Displays the time No. only when used in conjunction with the central remote controller.
5	**DISPLAY "PROGRAM ↵ START." (PROGRAMMING START)**
	The light turns on when the timer is programmed.
6	**DISPLAY " OFF " (HOLIDAY SETTING)**
	Lights above the day of the week set as holiday. The operation controlled by timer is not available on that day.
7	**DISPLAY " — " (SETTING OF DAYS OF A WEEK)**
	Flashes below the day of the week programmed.
8	**DISPLAY " 🔧8 " (MALFUNCTION CODE)**
	Displays the contents of malfunction during the stop due to malfunction.

9	**DISPLAY " MON TUE WED THU FRI SAT SUN CLOCK AM PM 18:88 " (PRESENT TIME)**
	Displays the present day of the week and time.
10	**DISPLAY " AM PM | ON 18:88 " (PROGRAMMED TIME OF SYSTEM START)**
	Displays the time programmed to start.
11	**DISPLAY " ○ OFF AM PM 18:88 " (PROGRAMMED TIME OF SYSTEM OFF)**
	Displays the time programmed to stop.
12	**TIME NO. BUTTON " ⊕ NO. "**
	See page 5–9.
13	**CLOCK ADJUSTING BUTTON " CLOCK "**
	Press this button to set the present time.
14	**PROGRAMMING START BUTTON " ↵ PROGRAM "**
	Press this button to set or check the No. of programmed time. Press it again after you are through with the program.
15	**BUTTON FOR SELECTING DAYS OF A WEEK " DAY (1~7) "**
	Press this button to select the day of the week.
16	**HOUR/MINUTE BUTTON** **" HR. (1~12) MIN. (1~60) "**
	Press this button to adjust the present time and the programmed time.

5

4

17	**TIMER ON BUTTON " ⏎ OK "**
	Press this button to set the present time and the programmed time.
18	**HOLIDAY SETTING BUTTON " DAY OFF "**
	Press this button to set holidays.
19	**BUTTON FOR COPYING PROGRAM OF PREVIOUS DAY " DAY COPY "**
	Use this button to set the No. of programmed time same as that of the previous day.
20	**PROGRAM CANCELING BUTTON " HR. MIN. --;-- DELETE "**
	Use this button to set the programmed time to cancel. The display shows " – ; – – ".

(Note)
1. Please note that all the displays in the figure appear for explanation purpose or when the cover is open.

OPERATION

■ Setting present time (Fig. 3)

(Example)   In case of setting Friday, 5:30 p.m.

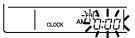1. ☞ **Press the CLOCK ADJUSTING BUTTON. The present time display flashes.**

   (NOTE)
   • The present time needs adjusting in case of turning power supply on for the first time or the occurrence of power failure over the period of 48 hours or more.

2. ☞ **Press the BUTTON FOR SELECTING DAYS OF A WEEK. Each time the button is pressed, the day display shifts to the right.**

   (NOTE)
   • The display " MON " follows the display " SUN. "

   Set the day to Friday.

3. ☞ **Set the time with the HOUR/ MINUTE BUTTON. Each time the HOUR/MINUTE BUTTON is pressed, the display is put forward minute by minute and hour by hour. When the button is kept pressed, the display is put forward continuously.**

   (NOTES)
   • After becoming " AM 11:00 ", when the button is pressed, the display becomes " PM 0:00 ".
   • After becoming " 59 " (minute), when the button is pressed, the display becomes " 00 " (minute).

   Set the time to 5:30 p.m.

4. ☞ **Press the TIMER ON BUTTON the moment the time signal of TV, radio, telephone, etc. is heard. The mark " : " flashes, and the clock starts.**

   Press the TIMER ON BUTTON in tune with the time signal at 5:30 p.m.

   (NOTES)
   • The clock used is of 12-hour type.
   • When you turn power supply on, the system may display " 88 " for about one minute and not start to operate after all the liquid crystal displays appear at a time.
   • If the CLOCK ADJUSTING BUTTON is pressed by mistake, press it again to return to the original state. As the clock does not stop, the time indicated by the clock is kept correct. In case of power failure within 48 hours, the clock keeps operating by utilizing the built-in battery.

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■ Setting no. of programmed time (Fig. 4)

(Example)   Time No. 5 (to be programmed only when used in conjunction with the central remote controller)

Monday to Friday:
Operating from 8:45 a.m. till 5:00 p.m.
Operating from 5:15 p.m. till 11:00 p.m.

Saturday and Sunday:
Setting the whole day stop operation (application for holidays) controlled by programmed time.

1. ☞ **Press the PROGRAMMING START BUTTON. Programming is available.**
The display " PROGRAM ↵ START" appears, and the display of days of a week flashes.

2. ☞ **Press the TIME No. BUTTON, and select the desired number.**
(NOTE)
• Unless used in conjunction with the central remote controller, The TIME No. is not displayed and can not be selected.

Select the TIME No. 5.

3. ☞ **Press the BUTTON FOR SELECTING DAYS OF A WEEK, and set the proper day of the week. Each time you press it, the flashing display of days of a week shifts to the right.**

Set to Monday.

(1) Setting programmed time

4. ☞ **Set the programmed time of system start 1 by using the HOUR/ MINUTE BUTTON. Each time the HOUR/MINUTE BUTTON is pressed, the display is put forward minute by minute and hour by hour. When the button is kept pressed, the display is put forward continuously.**
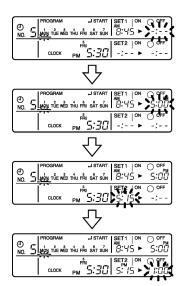
Set the "PROGRAMMED TIME OF SYSTEM START 1" at 8:45 a.m.

5. ☞ **Press the TIMER ON BUTTON, and set the programmed time of system start 1. Each time you press it, the next area to be set flashes.**
(NOTE)
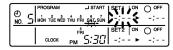• Set the other programmed time in the same procedure.

6

(2) Set the next day of the week.
Set the day of the week to Tuesday, and copy the program of the previous day (Monday). In the same procedure, set the day of the week to Wednesday through Friday in sequence.

6. ☞ **Press the BUTTON FOR SELECTING DAYS OF A WEEK and set the following day. Press the BUTTON FOR COPYING PROGRAM OF PREVIOUS DAY. The same program as that of the immediately preceding day of the week is set.**

(NOTE)
• Repeat each procedure 3 – 5 in the above when not copying the contents of the previous day.

(3) Holiday setting

7. ☞ **Press the BUTTON FOR SELECTING DAYS OF A WEEK and set one or more days of the week as holiday. Press the HOLIDAY SETTING BUTTON, and the display " OFF " is displayed at the top of the day of the week. If you press it again, the display returns to the original state.**

Set Saturday and Sunday as holidays.

8. ☞ **Press the PROGRAMMING START BUTTON, and finish the program setting.**

(NOTES)
• Unless the button is pressed within 20 minutes, the display will automatically revert back to the original state. In this case, setting contents up to the point where the TIMER ON BUTTON (or HOLIDAY SETTING BUTTON or BUTTON FOR COPYING PROGRAM OF PREVIOUS DAY) is pressed will only take effect.
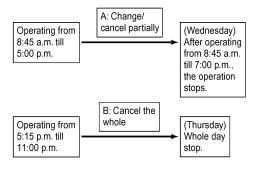• The display " PROGRAM ↵ START " and the display of days of a week " — " disappears.

• The flashing display goes off, and the No. of programmed time of the present day is displayed. Then the operation controlled by timer starts.
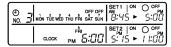• The operation controlled by timer is executed even while the program is being set.

This is the end of the setting example.

■ Change and cancellation of no. of programmed time (Fig. 5)

(Example) Time No. 3 (to be set only when used in conjunction with the central remote controller)

1. ☞ **Press the PROGRAMMING START BUTTON. The program setting is ready. The display " PROGRAM ↵ START " appears, and the display of days of a week flashes.**

2. ☞ **Press the TIME No. BUTTON, and select the desired No.**

Select the time No. 3.

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3. ☞③ **Press the BUTTON FOR SELECTING DAYS OF A WEEK, and set the day of the week to be changed. The set No. of programmed time of the day of the week is displayed.**

Set the day to Wednesday.

A. Change/cancel partially

4. ☞④ **Press the TIMER ON BUTTON and change, and the display of programmed time flashes. Each time you press it, the next area to be set flashes.**

Shift to the display "PROGRAMMED TIME OF SYSTEM OFF 1".

5. ☞⑤ **Press the HOUR/MINUTE BUTTON and change the programmed time. Press the TIMER ON BUTTON, and finalize the setting of change.**

Change the "PROGRAMMED TIME OF SYSTEM OFF 1" to 7:00 p.m.

6. ☞⑥ **Press the PROGRAM CAN-CELING BUTTON, and cancel the programmed time. If you press it again, display returns to the original state. Press the TIMER ON BUTTON to finalize the cancellation.**

Shift to the "PROGRAMMED TIME OF SYSTEM START 2".

Set the "PROGRAMMED TIME OF SYSTEM START 2" to program cancellation.

In the same procedure, cancel the programmed time of system off 2.

B. Cancel the whole

7. ☞⑦ **Press the BUTTON FOR SELECTING DAYS OF A WEEK, and shift to the day of the week to be canceled. Then, press the HOL-IDAY SETTING BUTTON, the display " OFF " appears at the top of the particular day of the week. The programmed time is canceled. If you press the button again, the display returns to the original state.**

Shift the day of the week to Thursday to set as a holiday.

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8. ☞ **Press the PROGRAMMING START BUTTON. The program setting is now finished.**

(NOTES)
- Unless the button is pressed within 20 minutes, the display will automatically revert back to the original state. In this case, setting contents to the point where the TIMER ON BUTTON (or HOLIDAY SETTING BUTTON or BUTTON FOR COPYING PROGRAM OF PREVIOUS DAY) is pressed will only take effect.
- To continue the change/cancellation, do not press the PROGRAMMING START BUTTON until all change/cancellation are completed.
- The operation controlled by timer is executed even while the program is being set.

■ Manual operation (Fig. 6)

This schedule timer enables the operation/stop by pressing the UNIFIED OPERATION/STOP BUTTON in addition to the operation controlled by timer (operation/stop according to the programmed time) at any time.

1. ☞ **Press the UNIFIED OPERATION BUTTON, and the OPERATION LAMP turns on.**

2. ☞ **Press the UNIFIED STOP BUTTON, and the OPERATION LAMP is turned off.**

(NOTES)
- The operation automatically stops according to the programmed time of system off even during the manual operation. In the meantime, the operation starts automatically according to the programmed time of system start even during the stop of operation.
- If the unit is used in conjunction with other optional controllers for centralized control, the OPERATION LAMP of the unit that is not under operation control may be turned on or off a few minutes behind schedule. This shows that the signal is being exchanged, and does not indicate any failure.

Operation lamp
○ Turn on: The light turns on when any of the indoor units is in operation whether the operation is controlled by timer or by hand.
● Turn off: The light turns off when all the indoor units stop.

■ Operation control code

Two different types of operation control codes can be selected when this kit is used independently (when not used in conjunction with the central remote controller, unified ON/OFF controller, etc.).

Individual
In case where the operation/stop is controlled by both schedule timer and remote controller.

Centralized
The operation is controlled by the schedule timer alone, and the operation/stop is controlled freely with the remote controller during the programmed time.

(NOTES)
- For current settings, contact your DAIKIN dealer.
- To change settings, contact your DAIKIN dealer.
  Do not change settings yourself.

■ Error diagnosing function (Fig. 7)

This schedule timer is provided with the malfunction diagnosing function. The malfunction code flashes if there occurs any malfunction in communication, etc. between and among the optional controllers for centralized control. In addition, the operation lamp also flashes if there occurs any malfunction in communication with the indoor unit. Check the contents of the display and contact your DAIKIN dealer because the signals give you the idea of the trouble area.

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Opera-tion lamp	Malfunc-tion code	Contents of mal-function
Turn off	M1	Failure of PC board of schedule timer. **Fixes** The following causes are possible. Check each one. 1. PC board problems
Turn on or off	M8	Malfunction of transmission between each optional controllers for centralized control. **Fixes** Check all central devices which are connected (e.g., power supply, transmission wiring, etc.).
Turn on or off	MA	Improper combination of optional controllers for centralized control. **Fixes** The following causes are possible. Check each one. 1. Are all central devices combined correctly? 2. Is the master central connector attached to two or more central devices? 3. Are there 128 or more indoor units connected?

Turn on or off	MC	Address failure of schedule timer. **Fixes** The following causes are possible. Check each one. 1. Do the control range addresses in the central remote controller overlap? 2. Do the control range addresses in the on/off controller overlap? 3. Are there 2 or more schedule timers connected?
Flash	UE	Malfunction of transmission between indoor unit and optional controllers for centralized control. **Fixes** Inspect all indoor units which are displaying an error (e.g., power supply, transmission wiring, etc.).
Flash	—	Malfunction in indoor unit (Refer to the malfunction codes of the indoor remote controller, while also read the " CAUTION FOR SERVICING " attached to the indoor unit.)

QUESTION AND ANSWER

Question	Answer
It is possible to make settings twice a day, but is it possible to make only the " off " setting? (To avoid forgetting to turn the unit off.)	Yes. Press the PROGRAM CANCELING BUTTON in the " $\frac{AM\ PM\ |\ ON}{l\mathcal{B}:\mathcal{B}\mathcal{B}}$ " section in order to set it to " OFF ".

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Is it possible to set times which straddle days?	Yes, it is possible. Example: Start operation at 5:00 a.m. on Sunday Stop operation at 6:00 p.m. on Monday 	The TIME NO. is not displayed.	The following causes are possible. **1.** The TIME NO. is not displayed when using the schedule timer alone. (It can be set if using the central remote controller at the same time.)
The unit does not turn on even though the set " on " time has come. (When using the schedule timer alone)	The following causes are possible. **1.** Are the " on " time and the " off " time set to the same time?	The display remains "" even though I push the HOUR/MINUTE BUTTON in the timer program settings.	The following causes are possible. **1.** Is the day set to a holiday?
The unit does not turn on even though the set " on " time has come. (When using the unit with a central remote controller)	The following causes are possible. Check each one. **1.** Was the timer number set with the central remote controller? Was an incorrect timer number set? **2.** Is another timer no. set with the central remote controller set for " off " at the same time? **3.** Is the operation code set to " remote control permission timer " using the central remote controller or the on/off controller?	I cannot set " central management priority " or " after-push priority " with the schedule timer.	The following causes are possible. **1.** Is a central remote controller or on/off controller also installed? ∗ **The priority order of the operation codes depends on the central devices which are installed.** The below operation codes are set. • Schedule timer Central remote controller is used as well Operation code of the central remote controller • Schedule timer On/off controller is used as well Operation code of the on/off controller • Schedule timer Central remote controller On/off controller is used as well Operation code of the central remote controller
The unit operates even though that day is set as a holiday. (When using the unit with a central remote controller)	The following causes are possible. **1.** Is another timer number set with the central remote controller set for " on " at the same time? (If two timer numbers are set, make sure that the settings for holidays and working days do not overlap between the different timer numbers.)		

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5.8   Combination of <DCS302C71 / DCS301C71 / DST301BA61>
Combinations of Optional Controllers for Centralized Control

Besides using the various optional controllers for centralized control by themselves, a schedule timer or unified ON/OFF controller can be combined with and connected to the central remote controller. By devising a component system such as this, you can freely construct the ideal central control system according to use and scale.

5.8.1   System Example

■ **Unified ON/OFF controller**

(V0197)

Connect a unified ON/OFF controller according to the number of indoor units. A network consisting of up to 16 groups×8 units=128 groups can be constructed using a single line.

■ **Central remote controller + unified ON/OFF controller**

(V0198)

Combines the high functionality of a central remote controller and the easy operation of a unified ON/OFF controller. Centrally controls up to 128 groups of indoor units.
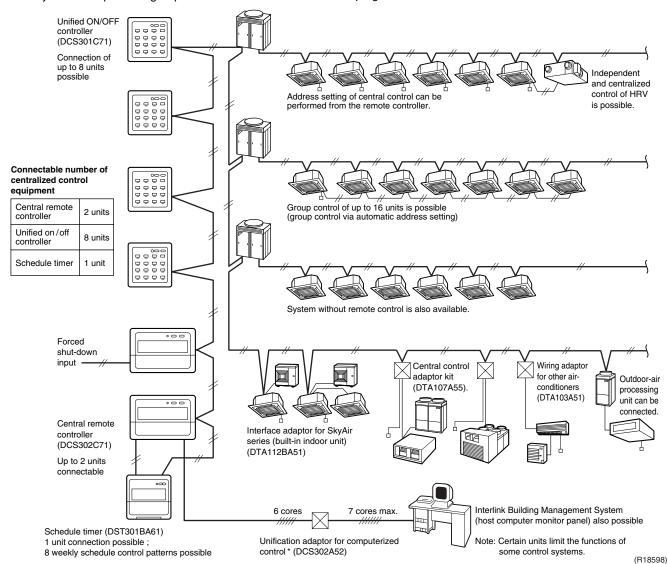
■ **Schedule timer + central remote controller**

(V0199)

Lets you set up to 8 patterns of weekly schedule for turning air-conditioning equipment ON/OFF twice a day. Operates up to 128 groups of indoor units individually or by zone according to a programmed schedule.

■ **Schedule timer + unified ON/OFF controller**

(V0200)

Lets you set ON/OFF for twice a day.
Operates up to 128 groups of indoor units all together according to a programmed schedule.

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Unified ON/OFF controller (DCS301C71)

Connection of up to 8 units possible

Address setting of central control can be performed from the remote controller.

Independent and centralized control of HRV is possible.

Connectable number of centralized control equipment

Central remote controller	2 units
Unified on / off controller	8 units
Schedule timer	1 unit

Group control of up to 16 units is possible (group control via automatic address setting)

System without remote control is also available.

Forced shut-down input

Central remote controller (DCS302C71)

Up to 2 units connectable

Interface adaptor for SkyAir series (built-in indoor unit) (DTA112BA51)

Central control adaptor kit (DTA107A55).

Wiring adaptor for other air-conditioners (DTA103A51)

Outdoor-air processing unit can be connected.

Schedule timer (DST301BA61)
1 unit connection possible ;
8 weekly schedule control patterns possible

6 cores   7 cores max.

Unification adaptor for computerized control * (DCS302A52)

Interlink Building Management System (host computer monitor panel) also possible

Note: Certain units limit the functions of some control systems.

(R18598)

You can freely combine the central controllers within the limitation of the following number of each controller; 1~4 units of central remote controllers, one unit of schedule timer and 1~16 units of unified ON/OFF controllers. However, the maximum number of the indoor units to be controlled is 128 units for one system in any combination of the central controllers.
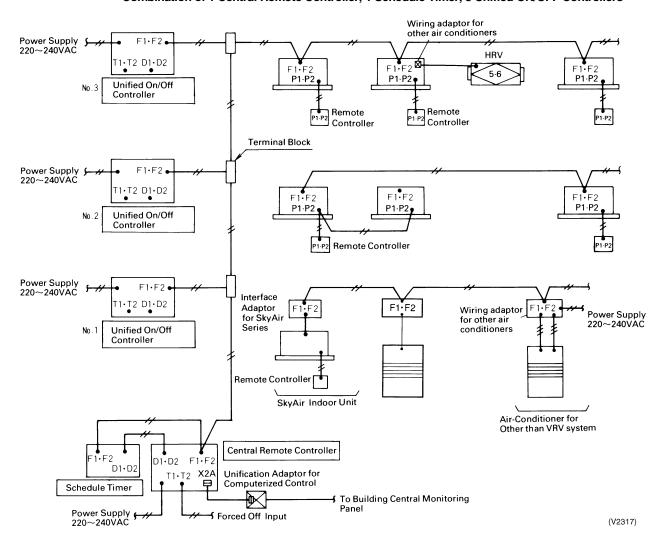
■ **Connection Pattern for Optional Controller for Centralized Control**

Central Remote Controller DCS302C71	Unified ON/OFF Controllers DCS301C71	Schedule Timer DST301BA61
	—	—
1~4	1~16	—
		1
	—	1

The maximum number of indoor units is based on one unit in each zone and is also under the double central control system.

5.8.2 Electric Wiring

Combination of 1 Central Remote Controller, 1 Schedule Timer, 3 Unified ON/OFF Controllers

(V2317)

5.8.3 Initial Settings for Central Control Equipment

1. Central Remote Controller

■ Leave the master control connector (X1A) connected.
(Connected when shipped from the factory)
The connector is to be connected to only 1 central line.

■ Operation control setting
Sets the priority ranking of control for the central remote controller and remote controller for indoor units.

■ Zone setting
Sets the zones when several groups are controlled as one group.

2. Unified On/Off Controller (No.s 1, 2, and 3 in the figure above)

■ Remove the master control connector (X1A).

■ Control range setting switch (DS1)
Sets the range of group No.s for each group of indoor units to be controlled by unified ON/OFF controllers
no.1,2 and 3 in the figure above. 16 units (16 groups) can be set by 1 unified ON/OFF controller.

■ Control mode switch (DS2)
Sets priority ranking of control for unified ON/OFF controllers and remote controllers for indoor units. If
using in combination with a central remote controller, the central remote controllers control mode is given
priority.

3. Schedule Timer

■ Leave the setting connector for individual use (X1A) disconnected. (Disconnected when shipped from the
factory)

■ Control mode switch (SS2)
Sets the priority ranking of control for the schedule timer and remote controllers for indoor units. If using in
combination with a central remote controller, the central remote controllers control mode is given priority.

5.8.4 Group No. Setting for Central Control

1. Setting by Remote Controller for Indoor Units

■ Sets group No.s in local setting mode by remote controller. (Group No.s are 1-00~1-15, 2-00~2-15 up to 8-
00~8-15)

2. Adaptor PC Board Setting

Sets group No. setting switches RS1 and RS2 for central control on PC board when using an interface
adaptor for SkyAir series, or wiring adaptor for other air-conditioners.
RS1 (Upper): 1~4 (1~8 in case of interface adaptor for SkyAir Series)
RS2 (Lower): 0~F

5

5.9   <KRP928BB2S> Interface Adaptor for DIII-NET (Residential Air Conditioner)

Safety Precautions

• Read these Safety Precautions carefully to ensure correct installation. This manual classifies precautions into WARNING and CAUTION.

⚠ **WARNING :** Failure to follow WARNING is very likely to result in such grave consequences as death or serious injury.

⚠ **CAUTION :** Failure to follow CAUTION may result in serious injury or property damage, and in certain circumstances, may result in a grave consequence.

Be sure to follow all the precautions below ; they are all important for ensuring safety.

⚠ WARNING

• **Installation should be left to the dealer or another qualified professional.**
  Improper installation by yourself may cause malfunction, electrical shock, or fire.
• **Install the set according to the instructions given in this manual.**
  Incomplete or improper installation may cause malfunction, electrical shock, or fire.
• **Be sure to use the standard attachments or the genuine parts.**
  Use of other parts may cause malfunction, electrical shock, or fire.
• **Disconnect power to the connected equipment before starting installation.**
  Failure to do so may cause malfunction, electrical shock, or fire.
• **A ground fault circuit interrupter / an earth leakage circuit breaker should be installed.**
  If the breaker is not installed, electrical shock may occur.

⚠ CAUTION

• **Do not install the set in a location where there is danger of exposure to inflammable gas.**
  Gas accumulated around the unit at the worst may cause fire.
• **To prevent damage due to electrostatic discharge, touch your hand to a nearby metal object (doorknob, aluminum sash, etc.) to discharge static electricity from your body before touching this kit.**
  Static electricity can damage this kit.
• **Lay this cable separately from other power cables to avoid external electrical noises.**

• After installation is complete, test the operation of the PCB set to check for problems, and explain how to use the set to the end-user.

1.Overview, Features and Compatible Models

This kit is the interface required when connecting the central controller and a Room Air Conditioner. Use of the central controller makes it possible to perform the following monitoring and operations. It is compatible with room air conditioners which have an HA connector S21.

1. Run / stop for the central controller and wired remote controller, operating mode selection, and temperature can be set.
2. The operating status, any errors, and the content of those errors can be monitored from the central controller and wired remote controller.
3. Run / stop for the central controller and wireless remote controller, operating mode selection, and the temperature setting can be limited by the central controller.
4. Zone control can be performed from the central controller.
5. The unit can remember the operating status of the air conditioner before a power outage and then start operating in the same status when the power comes back on.
6. Card keys, operating control panels, and other constant / instantaneous connection-compatible equipment can be connected.
7. The Operating / error signals can be read.
8. The indoor temperature can be monitored from the Intelligent Touch Controller.

Precaution
1. When reading the Operating / error signals, a separate external power source (12 V DC) is needed.
2. A separate timer power source (16 V DC) is needed when using the schedule timer independently, and not in conjunction with other central controllers.
3. The range of temperatures that can be set from the central controller is 18°C to 32°C in cooling and 14°C to 28°C in heating.
4. Fan operation cannot be selected from the central controller or wired remote controller.
5. Group control (i.e., control of multiple indoor units with a single remote controller) is not available.
6. Monitoring is not available of the thermo status, compressor operating status, indoor fan operating status, electric heater, or humidifier operating status.
7. Forced thermo off, filter sign display and reset, fan direction and speed settings, air conditioning fee management, energy savings instructions, low-noise instructions, and demand instructions cannot be made.
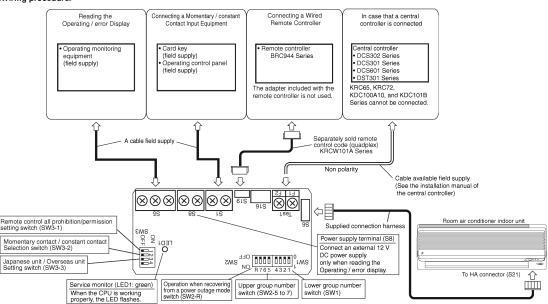
2.Component Parts

This kit includes the following components. Check to ensure that none of these are missing.

Parts	Q'ty	Parts	Q'ty
Kit assy PCB is in the housing.	1	Connection harness (about 1.6m)	1
		Mounting screws	3
		Binding band	6
		Installation manual	2

3.Names of Parts and Electric Wiring

<Wiring procedure>

4.Switch Settings

NOTE	Turn the power on after all the switches have been set. Settings made while the power is on are invalid.

Open the Kit's case and set the switches on the circuit board.

(1) For Overseas / Japanese unit setting (SW3-3)
Room air conditioners, different methods are used for setting the temperature in automatic mode, so this switch needs to be set.

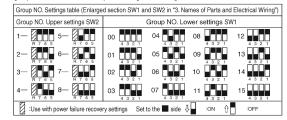| Destination	SW3-3 setting	What Happens
Japan	OFF (Factory setting)	• "Automatic" operation is not available from the central controller. When using "automatic" operation using the wireless remote controller, the central controller displays automatic cooling (heating) and 25°C. Even if the temperature is changed, it will return to 25°C after a while.
Overseas	ON	• "Automatic" operation is available from the central controller.

(2) Group number settings (SW1 and SW2-5 to SW2-7)
Set these when using the central controller. (Set to the ■ side.) Do not set more than one unit to the same number.
Use SW2-R for (3) Settings when recovering from a power outage.
However, these settings do not need to be made when using the schedule timer independently.
(The settings are needed when used in conjunction with another DCS Series central controller.)
In this case, the schedule timer performs an auto address after the power is turned on, so new group numbers are automatically set. Settings made using the switches will be overwritten.

Group NO. Settings table (Enlarged section SW1 and SW2 in "3. Names of Parts and Electrical Wiring")

Group NO. Upper settings SW2	Group NO. Lower settings SW1

☐ :Use with power failure recovery settings   Set to the ■ side ⇩ :ON   ⇧ :OFF

NOTE also that a separate timer power source is needed when using the schedule timer independently.
Power source specs:16 V DC, +10%, -15%, 200mA.

(3) Settings when recovering from a power outage (SW2-R)
This selects whether to restart operation when the power comes back on after a power outage occurred during operation. This setting is given priority in cases where the indoor unit has an auto start ON / OFF jumper. Note also that regardless of whether switch SW2-R is on or off, the operating mode (NOTE), set temperature, fan direction and speed settings, and remote control prohibition status are stored.

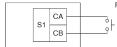| SW2-R setting	What Happens
OFF (Factory setting)	Stops after recovering from a power outage
ON	Stops if the unit was stopped before the power outage and runs if it was running.

(NOTE) The following settings apply to the models below.

Room air conditioner	Mode before the power outage	COOLING	HEATING
Models with humid heating and dehumidifying functions.		DRY COOLING	HUMID HEATING
Models with dehumidifying function.			HEATING

(4) Contact input function settings (SW3-1 to SW3-2)
When using contact input (S1), choose one of the following functions.

S1 operating mode	SW3-1 setting	SW3-2 setting	What Happens	Control mode
Instantaneous contact input (factory setting)	OFF	OFF	The operating status of the air conditioner is reversed by an instantaneous input of 100 msec or more.	Last command priority
Constant contact input		ON	Contact - Open to close: air condition runs. Close to open: air conditioner is stopped (NOTE 1).	ON / OFF control is rejected (operate / stop / timer prohibition) (NOTE 2).
Remote control all prohibition/permission input	ON	Invalid	Contact - Open to close: air condition stops. Close to open: no change in operating status.	All remote controller actions are prohibited when the contact is closed. (NOTE 3)

NOTE1: Since central controller uses last command priority, the contact status and operating status of the air conditioner might not match sometimes.
Example: If the unit is run from the central controller while the air conditioner is stopped with an open contact, the contact will be open and the unit will be running.
NOTE2: Operating mode and fan direction and speed settings can be changed.
NOTE3: If the contact is closed while the ON timer is set, as the power ON timer function is still operating, the operation starts at the time specified by the timer. To prevent operation of the power ON timer, use of the ⟨KRP413AB1S⟩ remote control PC-board set is recommended. However, note that it cannot be used in tandem with the central controller.
If this product is connected to an air conditioner manufactured in or after 2011, when the contact is closed, the power ON timer may be cancelled depending on the combination with the model.

Run / stop Input

Contact specs
No-voltage minute electric current contact (Minimum applicable load 12 V DC, 1mA or lower)
Total wire length max: 100m

5.Control Codes

When using a central remote controller, the operating codes can be used to limit operation from wireless remote controllers. Three beeps for signal reception will be heard continuously when the wireless remote controller is operated while in central control.
○ : permitted; × : prohibited

S1 operating mode	Control mode	Control code	"Run" control from the central controller				"Stop" control from the central controller				Operations from central controller and contact input
			Run / timer	Stop	Operating mode temperature	Fan direction and fan speed	Run / timer	Stop	Operating mode temperature	Fan direction and fan speed	
Instantaneous contact mode	ON / OFF control is rejected	0,1,3	×	×	○		×	×	○		
		10,11	×	×	×		×	×	×		
	Only OFF control is accepted	2	×	○	×		×	○	×		
		12–19	×	○	×		×	○	×		
	Central priority	4	○	○	○		×	×	○		
		5	○	○	○	○	×	×	○	○	
	Last command priority	6,7	○	○	○		○	○	○		
	Timer operation is accepted by remote controller	8	○*	○*	○*		×	○	×		
		9	○*	○*	○*		×	×	○		○
Constant contact mode		2,10-19			×				×		
		0,1,3,5-7			○				○		
		4	×	×	○		×	×	×		
		8			○*				×		
		9			○*				○		
All remote controller actions are prohibited			×	×	×	×	×	×	×	×	

*Only during timer operation

The remote controller permission / prohibition settings using the Intelligent Touch Controller are as follows.
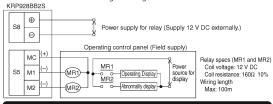○ : permitted; × : prohibited

S1 pin operating mode	Intelligent Touch Controller settings			Operations from the remote controller				Operations from central controller and contact input
	Start / stop	Change operating mode	Change set temperature	Run / timer	Stop	Operating mode temperature	Fan direction and fan speed	
Instantaneous contact mode · Constant contact mode	ON / OFF control is rejected	permitted	permitted/prohibited	×	×	○		
		prohibited	permitted/prohibited	×	×	×		
Instantaneous contact mode	Only OFF control is accepted	permitted	permitted	×	×	○		
		prohibited	prohibited	×	×	×		
			permitted/prohibited					
Constant contact mode		permitted	permitted	×	×	○		
		prohibited	prohibited	×	×	×		○
			permitted/prohibited					
Instantaneous contact mode	Last command priority	permitted	permitted/prohibited	○	○	○		
		prohibited	permitted/prohibited	×	○	×		
Constant contact mode		permitted	permitted/prohibited	×	×	○		
		prohibited	permitted/prohibited	×	×	×		
All remote controller actions are prohibited	Does not affect settings			×	×	×		

6.Read Operating / Error Display Signal

The Operating / error signals can be read from the contact output (S5).
Output specs
M1: Turn MR 1 ON when the air conditioner is running.
M2: Turn MR 2 when a communication error has occurred between the KRP928BB2S and the air conditioner, or MR 1 is ON and the unit has stopped after an error. MR 2 is not turned ON during a warning.

KRP928BB2S

Power supply for relay (Supply 12 V DC externally.)

Operating control panel (Field supply)

Relay specs (MR1 and MR2)
Coil voltage: 12 V DC
Coil resistance: 160Ω 10%
Wiring length
Max: 100m

7.Combining Equipment

The central controller can be combined with the following devices.

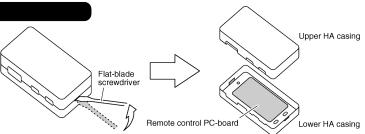|	Central Remote Controller	ON / OFF controller	Schedule timer	D-BIPS	Contact input	Wired Remote Controller	Wireless Remote Controller
Central Remote Controller	○	○	○	○	○	○	○
ON / OFF controller	○	○	○	○	○	○	○
Schedule timer	○	○	×	×	○	○	○
D-BIPS	○	○	×	×	○	○	○
Contact input	○	○	○	○	×	○	○
Wired Remote Controller	○	○	○	○	○	×	×
Wireless Remote Controller	○	○	○	○	○	×	○

5

3P248024-1E

Connection to Remote Control PC-board

Connection to Remote Control PC-board

1. Removal of upper HA casing

① Insert a flat-blade screwdriver into the groove between the upper and lower casings.

Flat-blade screwdriver

Upper HA casing

Remote control PC-board

Lower HA casing

② Lift the handle of the screwdriver upward.

2. Securing of lower HA casing

Mount and secure the lower HA casing directly on the wall with the provided screws inserted into the screw holes (a round hole and two ellipse holes) of the casing.
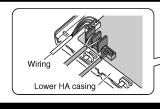
NOTE | Mount the HA casing in a direction where the wiring through-holes will be hidden in order to prevent infants from putting their fingers into the HA casing and the LED light on the internal PC board from leaking outside.
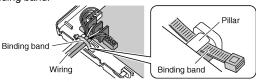
3. Connection of wiring

Connect the wiring to the connector terminals.

Wiring

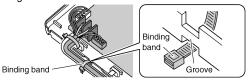Lower HA casing

Lower HA casing

4. Fixation of wiring

① Insert the provided binding band under the pillar of the HA casing and secure the covers of the wiring with the binding band.
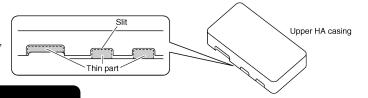
Binding band

Wiring

Pillar

Binding band

② Insert the second binding band into the groove on the side of the HA casing and fix the wiring securely so that the wiring will not be disconnected.

Binding band
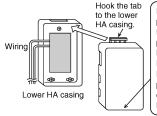
Binding band

Groove

A large number of wires

Make a slit with an appropriate tool, such as a cutter knife, on the thin part of the upper HA casing along the frame. Then cut the part with an appropriate tool, such as a pair of nippers.

(NOTE) Cut off only the thin part required for wiring.

Slit

Upper HA casing

Thin part

5. Finishing

Mount the upper HA casing to the original position.

Hook the tab to the lower HA casing.

Wiring

Lower HA casing

Press the lower part of the upper HA casing and press fit it onto the lower HA casing. Press the upper HA casing precisely until a clicking sound is heard.

Information

When the contact input device (such as card keys) and central controller are used in tandem:

Even when the operating mode of the S1 pin is set to prohibit all remote controller actions, run/stop operation from the central controller is possible. The operation also starts when the power ON timer of the indoor unit is up while all remote controller actions are prohibited.(*) In this case, stop the operation from the central controller. For the compatible models of the ⟨KRC944 series⟩ remote controller, the operation can be prohibited by using the remote controller in tandem with the central controller. *If this product is connected to an air conditioner manufactured in or after 2011, when the contact is closed, the power ON timer may be cancelled depending on the combination with the model.

3P248024-3D

5.10   <KRP1C75> Adaptor for Wiring

Accessories

Check if the following accessories are included in the kit.

Name	Adaptor for wiring	Harness	PCB support	Clamp	Installation manual
Shape					
Quantity	×1	×1	×4	×3	×1

<Caution>
- All wiring must be performed by an authorized electrician.
- For electric wiring work, refer to also "Wiring diagram" attached to the control box lid and this manual.
- All wiring must be worked after shutting down power supply.
- All field supplied parts and materials and electric works must conform to local codes.
- A circuit breaker capable of shutting down power supply to the entire system must be installed.

❶ Names of parts

Harness

X2A

This function can not be used.

YC Y1 Y2   Terminals for controlling external heater, humidifier, and other equipment.

X1 X2 X3 X4 F1U F2U X1A

Terminals for operation status

5

❷ Electric wiring

- Refer to the wiring diagram attached to the indoor unit before attempting to wire.
  [Make sure wires to units do not pass over the PCB when wiring.]
- Wire the adaptor to the indoor unit as shown below.
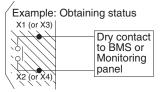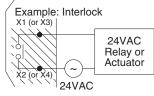
X1M

X2A

Note)1

Indoor unit PCB

X2M   X1A

Note)1 Connector No. X33A

① Thermo-ON and Fan ON status

- Thermo-ON status
Contact terminals X1 and X2 close while the indoor unit is Thermo-ON (call for cooling or heating)

- Fan ON status
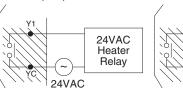Contact terminals X3 and X4 close when indoor unit fan is ON

Example: Obtaining status

X1 (or X3)

Dry contact to BMS or Monitoring panel

X2 (or X4)

Example: Interlock

X1 (or X3)

24VAC Relay or Actuator

X2 (or X4)

~ 24VAC

② Interlocking Heater and Humidifier

- Heater output
  - Auxiliary heater output with heat pump heating
  - Primary heater output when heat pump lockout enabled

- Humidifier output
  - Energized while heating Thermo-ON (call for heating)

Y1

24VAC Heater Relay

YC   ~ 24VAC

Y2

24VAC Humidifier Interlock Relay

YC   ~ 24VAC

❸ Installation

- Installation differs according to models as shown below.
- Do not bundle low and high voltage wires together.
- Bundle any excess wires with the attached clamps so as to keep loose wires off the indoor unit PCB.

Lid of installation box (KRP1BA101)

Adaptor (KRP1C75)

Installation box for adaptor PCB (KRP1BA101)

PCB support

C: 2P263038-1E

5.11 <KRP4A74> Wiring Adaptor for Electrical Appendices

Accessories | Check if the following accessories are included in the kit.

Adaptor	Relay harness
×1	(1) ×1 each (2)

PCB support	×4
Clamp	×3
Installation manual	×1

❶ System outline

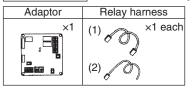This kit enables remote control (ON/OFF control, temperature setting, operation display, error display) and can be used with the following systems though it cannot be used in conjunction with other optional controllers for centralized control.

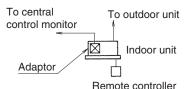1. Individual control (Each indoor unit is controlled individually.)

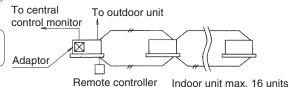This system requires the following parts.
- Adaptor..KRP4A74
- Remote controller (For operation control)....................BRC1E73

(Ex.)When individually controlling 8 units
KRP4A74 ×8 kits
BRC1E73 ×8 kits

To central control monitor
To outdoor unit
Indoor unit
Adaptor
Remote controller

2. Group control (Multiple indoor units are controlled as a group.)

This system requires the following parts.
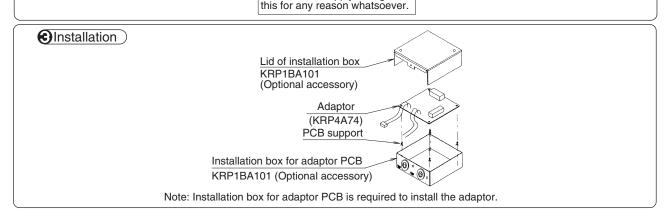- Adaptor..KRP4A74
- Remote controller (For operation control)....................BRC1E73

To central control monitor
To outdoor unit
Adaptor
Remote controller
Indoor unit max. 16 units

❷ Names of parts and function

Service monitor (H1P: Green)
This lamp flashes while the CPU is operating normally.

Service monitor (H10P: Red)
This lamp lights up when trouble occurs in electrical wiring or setting switches. Remote control is disabled. (This LED is out in constant operation.)

Terminal board for display signal (X3M)
Connects operation and error output to a remote point (Central control monitor, etc.). (Normal operation: W1, W2; Error: W3, W4)

Power supply connector
To connector on indoor unit PCB.
Note) Connector No. X35A

Temperature setting ON/OFF switch (SS2) (Factory set: Possible)

Impossible
Possible
SS2

Do not change to "Impossible". Otherwise, temperature setting by the remote control cannot be made.

Transmission wiring (P1,P2)
To P1 and P2 on indoor unit terminal board.

Changeover switch (SS1) (Factory set: Volt)
Set to "Non volt" to input a no-voltage normally open contactor on the remote control input terminal board (TeS1).

Control mode selector switch (RS1) (Factory set: 0)
For selecting the type of system operation permitted via remote.

Remote control input terminal board (X1M)
Connects control input from the remote control (Central control monitor, timer, etc.).

Temperature setting input terminal (X2M)
This function cannot be used for this kit. Never apply voltage to this for any reason whatsoever.

For details, see the electric wiring.

W1 W2 W3 W4
B1 B2 BC   A⁺ A⁻

❸ Installation

Lid of installation box
KRP1BA101
(Optional accessory)

Adaptor
(KRP4A74)
PCB support

Installation box for adaptor PCB
KRP1BA101 (Optional accessory)

Note: Installation box for adaptor PCB is required to install the adaptor.
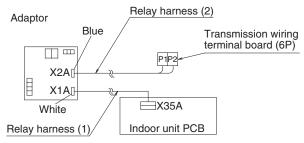
C: 1P161220-1A

❹ Electric wiring

① First, wire between the indoor and outdoor units, and then to the separate power sources, and finally between the indoor units and the remote controllers. Then, check if they operate properly.
(If wiring for group control by remote controller, check crosswires.)
For details, see the installation manual of the indoor and outdoor units.

② Next, wire between outside units such as the central control monitor, etc. and make the necessary settings.
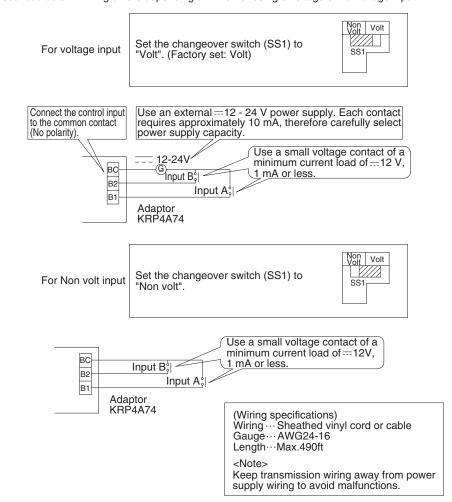For details, see Wiring to outside units (Central control monitor).

Wiring to indoor units

Adaptor   Relay harness (2)
         Blue   Transmission wiring
                                           terminal board (6P)

                                           P1 P2
         X2A
         X1A
         White   X35A
Relay harness (1)   Indoor unit PCB

Make connections as shown above, using the attached relay harnesses (1) and (2).
● Connect relay harness (1) to the connector on the indoor unit PCB.
● Relay harness (2) has no polarity. Connect it to terminals P1 and P2 on the transmission wiring terminal board inside the indoor unit electric parts box.

Wiring to outside units (Central control monitor)

1. Remote control input (Operation control)
   Wire as described below. Wiring differs depending on whether using a voltage or no-voltage input.

| For voltage input | Set the changeover switch (SS1) to "Volt". (Factory set: Volt) | Non Volt / Volt / SS1 |

Connect the control input to the common contact (No polarity).

Use an external ⎓12 - 24 V power supply. Each contact requires approximately 10 mA, therefore carefully select power supply capacity.

⎓ 12-24V

Use a small voltage contact of a minimum current load of ⎓12 V, 1 mA or less.

BC
B2   Input B
B1   Input A
Adaptor
KRP4A74

| For Non volt input | Set the changeover switch (SS1) to "Non volt". | Non Volt / Volt / SS1 |

Use a small voltage contact of a minimum current load of ⎓12V, 1 mA or less.

BC
B2   Input B
B1   Input A
Adaptor
KRP4A74

(Wiring specifications)
Wiring ⋯ Sheathed vinyl cord or cable
Gauge ⋯ AWG24-16
Length ⋯ Max.490ft

<Note>
Keep transmission wiring away from power supply wiring to avoid malfunctions.

5

2. Setting the control mode selector switch (RS1)

Using the control mode selector switch (RS1), select the control mode as described below.

RS1
0 Control mode
    Selector switch

(Factory set) "0" position

① For specifying individual display

Position	Function
0	Individual display (Input ignored)

② When operating the unit with constant input at input A

Position	Function	When input A is ON	When input A is OFF
1	ON/OFF control impossible by remote controller	Operation (Normally ON/OFF control impossible by remote controller)	OFF + ON/OFF control impossible by remote controller
2	Centralized	Operation + ON/OFF control possible by remote controller	
3	OFF control possible by remote controller	Operation + OFF control possible by remote controller (ON control impossible by remote controller)	
4	ON/OFF control possible by remote controller	ON/OFF control possible by remote controller (Operation impossible by optional controller)	

<Note>
● Input B is for forced ON/OFF input. When input B is ON, OFF control is possible but ON/OFF control by the remote controller is impossible, and input A is ignored. When it is OFF, input A is ignored even if selected.
  It is necessary to reselect input A.

③ When operating the unit using instantaneous input at input A
  (Use an instantaneous input of 200 msec or longer ON time).

Position	Function	Input A	Input B capacity
5	ON/OFF control impossible by remote controller	Turns OFF system with ON input Turns ON system with ON input	Input B is for forced OFF input (when ON, OFF control is possible but ON/OFF control by remote controller is impossible, and input A is ignored)
6	Individual	Turns OFF system with ON input Turns ON system with ON input (Normally ON/OFF control possible by remote controller)	

★ For thermostat control using input B

Position	When input A is ON	When input B is ON
C	ON/OFF control impossible by remote controller (Same as position 5)	Forced thermostat OFF command
D		Energy saving command (∗)
E	Individual (Same as position 6)	Forced thermostat OFF command
F		Energy saving command (∗)

● Forced thermostat OFF command indoor unit fan only operates.
● Energy saving command (∗)
  The indoor unit operates at 4°F higher (cooling)/lower (heating) the set temperature.

<Note>
● In such case, even if input A is ON, thermostat control is turned OFF, and all units in the same group will stop.

④ When operating the unit using instantaneous input at input A and B
  (Use an instantaneous input of 200 msec or longer ON time).

Position	Function	When input A is ON	When input A is OFF
7	ON/OFF control impossible by remote controller	Operation (Normally ON/OFF control impossible by remote controller)	OFF + ON/OFF control impossible by remote controller
8	Centralized	Operation + ON/OFF control possible by remote controller	
9	OFF control possible by remote controller	Operation + OFF control possible by remote controller (ON control impossible by remote controller)	
A	ON/OFF control possible by remote controller	ON/OFF control possible by remote controller (Operation impossible by optional controller)	
B	Individual	Operation (Normally ON/OFF control possible by remote controller)	OFF (Normally ON/OFF control possible by remote controller)

<Note>
● When set to position 7-A, and using the constant mode for input B, forced stop capacity is enabled (Input A is ignored).
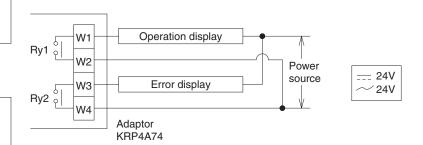● At position B, the constant mode for input B is not used.

3. Cancelling display signals

Operation output terminals (W1 and W2) and error output terminals (W3 and W4) are no-voltage normally constant contacts.

(Allowed electric current per contact is between 10 mA and 3 A.)

Normal operation output (Ry1)
ON when the indoor unit is
operating normally.

Error output (Ry2)
ON when the indoor unit stops
because of malfunction or when
a transmission error occurs
between the adaptor and the
indoor unit.

Ry1	W1	Operation display	
	W2		Power
Ry2	W3	Error display	source
	W4		

Adaptor
KRP4A74

24V
24V

Display output is as described below.

Output	Both Ry1 and Ry2 OFF	Only Ry1 ON	Only Ry2 ON
Display	OFF	Normal operation	System stopped due to malfuction or transmission error generated between adaptor and indoor unit

5

1P161221-1A

5.12   <KRP1BA101> Installation Box for Adaptor PCB

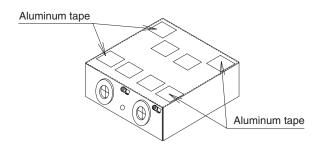| Accessories	Check the following accessories are included in this kit.						
Name	Installation box	Lid of installation box	Clamp	Screw	Cord sticker	Installation manual	Screw
Quantity	x1	x1	x3	x3	x3	KRP1B101 English KRP1BA101 Englishx1, Japanesex1	x2
Shape	①	②	③	④	⑤	⑥ (This manual)	⑦

❶ Method of attaching the adaptor

Attach the adaptor

Attach the adaptor in the installation box ① by the PCB supports.
(PCB supports are accessories of adaptor.)
● Detach the aluminum tapes of the installation box ① to insert the PCB
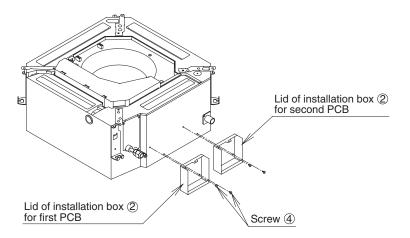
Aluminum tape

Aluminum tape

● Connect wires with the adaptor before attaching to the installation box ①.
● Low voltage wires and high voltage wires should be kept space at least 50 mm from each other.

Adaptor PCB

Low voltage wire

PCB support
(Accessory of adaptor)

Hole for low voltage wire
(Signal line)

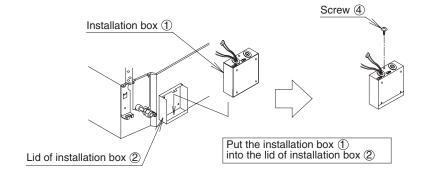Hole for high voltage field wire

Installation box ①

Attach the lid of installation box

Attach the lid of installation box ② to indoor unit with two screws. If two adaptors are installed, the second adaptor is attached to side of first one.
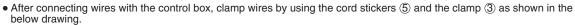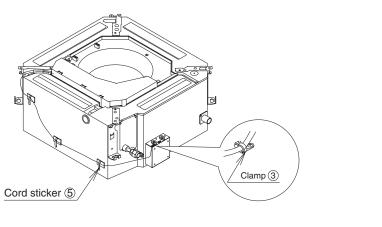
Lid of installation box ②
for second PCB

Lid of installation box ②
for first PCB

Screw ④

Attach the installation box

Attach the installation box ① into the lid of installation box ② with the screw.

Screw ④

Installation box ①

Lid of installation box ②

Put the installation box ①
into the lid of installation box ②

❷ Method of wiring processing

● Connect wires with the control box. (Refer to the installation manual attached to the adaptor.)
● After connecting wires with the control box, clamp wires by using the cord stickers ⑤ and the clamp ③ as shown in the below drawing.

Clamp ③

Cord sticker ⑤

1P107687-1D

5.13 <KRCS01-4B> Remote Sensor

Notes

- Please check applicable kit model name by catalog etc.

- When installed on SkyAir Round-flow type models, the dehumidification by detection of humidity does not operate.

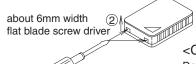### Accessories

Check the following accessories.

Name	Remote sensor (sensor box)	Extension cable (2-core, 12m)	Clamp	Installation manual (this drawing)	Mounting screw (M4x16)
Shape	①	②	③	④	⑤
Quantity	x 1	x 1	x 2	x 1	x 2

❶ Mounting

1) Selection of mounting location.
The thermistor for temperature detection is incorporated into the remote sensor. Select the mounting location taking the following cautions into account.
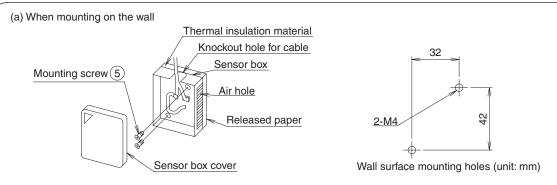
① Where the average temperature of an air conditioned room can be detected.

② Where it is not exposed to the direct sunlight.

③ Where it is not influenced by other heat sources.

④ Where it is not exposed to the direct discharge air from the air conditioner.

⑤ Where it is not exposed to the outdoor air infiltrated into the room by opening the door.
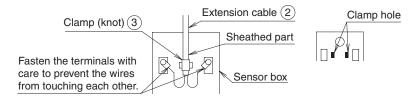
2) Mounting
- Remove the cover of the sensor box.

① Insert a flat blade screw driver into the sensor box concave part (2 locations).
② Remove the cover pushing up the nail to the cover of the sensor box.

about 6mm width
flat blade screw driver

<Cautions>
Do not push the nail powerfully with a narrow flat blade screw driver, because you may break off the nail.

(a) When mounting on the wall

Thermal insulation material

Knockout hole for cable

Mounting screw ⑤

Sensor box

Air hole

Released paper

Sensor box cover

32

2-M4

42
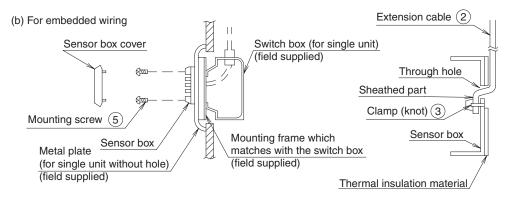
Wall surface mounting holes (unit: mm)

- Break open the knockout hole in the sensor box with a nipper or a similar tool. Pass the extension wires through the hole and fasten the wires to the terminals with screws.
- To avoid tensile force on the terminals, pass the attached clamp through the holes shown in the below right figure and tighten the extension cable with the attached clamp at the sheathed part. (The knot must come to the box inside.)
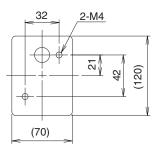
Clamp (knot) ③

Extension cable ②

Sheathed part

Clamp hole

Fasten the terminals with care to prevent the wires from touching each other.

Sensor box

- Screw the sensor box securely to the wall surface with screws M4x16 (2 places).
  If the sensor box cannot be screwed to wall surface, tear off the released paper and mount it on the wall surface.

(b) For embedded wiring

Extension cable ②

Sensor box cover

Switch box (for single unit)
(field supplied)

Through hole

Sheathed part

Clamp (knot) ③

Mounting screw ⑤

Sensor box

Metal plate
(for single unit without hole)
(field supplied)

Sensor box

Mounting frame which matches with the switch box
(field supplied)

Thermal insulation material

- Pass the extension cable through the switch box cable hole and carry out the wiring.
- Pass the attached clamp through the clamp holes and tighten the extension cable at the sheathed part as shown in the upper right figure.
- Tap M4 screw holes in the metal plate (field supplied) as shown in the right drawing and mount the switch box on the metal plate.

32   2-M4

21

42

(120)

(70)

Holes to be tapped in the
metal plate on site (unit: mm)

<Cautions>

- When wiring the extension cable, the air holes will not be blocked.
- When the extension cable is longer than necessary, cut it to the appropriate length, peel the insulation, attach the round crimp terminal for M3 (field supplied) and carry out the wiring. The length of insulation to be peeled off is as shown.
  (Work carefully so that the connector side may not be cut.)

45

For M3
Round crimp terminal

❷ Wiring method

Connect the extension cable connector side to the indoor unit PCB (printed circuit board)
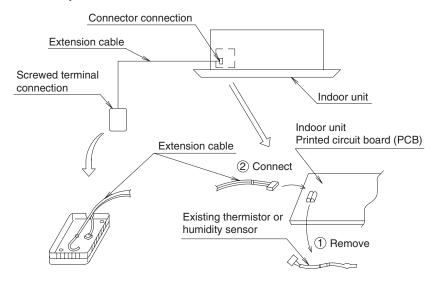For connection to the indoor unit, follow the procedure shown below.

⚠ Caution

1) Make sure to turn off the power supply before starting the wiring work and do not turn on until all the work is completed.
Read also the installation manual and the wiring diagram of the indoor unit when carrying out the work.

2) When wiring the extension cable, do not pass where the extension cable may be affected by the power line or noise.

3) Make sure to securely connect the connectors.
Defective connection may result in incorrect detection of room temperature or malfunction.

4) Do not splice wires.

5) Since the connector marking of the thermistor for detection of inlet air temperature differ depending on the indoor unit type, make sure to check the indoor unit wiring diagram and follow it correctly.

6) Lay and clamp the extension cable inside the indoor unit switch box just like the low voltage line (cord for remote controller).
And do not pass where the extension cable inside the indoor unit switch box may be affected by the power line (cord for the indoor unit and the other electric line).

<Procedure>

1) When wiring to the indoor unit PCB, remove the existing thermistor (for detection of inlet air temperature) and then connect the extension cable.
When doing this work, make sure to check the symbol of connecting address on the PCB whether it is correct or not referring to the wiring diagram.

<For SkyAir and VRV>

Connector connection

Extension cable

Screwed terminal connection

Indoor unit

Indoor unit
Printed circuit board (PCB)

Extension cable

② Connect

Existing thermistor or
humidity sensor

① Remove

2) Lay and clamp the extension cable inside the indoor unit switch box just like the existing thermistor.
When doing this work, keep a certain distance between the high voltage wiring and the low voltage wiring to avoid error of sensor.
Provide protection of the existing cable for thermistor without affecting other components.

3) Fit the sensor box cover into the sensor box.

❸ Operation test after mounting the sensor

Conduct cooling and heating operation test after the sensor is mounted and the wiring is completed.

3K019189-1D

DAIKIN

Warning ⚠

- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.

- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorized parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.

- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

- Specifications, designs and other content appearing in this brochure are current as of December 2017 but subject to change without notice.