1P162827-1A

UNIFIED ON/OFF CONTROLLER INSTALLATION MANUAL

Read these instructions carefully before installation.
Refer to the installation manual of the indoor unit.

DCS301BA51·61

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 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.)

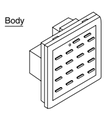
Remote controller (wireless kit) transmitting distance can result shorter than expected in rooms with electronic fluorescent lamps. (inverter or rapid start types)
Install the indoor unit as far away from fluorescent lamps as possible.

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 COMPONENTS

Check the following components are included in this optional accessory before installation.

Body



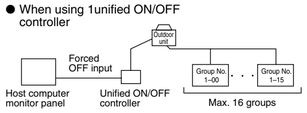
Installation screw (M4 × 16)	2
Operation manual	1
Installation manual*	4
Installation table*	4
Switch display sticker	1

When using this optional accessory for EMC (Electromagnetic Compatibility) (European Directive), a electric parts box of KJB212AA and an optional accessory applicable to EMC (KEK26-1A) are required. In this case, refer to the installation manual of KEK26-1A.
For installation, a steel electric parts box to be embedded is necessary.
*DCS301BA61 includes only one installation manual and installation table.

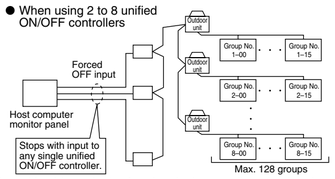
2 SYSTEM CONFIGURATION

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



● When using 2 to 8 unified ON/OFF controllers

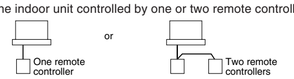


(This optional accessory can not be used in conjunction with wiring adapter for electrical appendices (optional accessory).)

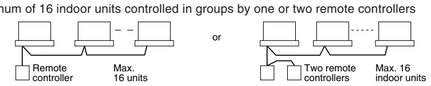
The goups of indoor units are as follows:

① One indoor unit without remote controller

② One indoor unit controlled by one or two remote controllers



③ A maximum of 16 indoor units controlled in groups by one or two remote controllers

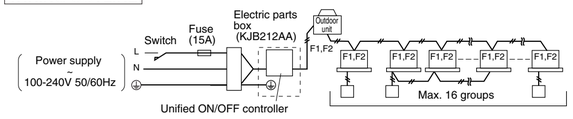


3 ELECTRIC WIRING

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

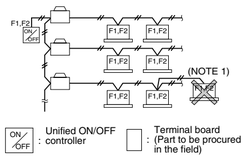
	Type	Size
Power supply wiring	H05VV-U3G	(NOTE 1)
Transmission wiring	Sheathed wire (2 wire) (NOTE 2)	0.75 – 1.25mm²

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.

EXAMPLES OF WIRING FOR TRANSMISSION

Series wiring

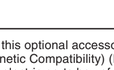


NOTES) 1. No branching is allowed after branching.
2. Use a relay terminal board (part to be procured in the field) to branch more than 3 control wirings from the same terminal board.

WIRING TO THE INDOOR UNIT AND OUTDOOR UNIT

CONTROL TERMINAL STRIP

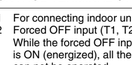
∗1 For connecting indoor unit (F1, F2)
∗2 Forced OFF input (T1, T2)
While the forced OFF input (no voltage contactor, for micro current) is ON (energized), all the connected indoor units are stopped and can not be operated.
Use only contactors which guarantee the minimum applicable load DC16V, 10mA.

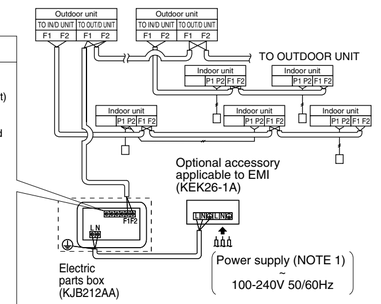


NOTE) Use instantaneous contactor of over 200msec. energizing time, when necessary.

∗3 For schedule timer (D1, D2)
Power can be supplied to the schedule timer (DST301BA51•61 optional accessory). For details, refer to the installation manual of the schedule timer.

Wire ∗2 and ∗3 only when necessary.





NOTE) 1. When not using the optional accessory applicable to EMI (KEK26-1A), connect the power supply wiring directly to the unified ON/OFF controller.

(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.

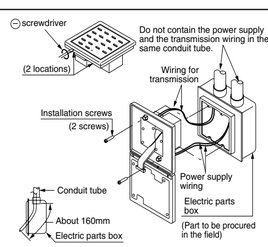
4 INSTALLATION

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 × 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.



5 INITIAL SETTING

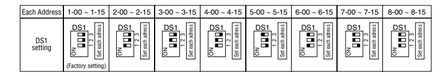
Setting ① through ③ are initialized when power is turned ON, therefore complete settings before activating the power.

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 below table.

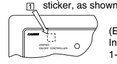
Pattern of connection of optional controllers for centralized control			Connector for setting master controller (X1A) Settings		
Unified ON/OFF controller	Central remote controller	Schedule timer	Unified ON/OFF controller	Central remote controller	Schedule timer
1 to 16			Set one to "Used" and all the 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.

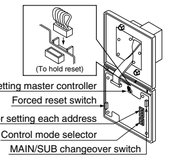
② Switch for setting each address (DS1)
These switches are used to set group control address.
Groups Nos. 1–00 through 1–15 are grouped in the same control group when the unit is shipped from the factory.



After setting, attach the number seal applicable to respective control range of the attached switch display sticker, as shown in the diagram below.

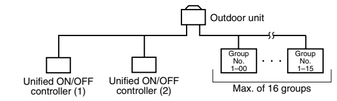


(Example)
In the case of 1-00 to 1-15, attach 1 .

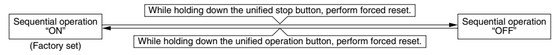


③ MAIN/SUB changeover switch setting
With two unified ON/OFF controllers, centralized control (indoor units) is possible from different locations. In this kind of set-up, it is necessary to set the MAIN/SUB changeover switch.

One of the two unified ON/OFF controllers (1)·(2) is set to "MAIN" while the other is set to "SUB".



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.



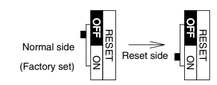
NOTE: The sequential operation function is designed to reduce the load on the power supply equipment, but does not guarantee that compressors will not be started simultaneously. You cannot therefore count on a capacity reduction effect by power supply equipment breaker selection.

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 ■ 2 1 CONTROL MODE ON	DS2 2 ■ 1 CONTROL MODE ON	DS2 ■ 2 1 CONTROL MODE ON	DS2 2 ■ 1 CONTROL MODE ON

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.)



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 "*88*".)

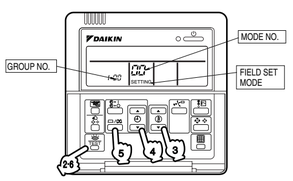
(2) While in the normal mode, hold down the "[SET]" button for a minimum of 4 seconds.
The remote controller will enter the FIELD SET MODE.

(3) Select the MODE No. "*00*" with the "[TEMP]" button.

(4) Use the "[TIME]" 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 "[TIME]" to set the selected group No.

(6) Press "[SET]" to return to the NORMAL 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.

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 "[HOST]" 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 "[HOST]" 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.