ENERGY-INTELLIGENT™ TECHNOLOGY
HEATING AND COOLING SYSTEMS

INTELLIGENT TOUCH MANAGER
ONE FOR ALL
ADVANCED MULTI-ZONE CONTROLLER
The intelligent Touch Manager (iTM) is an advanced multi-zone controller that controls and monitors the Daikin VRV system. The iTM can provide a cost-effective mini Building Management System (BMS) solution to integrate and control third-party devices through optional software and hardware. If a BMS already exists, the iTM can be used as a BACnet gateway for BMS integration with the new iTM BACnet Server Gateway Option.

**Easy Operation and Configuration**
- Intuitive user interface with 10.4” LCD touch screen
- Flexible screen views includes the icon view, list view and layout view for system configurations
- Easy engineering with use of the Preset Tool and USB port

**Advanced Control Logic**
- Independent Cool and Heat setpoints or Single setpoint in the occupied period
- Independent Setback setpoints in the unoccupied period
- Weekly Schedule with Optimum Start and Timed Override
- Auto Changeover with configurable methods

**Facility Management and Billing**
- Remote Web access
- Automatic Error and Alert emails
- Tenant Billing with iTM PPD option

**Mini BMS Solution with Software and Hardware Options**
- Interlock and Emergency Stop for facility management
- DI, DO, Ai, AO points integrated via the WAGO I/O System
- BACnet points (AI, AO, AV, BI, BO, BV, MSI, MSO, MSV) integrated with the iTM BACnet Client Option
- DI and DO points integration via DIII-Net connected DI and DIO units

**BACnet Server Gateway Option**
- Direct connection to the VRV system using the iTM as a gateway
- Individual device ID assigned to each indoor unit management point
- Seamless control logic integration between the iTM and BMS
- Greatly reduces the need for BMS integrator programming
Overview

Integration of Third Party Equipment

BACnet® Client Option (DCM009A51)

BACnet® Server Gateway (DCM014A51)

Full Control of Daikin VRV System

Up to 512 groups (1024 indoor units)

Up to 7 adaptors

Max. 64 indoor unit groups

Max. 64 indoor unit groups

Max. 64 indoor unit groups

Max. 64 indoor unit groups

Web access

BACnet/IP

Ethernet

KRP928

Adapte r

Di/Pi port

Up to 7 adaptors

BACnet® Server Gateway

DCM601A71

RS485

WAGO I/O

Up to 30 nodes

BMS

Integration of Third Party Equipment

Web access

Fire alarm

kWh meter

Di/Pi port

Ethernet (BACnet IP)

BACnet® Client Option (DCM009A51)

Lighting

Fan

Pump

Sensor

Dedicated Outside Air Supply (DOAS)

Integration of Third Party Equipment

Web access

Fire alarm

kWh meter

Di/Pi port

Ethernet (BACnet IP)

BACnet® Client Option (DCM009A51)

Lighting

Fan

Pump

Sensor

Dedicated Outside Air Supply (DOAS)
Easy Operation and Configuration

The easy to understand icon and intuitive menu will enable even a novice user to be proficient in managing the VRV system.

- **List view**: Designed for simplicity, List View provides a quick view of overall status and essential information in a list format. Using the sorting function, the indoor units operating under the same conditions and status are identified for comparison and assessment.

- **Icon view**: Icon menus for configurations

- **Area / Unit Detailed Settings**

- **Layout view**: A special feature utilizes building floor plans to provide a visual representation of system equipment. The users can visually locate any installed equipment on the floor plan without having to memorize equipment names.

**Easy Engineering**

The system configuration can be done through the Preset Tool off-site then imported to the iTM via the USB port at the site. This feature makes engineering easier and more manageable.
Auto Changeover

The iTM extends the Auto Changeover capabilities based on cooling or heating demand.

The changeover is evaluated by how much the room temperature is deviated from the cooling or heating setpoint. For example, when the room temperature exceeds the primary changeover deadband from the cooling setpoint, iTM initiates a change from the heating mode to the cooling mode.

The changeover deadbands can be configured to the minimum of 1°F to a maximum of 4°F.

- The guard timer prevents another changeover for 15, 30 or 60 minutes (configurable).
- When the setpoint is changed manually or by the schedule, the guard timer is not active.

**Change to Cool**

1. **No change to Cool when RT <= C_SP + PCd**
   - Room Temperature (RT)
   - PCd (Primary Changeover deadband, 1 to 4F)
   - C_SP (Cooling Setpoint)

2. **Change to Cool when RT > C_SP + PCd (Guard timer is initiated)**
   - SCd (Secondary Changeover deadband, 1 to 4F)

3. **Change to Cool when RT > C_SP + (PCd + SCd)**
   - (Guard timer initiated in heat mode is ignored)

**Change to Heat**

4. **No change to Heat when RT >= H_SP - PCd**
   - PCd (Primary Changeover deadband, 1 to 4F)
   - H_SP (Heating Setpoint)

5. **Change to Heat when RT < H_SP - PCd (Guard timer is initiated)**
   - SCd (Secondary Changeover deadband, 1 to 4F)

6. **Change to Heat when RT < H_SP - (PCd + SCd)**
   - (Guard timer initiated in cool mode is ignored)

When Cool/Heat Min Setpoint Differential is 0°F, at least 2°F PCd is recommended.
Auto Changeover (cont.)

Auto Changeover is applicable to both VRV Heat Pump and Heat Recovery system.

The iTM provides four changeover methods to meet a variety of expectations in your project. Fixed, Individual, Average or Vote methods can be specified in the changeover group with targeted indoor units as well as Primary / Secondary Changeover deadbands.

**Fixed method**
- Changeover is evaluated with the representative indoor unit.
- Changeover affects all indoor units.
- Good for prioritizing the representative indoor unit for the Heat Pump system (or multiple units on the same port of the BS Box in Heat Recovery system).

**Individual method**
- Changeover is evaluated with, and affects each indoor unit individually.
- Good for Hotel / Nursing home application with the Heat Recovery system.

**Average method** (Weight 0 to 3 on each indoor unit is multiplied in averaging)
- Changeover is evaluated with the average of room temperature and setpoints.
- Changeover affects all indoor units.
- Good for Open office application with Heat Pump system (or multiple units on the same port of the BS Box in Heat Recovery system).

**Vote method** (Weight 0 to 3 on each indoor unit is multiplied for the demand)
- Changeover is evaluated based upon total cooling demand and total heating demand. If the total cooling demand is greater than the total heating demand (like the figure left), the iTM changes the indoor units in the changeover group to cooling mode.
- When the changeover group is in cooling mode the total cooling demand will be decreased, at that point the total heating demand may become greater than the cooling demand and change the mode to heating (a guard timer applies).
- The setpoints can be different in each indoor unit within the changeover group. The demand is calculated based on the setpoints in comparison to room temperature for each indoor unit. The demand within the Primary Changeover deadband (PCd) is considered as no demand.
- Good for the Heat Pump system (or multiple units on the same port of the BS Box in Heat Recovery system) as pseudo simultaneous cooling and heating operation.
- A weight (0-3) can be added to each indoor units demand in the changeover group. The default is 1.

Option available for heating override if there is an indoor unit which the heating demand exceeds (H_SP – (PCd + SCd))
Weekly Schedule with dual setpoints for the occupied period and Setback setpoints for the unoccupied period provides year round schedule programming.

- Up to 100 schedule programs can be created with up to 20 events per day.
- 7 day, 5+2 (Weekday + Weekend), 5+1+1 (Weekday + Saturday + Sunday), 1 (Everyday) weekly patterns are available with Annual scheduling that provides 5 special day programs for holiday scheduling or events outside the weekly schedule.
- Special day programming can be specified on calendar as a specific day (like Jan 1st) or a floating day (like 1st Monday in September).
- Timer Extension offers 30 to 180 minutes (configurable) Override in the unoccupied period.
- Optimum Start insures the room temperature achieves setpoint at the scheduled event time.
- Daylight Savings Time (DST) setting automatically adjust the iTM clock to insure schedule times are met.
Remote Monitoring / Maintenance

- The Web function enables remote management for the Daikin VRV system with other general equipment integrated into the iTM so they can be accessed from your PC (*).
  - Up to 4 administrators and 60 general users can be registered.
  - Screens and operation accessible to general users can be restricted.

- Automatic Alert/Error e-mail enables prompt response by service personnel based on timely and precise knowledge of what happened in the system at the remote site.
  - Up to 10 e-mail addresses can be set.
  - The SMTP server authentication method is selectable from no authentication, POP before SMTP, and SMTP-AUTH.

(*) Flash Player is required.

Tenant Billing (PPD Option)

The iTM PPD (Power Proportional Distribution) option records all the operation duration, room temperature, electronic expansion valve opening ratio data, etc. Based on the recorded data, the energy consumption of the VRV system is proportionally calculated for each indoor unit. The calculated data can be used for tenant billing.

Easy to output PPD data

PPD data can be downloaded in CSV format to a PC or USB flash drive.

- Output data can be customized using the PPD Calculation Tool

* Pulse power meter that provides an output of 1 pulse per 1 kw and has a width of 40-400 milliseconds.
Integration of General Equipment

General equipment can be integrated with the iTM by using the WAGO I/O modules. The general equipment can be monitored and controlled via interlock/stand alone, manual operation, schedule and Web function. The WAGO I/O Modules provide Digital Inputs (Di) for monitoring equipment status and alarms, Digital Outputs (Do) for On/Off control, Analog Outputs (Ao) for step control of fan speeds and damper opening, and Analog Inputs (Ai) for temperature, humidity, and CO₂ monitoring.

- **ON/OFF operation and status monitoring**
- **Get Alert/Error e-mail upon malfunction**
- **Manage with remote accessibility**

Interlock Variety

The iTM offers monitoring and control that extends beyond simply starting and stopping connected units. It also enables the iTM to control the HVAC and ancillary equipment through interlock control such as occupancy control and demand response ventilation.

**HVAC interlock based upon room occupancy status**

Key control systems and occupancy sensors are employed to detect room occupancy status and automatically perform setback or stop operations for unoccupied rooms depending on settings.

**Ventilation control**

Ventilation equipment is controlled depending on the indoor CO₂ levels. Air conditioning losses attributed to unnecessary ventilation are reduced while maintaining appropriate indoor air quality and enabling energy savings.

Emergency stop for localized fire protection areas

The iTM offers options to select areas or the whole system to interlock with the fire alarm system and to perform an emergency stop.
**Mini BMS Solution with the BACnet® Client Option**

**DCM009A51 - BACnet® Client Option**
The iTM offers an advanced and cost-effective solution for Building Management Systems (BMS) applications. The iTM BACnet Client Option (DCM009A51) provides more flexibility to enhance the iTM’s function as a mini BMS. With this new option, the iTM is able to manage DOAS systems and other third party equipment through the BACnet/IP protocol. By registering equipment connected to a BACnet server as management points in the iTM, you can now monitor and control the equipment via the iTM.

**Features/Benefits**
- Cost-effective BMS solution
- Direct connection on iTM using the BACnet/IP Protocol
- Integrated control on Daikin VRV system and Daikin Applied System
- Monitors and controls third party equipment
- Easy commissioning with pre-Engineering Preset Tool
- Easy monitoring with preconfigured GUI

**Object Types**
- Analog Input, Analog Output, Analog Value
- Binary Input, Binary Output, Binary Value
- Multi-State Input, Multi-State Output, Multi-State Value

**Applications**
- Simple I/O: Sensor, Pump, Light, Fan
- Multi-State Objects: AHU, Alarm, Elevator
- The iTM can integrate with the WAGO BACnet/IP Controller (750-831) using the BACnet Client Option

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**Diagram**

![Diagram](image-url)

- **VRV System**
- **MicroTech III**
- **DOAS System**
- **Third Party BACnet Server**
- **WAGO BACnet/IP Controller (750-831)**
- **750-831 Di/Do/Ai/Ao Contacts**
- **DIII-Net**
- **Ethernet (BACnet/IP)**

- **Pump**
- **Lighting**
- **Fan**
- **Sensor**

- **Third Party devices/equipment**
Advanced BMS Integration Solution with the BACnet® Server Gateway Option

DCM014A51 - iTM BACnet® Server Gateway Option

The intelligent Touch Manager is now capable of serving as a BACnet interface for Building Management System (BMS) integration. The iTM BACnet Server Gateway Option (DCM014A51) will provide BMS integrators with the ability to monitor and control the VRV indoor units via the BACnet/IP protocol. The iTM BACnet Server Gateway Option, eliminates the need for an additional hardware interface for the BMS to monitor and control VRV system. The iTM BACnet Server Gateway Option will provide seamless control logic integration between the iTM and BMS. With the BACnet Server Gateway Option, up to 128 indoor units management groups can be controlled and monitored by BMS.

Features

- Direct connection on iTM using the BACnet/IP Protocol
- BACnet virtual router function implemented:
  - Individual BACnet device ID assigned to each indoor unit group address
  - Indoor unit group names created in the iTM are visible on the BMS
- Easy commissioning using CSV file
  - Available objects can be configured for each indoor unit
- Support Change of Value (COV) notifications to BMS
- Configurable as a BACnet foreign device if BBMD exist on different subnet within BACnet network
- Independent heating and cooling setpoints for occupied and unoccupied periods
- Individual min/max Setpoint Range Limitation for heat and cool modes
- The iTM’s auto changeover, setpoint range limitation, setback, dual setpoint logic and schedule can be accessed by the BMS
**Current Solution with BACnet® Gateway (DMS502B71)**

- **Device ID**: 123456
- **StartStopCommand**: BO 1 (1:1-00) BO 257 (1:1-01)
- **StartStopStatus**: BI 2 (1:1-00) BI 258 (1:1-01)

**Required Programming from BMS:**
- Auto changeover
- Dual setpoint
- Setpoint range limitation
- Setback Control
- Schedule

**Better Solution and Easy integration with iTM BACnet Server Gateway Option**

- **Device ID (1:1-00)**: 531100
- **Device ID (1:1-01)**: 531101
- **Occupancy Mode**: MO 1 (All indoor units)
- **Unit On Off Status**: BI 2 (All indoor units)

**Advanced iTM BACnet Server Gateway Points**

- **Enable/disable iTM schedule operation**
- **Enable/disable iTM auto changeover operation**
- **Timed override minutes**
- **System forced off**
- **Occupancy mode (occ, unocc, standby)**
- **Occupied cooling and heating setpoint**
- **Unoccupied cooling and heating setpoint**
- **Maximum and minimum cooling setpoint**
- **Maximum and minimum heating setpoint**
- **Minimum cooling and heating setpoint differential**
- **Cooling and heating setpoint tracking mode**
- **Remote control prohibit**
- **Timed override operation**
- **Current unit operation (off, normal, override, setback)**
- **Forced indoor unit thermo-off**
- **Indoor unit changeover option availability**
- **Indoor fan status**
- **And more basic operation and monitoring points...**

**iTM System Settings**

- **BMS**

**iTM Control Logic**

- **Schedule**
- **Auto Changeover**
- **Timer Extension Minutes**
- **Emergency Stop**
- **On/Off**
- **Occupied Dual Setpoint**
- **Setback Setpoints**
- **Setpoint Range Limitation**
- **Min. Cool/Heat SP Differential**
- **Setpoint Tracking Mode**
- **Remote Controller Prohibit**
- **Timer Extension**
- **And more basic functions...**

**Advanced Indoor Unit Operation**
## Specifications

<table>
<thead>
<tr>
<th></th>
<th>INTELLIGENT TOUCH MANAGER (ITM)</th>
<th>ITM PLUS ADAPTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>DCM601A71</td>
<td>DCM601A72</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC 24V 60Hz</td>
<td>AC 24V 60Hz</td>
</tr>
<tr>
<td>Power consumption</td>
<td>23W maximum</td>
<td>23W maximum</td>
</tr>
<tr>
<td>Operating conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surrounding temperature</td>
<td>-32°F to 104°F</td>
<td>14°F to 122°F</td>
</tr>
<tr>
<td>Humidity</td>
<td>15% to 85% RH (non condensing)</td>
<td>15% to 85% RH (non condensing)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>9.57 x 11.42 x 1.97</td>
<td>5.87 x 6.30 x 2.41</td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. number of indoor unit</td>
<td>64 addressed indoor unit groups (maximum 128 indoor units)</td>
<td>64 addressed indoor unit groups (maximum 128 indoor units)</td>
</tr>
<tr>
<td>Max. number of outdoor unit</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Interface</td>
<td>F/F2 (Daikin DIII-NET communication)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>10Base-TX (Ethernet communication)</td>
<td>1 (RJ-45)</td>
</tr>
<tr>
<td></td>
<td>USB port (for flash memory drive)</td>
<td>1 (2 to 32 GB)</td>
</tr>
<tr>
<td></td>
<td>RS-485 (for iTM Plus Adapter connection)</td>
<td>1 (2-wire polarity sensitive)</td>
</tr>
<tr>
<td>Input terminals</td>
<td>On/Off (Digital input for forced shutdown)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Di/Pi (Digital/Pulse input)*</td>
<td>3</td>
</tr>
<tr>
<td>EMC certification</td>
<td>FCC, Part 15 Class B</td>
<td>FCC, Part 15 Class B</td>
</tr>
</tbody>
</table>

* Pulse input from KWh meter requirements: 1 pulse to 1KWh or 10KWh. Pulse width must be between 40-400 msec. Non voltage, normally open semi-conductor type.

## Summary of Functions

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>FUNCTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Functions</td>
<td>ITM Plus Adaptor</td>
<td>Maximum number of adaptors: 7</td>
</tr>
<tr>
<td></td>
<td>Management points</td>
<td>Maximum number of management points: 650</td>
</tr>
<tr>
<td></td>
<td>Areas</td>
<td>Maximum number of indoor unit management points: 512</td>
</tr>
<tr>
<td></td>
<td>Maximum number of areas: 650</td>
<td>Maximum area levels: 10</td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Monitoring screens</td>
<td>Icon view: Icons show the operation status of equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>List view: Detailed information of each management point is displayed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Layout view: Up to 60 screens can be created</td>
</tr>
<tr>
<td>Automatic Control</td>
<td>Schedule</td>
<td>Maximum number of programs: 100</td>
</tr>
<tr>
<td></td>
<td>Weekly Schedule</td>
<td>Up to 20 actions/day can be set</td>
</tr>
<tr>
<td></td>
<td>Yearly Calendar</td>
<td>7 day, 5+2, 5+1+1, and Everyday weekly patterns can be set</td>
</tr>
<tr>
<td></td>
<td>Optimum Start</td>
<td>Special days can be specified by specific date or floating date</td>
</tr>
<tr>
<td></td>
<td>Interlock</td>
<td>Automatic DST adjustment</td>
</tr>
<tr>
<td></td>
<td>Emergency Stop</td>
<td>Ensure the room temperature is reached at scheduled start time</td>
</tr>
<tr>
<td></td>
<td>Auto changeover</td>
<td>Maximum number of changeover groups: 512</td>
</tr>
<tr>
<td></td>
<td>Temperature Range Limitation</td>
<td>Independent cooling and heating setpoint range limitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set between 60-90 °F</td>
</tr>
<tr>
<td></td>
<td>Timer Extension</td>
<td>Selectable from 36, 60, 90, 120, and 180 minutes</td>
</tr>
<tr>
<td></td>
<td>Setback</td>
<td>Independent heating and cooling setback point</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Setback recovery temperature range: 2-10°F</td>
</tr>
<tr>
<td>Data Control</td>
<td>History</td>
<td>Up to 500,000 events are recorded in history including malfunctions, operations, automatic control, and system information</td>
</tr>
<tr>
<td></td>
<td>Power proportional distribution</td>
<td>Up to 13 months of hourly power proportional distribution results are recorded</td>
</tr>
<tr>
<td></td>
<td>Web access</td>
<td>Display the same type of screen as the iTM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CSV format data output are supported</td>
</tr>
<tr>
<td></td>
<td>Email Alert</td>
<td>Up to 4 administrators and 60 general users can be registered</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Screens and operation accessible to general users can be restricted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Up to 18 email addresses can be set</td>
</tr>
<tr>
<td>Remote Access</td>
<td>Automatic Registration</td>
<td>Indoor units are automatically detected, and icons for respective models are automatically registered</td>
</tr>
<tr>
<td></td>
<td>Security</td>
<td>Screen lock function are available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Access restriction can be set for each general user</td>
</tr>
<tr>
<td></td>
<td>Screen saver</td>
<td>Screen saver time can be set from 1-60 mins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 patterns are available</td>
</tr>
</tbody>
</table>

**INTELLIGENT TOUCH MANAGER (ITM)**: DCM601A71

**ITM PLUS ADAPTER**: DCM601A72
### Options for Intelligent Touch Manager

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MODEL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| Optional Software         | DCM002A71 | Power Proportional Distribution (PPD)
|                           | DCM009A51 | BACnet® IP Client Option
|                           | DCM014A51 | BACnet Server Gateway Option
| Interface Adapters        | KPP288525 | For connection to Daikin Mini-Split system (connect to Indoor Unit)
| Digital input (DI) unit   | DEC101A51-1US2 | 8 sets of operation status input and alarm input
| Digital input/output (DIO) unit | DEC102A51-1US2 | 4 sets of control output, operation status input and alarm input

1 The power proportional distribution (PPD) feature supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin VRV system. Because input to the PPD includes measured pulses in the refrigerant system and because the VRV system includes a number of variables, including the operating temperatures and pressures, piping lengths, heat exchange rates, and so forth, no meter-type apportionment of individual user consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology and is applied to the many variables in the VRV system.

2 BACnet IP Client Option can not be activated at the same time with BACnet Server Gateway Option.

3 iTM PPD option and iTM BACnet Client option are not compatible with the iTM BACnet Server Gateway Option.

### WAGO I/O System

<table>
<thead>
<tr>
<th>MODULE</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Kit</td>
<td>51291052</td>
<td>Bus Coupler, Connector, 24 VDC Power Supply, and End Module</td>
</tr>
<tr>
<td>Digital Input</td>
<td>2 Channel DI 750-400</td>
<td>2 Channel Digital Input Module, 24 VDC</td>
</tr>
<tr>
<td></td>
<td>4 Channel DI 750-432</td>
<td>4 Channel Digital Input Module, 24 VDC</td>
</tr>
<tr>
<td></td>
<td>8 Channel DI 750-430</td>
<td>8 Channel Digital Input Module, 24 VDC</td>
</tr>
<tr>
<td></td>
<td>2 Channel DO 750-513/000-801</td>
<td>2 Channel Digital Output Module, without power jumper</td>
</tr>
<tr>
<td></td>
<td>4 Channel DO 750-504</td>
<td>4 Channel Digital Output Module, 24 VDC</td>
</tr>
<tr>
<td>Analog Input</td>
<td>2 Channel Al 750-454</td>
<td>2 Channel Analog Input Module, 4-20 mA, Differential Inputs</td>
</tr>
<tr>
<td></td>
<td>750-479</td>
<td>2 Channel Analog Input Module, ±10 VDC, Differential Measurement Input</td>
</tr>
<tr>
<td></td>
<td>750-481/020-000</td>
<td>2 Channel Analog Input Module, NTC 20k Ohm</td>
</tr>
<tr>
<td></td>
<td>4 Channel Al 750-455</td>
<td>4 Channel Analog Input Module, 4-20 mA, single-ended</td>
</tr>
<tr>
<td></td>
<td>750-459</td>
<td>4 Channel Analog Input Module, 0-10 VDC, single-ended</td>
</tr>
<tr>
<td></td>
<td>750-464/020-000</td>
<td>4 Channel Analog Input Module, NTC 20k Ohm/ NTC 10k Ohm, configurable</td>
</tr>
<tr>
<td>Analog Output</td>
<td>2 Channel AO 750-554</td>
<td>2 Channel Analog Output Module, 4-20 mA</td>
</tr>
<tr>
<td></td>
<td>750-550</td>
<td>2 Channel Analog Output Module, 0-10 VDC</td>
</tr>
<tr>
<td></td>
<td>4 Channel AO 750-555</td>
<td>4 Channel Analog Output Module, 4-20 mA</td>
</tr>
<tr>
<td></td>
<td>750-559</td>
<td>4 Channel Analog Output Module, 0-10 VDC</td>
</tr>
<tr>
<td>Internal System Power Supply</td>
<td>750-613</td>
<td>24 VDC Bus Power Supply Module, Required for use after every 32 contact points connected in a node</td>
</tr>
<tr>
<td>Passive Power Supply</td>
<td>750-602</td>
<td>24 VDC Power Supply Module, passive</td>
</tr>
</tbody>
</table>
About Daikin:

Daikin Industries, Ltd. (DIL) is a global Fortune 1000 company which celebrated its 90th anniversary in May 2014. The company is recognized as one of the largest HVAC (Heating, Ventilating, Air Conditioning) manufacturers in the world. DIL is primarily engaged in developing indoor comfort products, systems and refrigeration products for residential, commercial and industrial applications. Its consistent success is derived, in part, from a focus on innovative, energy-efficient and premium quality indoor climate and comfort management solutions.