



Installation and Maintenance Manual

IM 1037-4

Group: **Controls**

Part Number: **IM 1037**

Date: **October 2026**

Supersedes: **IM 1037-3**

Daikin BACnet® VAV Controller Model 250802400

Installation Procedures



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Revision History

Publication	Date	Release Notes
IM 1037-4	October 2026	Added information on the AQM2200 Power Module
IM 1037-3	October 2017	Updated VAV part number, cover image, and application numbers
IM 1037-2	January 2017	Updated for actuator with new AO connection
IM 1037	March 2010	Initial Release

Reference Documents

Publication	Company	Title	Source
IM 1038-2	Daikin Applied	Room Temperature Sensor for Daikin VAV Controller	www.DaikinApplied.com
IM 1261	Daikin Applied	Room Temperature Sensor with CO ₂ Sensor for Daikin VAV Controller	www.DaikinApplied.com
OM 1063-4	Daikin Applied	VAV Actuator Operation Manual	www.DaikinApplied.com

Limited Warranty

Consult your local Daikin representative for warranty details. To find your local Daikin representative, go to www.DaikinApplied.com.

Notice

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General Information

This manual contains the information you need to install the BACnet® VAV Controller on a Daikin VAV box.

Hazard Identification Messages

CAUTION

Cautions indicate potentially hazardous situations, which can result in personal injury or equipment damage if not avoided.

WARNING

Warnings indicate potentially hazardous situations, which can result in property damage, severe personal injury, or death if not avoided.

DANGER

Dangers indicate a hazardous situation which will result in death or serious injury if not avoided.

NOTICE

Notices give important information concerning a process, procedure, special handling or equipment attributes.

DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

This equipment must be properly grounded. Connections and service to the Daikin VAV Controller must be performed only by personnel knowledgeable in the operation of the equipment being controlled.

CAUTION

Static sensitive components. Can cause equipment damage.

Discharge any static electrical charge by touching the bare metal inside the control panel before performing any service work. Never unplug cables, circuit board terminal blocks, or power plugs while power is applied to the panel.

NOTICE

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense. **Daikin Applied disclaims any liability resulting from any interference or for the correction thereof.**

Description

These Installation Instructions describe direct-coupled mounting of the BACnet VAV Controller, Daikin's Non-spring Return Rotary Electronic Damper Actuator.

Application

The controller can be used in application numbers 6630 through 6637. For a full description of application specifics please refer to the Daikin BACnet VAV Controller Owner's Manual ([OM 1063-2](#)).

Component Data

The VAV Controller can be seen in [Figure 1](#). [Figure 2](#) shows the parts associated with the installation of the VAV Controller. A dimensioned drawing of the controller can be seen in [Figure 3](#).

Table 1: Parts List (see [Figure 2](#))

Item	Description
A	Controller with pre-terminated tubing
B	Damper position indicator
C	Mounting bracket
D	Self-tapping mounting screws
E	4 mm hex key
F	3/8-inch shaft adapter (8 to 10 mm shafts)

Figure 1: Daikin VAV Controller

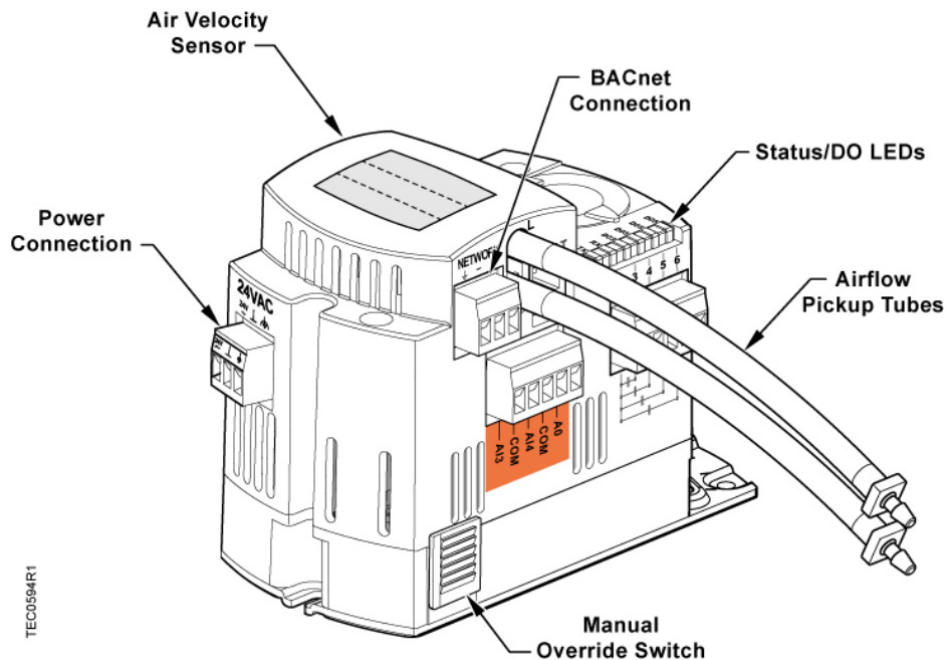


Figure 2: Daikin VAV Controller Parts

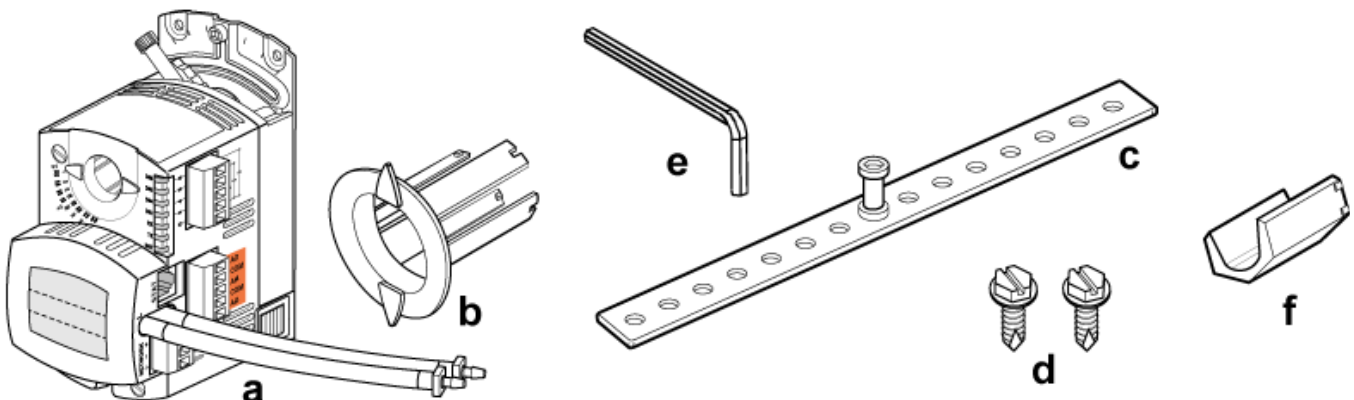
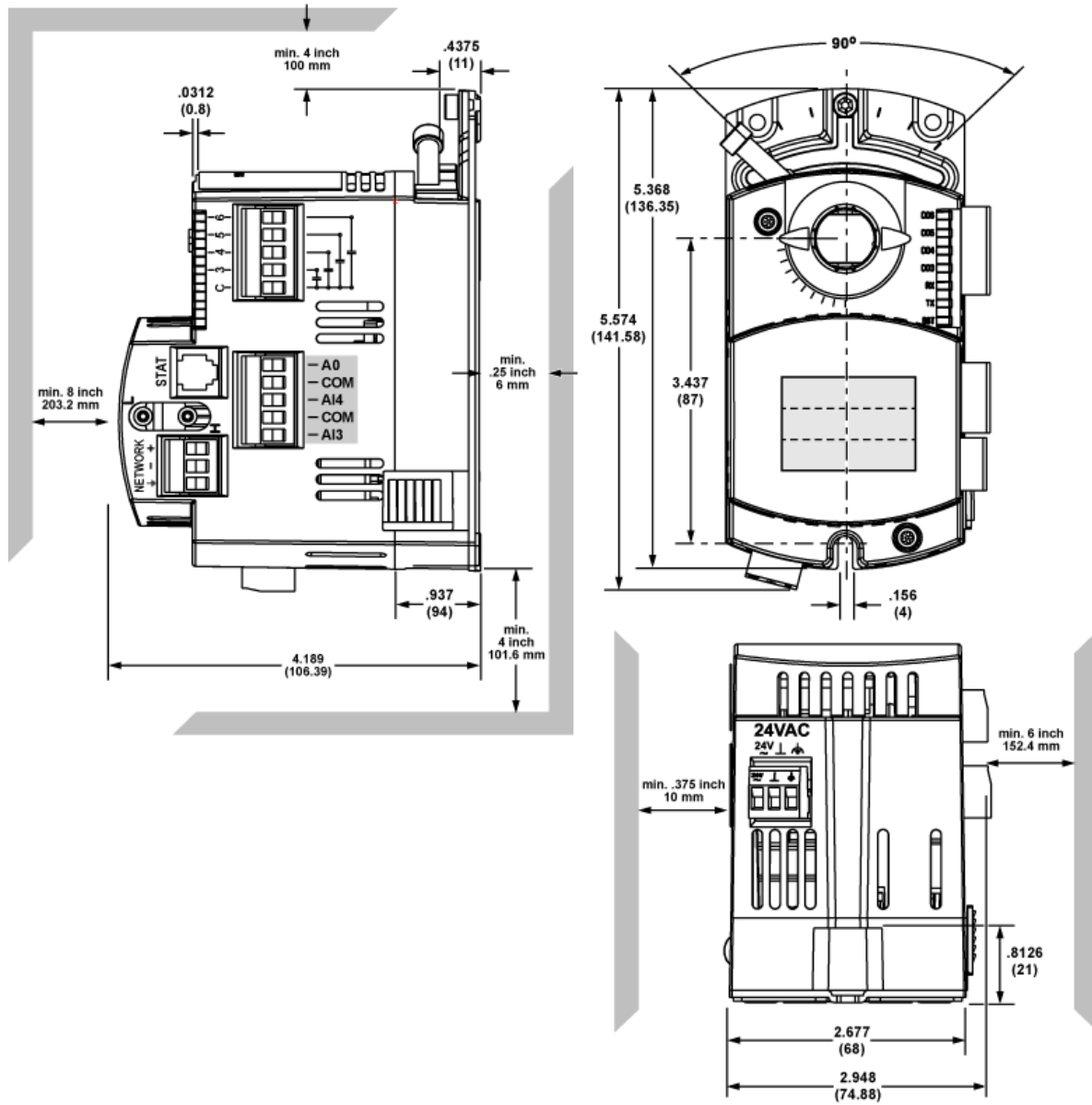


Figure 3: Daikin VAV Controller Dimensions in Inches (Millimeters)



The following section describes how to field install a new or replace an existing VAV Controller on a Daikin VAV unit.

Expected Install Time: 25 minutes



CAUTION

Electrostatic discharge hazard. Can cause equipment damage.

This equipment contains sensitive electronic components that may be damaged by electrostatic discharge from your hands. Before you handle a communications module, you need to touch a grounded object, such as the metal enclosure, in order to discharge the electrostatic potential in your body.



WARNING

Electric shock hazard. Can cause personal injury or equipment damage.

This equipment must be properly grounded. Only personnel knowledgeable in the operation of the equipment being controlled must perform connections and service to the Daikin VAV Controller.

Required Tools and Materials

- 4 mm hex wrench
- Small, flat-blade screwdriver
- 1/4-inch Hex drill/driver set
- Marker or pencil
- Torque Wrench

Prerequisites

- Wiring conforms to NEC and local codes and regulations
- Room temperature sensor installed (Optional)
- 24 Vac Class 2 power available
- Supply power to the unit is OFF
- Any application specific hardware or devices installed
- Air velocity sensors installed in ducts

Installing the Daikin VAV Controller

Follow these steps to install a VAV Controller on the Daikin VAV unit.

To Install the Daikin VAV Controller

1. Determine the size of the damper shaft.

A. If the damper shaft is 1/2-inch, proceed to Step 2.

NOTE: The actuator on the controller comes with a factory-installed 1/2-inch damper shaft guide.

B. If the damper shaft is 5/8-inch:

- a. Remove the 1/2-inch shaft guide, [Figure 4](#).
- b. Proceed to Step 2.

C. If the damper shaft is 3/8-inch:

- a. Remove the 1/2-inch shaft guide, [Figure 4](#).
- b. Use the 3/8-inch adapter, provided in the actuator packaging, [Figure 5](#). Hold the shaft insert so that the raised tabs are inserted last when placing the insert into the back of the actuator on the controller.
- c. Proceed to Step 2.

2. Determine the damper blade rotation, clockwise or counterclockwise to open, [Figure 6](#).

A. The actuator on the controller is designed to move slowly with high torque. In order to move the damper manually, push the switch down on the right side of the controller to disengage the gearing inside the actuator. To return the actuator back to its gearing, release the manual override switch. An audible click may be heard when the gearing reengages with the shaft. If it is not, lightly push the adjustment lever to make sure it is locked in place. Refer to [Figure 7](#).

- a. If the damper blades rotate clockwise, hold the manual override switch and move the adjustment lever to the left. Once at the desired location, release the switch.
- b. If the damper blades rotate counterclockwise, hold the manual override switch and move the adjustment lever to the right. Once at the desired location, release the switch.

3. Close the damper blades as seen in [Figure 9](#).

4. Mark the end of the damper shaft that the controller will be connected to with a pencil or marker, as seen in [Figure 9](#).

5. Tighten the set screw on the adjustment lever until the first thread can be seen in the shaft hole. The shaft hole has the position indicator inserted into it.

6. Mount the controller on the damper shaft. Again, refer to [Figure 9](#).

7. Install the position indicator into the shaft hole as seen in [Figure 10](#).

8. Tighten the adjustment lever to the proper torque listed below:

- A. 70 +/- 5 inch-pounds for solid metal shafts
- B. 37 +/- 2 inch-pounds for plastic graphite composite (hollow metal shafts require an insert to prevent shaft damage).

9. Attach and center the mounting bracket as seen in [Figure 11](#).

NOTE: When installing the mounting bracket directly on the ductwork, be sure to position the bracket so that the screws do not obstruct the damper blade movement inside the box.

10. Connect the airflow tubing for the Differential Pressure Sensor on the side of the controller.

- A. RED connects to HIGH.
- B. BLUE connects to LOW.

Figure 4: Removing the 1/2-inch Shaft Guide

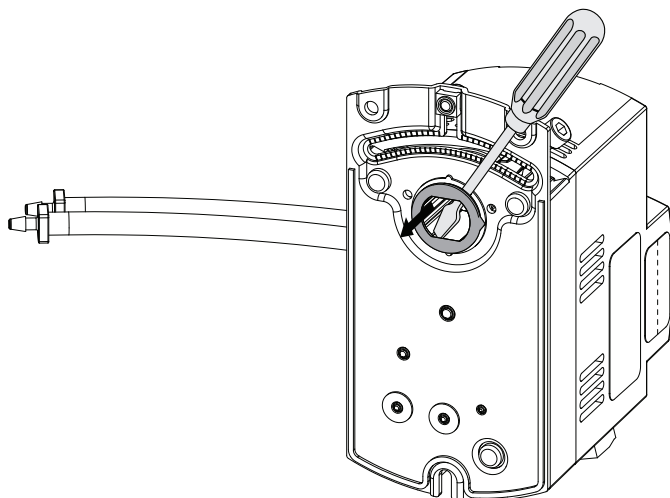


Figure 5: Installing the 3/8-inch Shaft Adapter

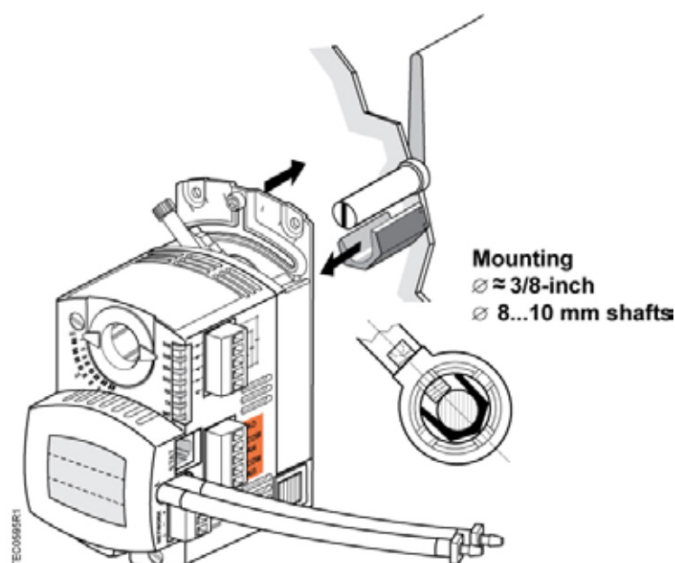


Figure 6: Damper Rotation

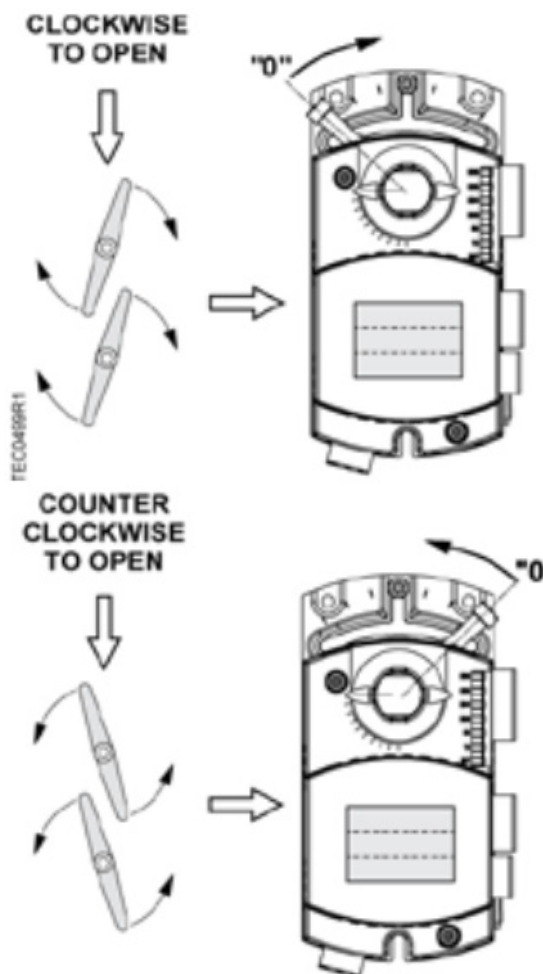


Figure 7: Moving the Adjustment Lever using the Manual Override Switch.

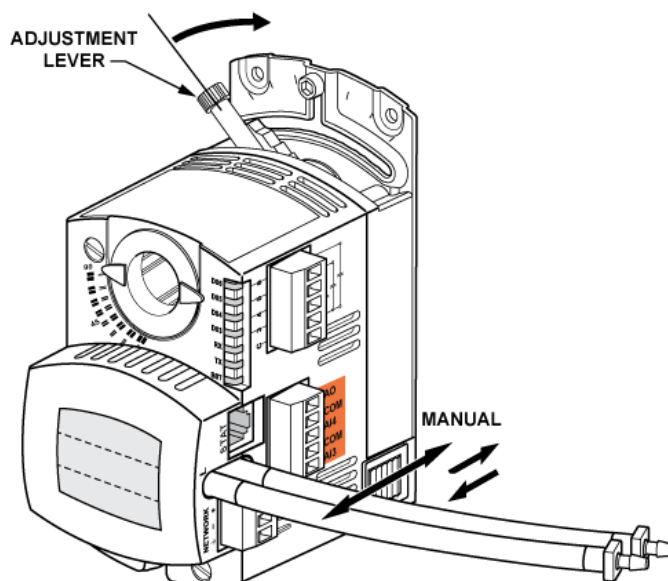


Figure 8: Closed Damper Blades.

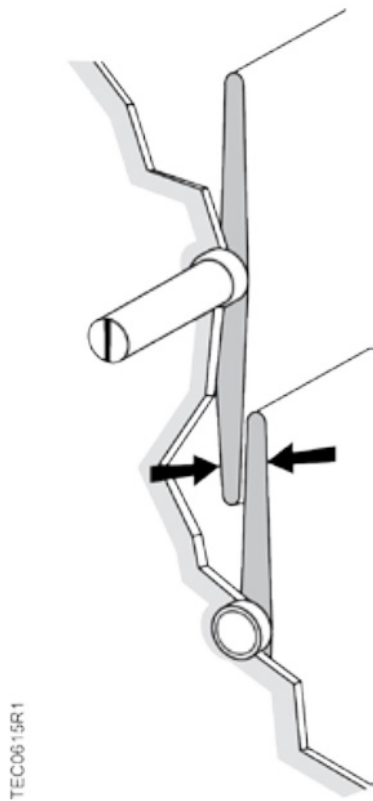


Figure 10: Position Indicator and Adjustment Lever

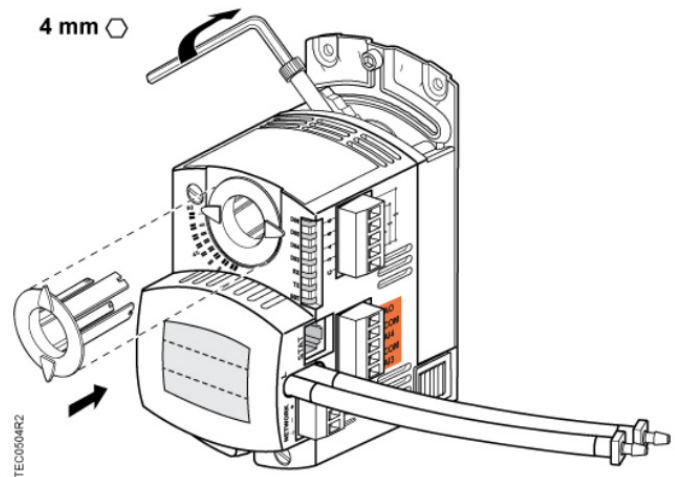


Figure 9: Mounting the Controller

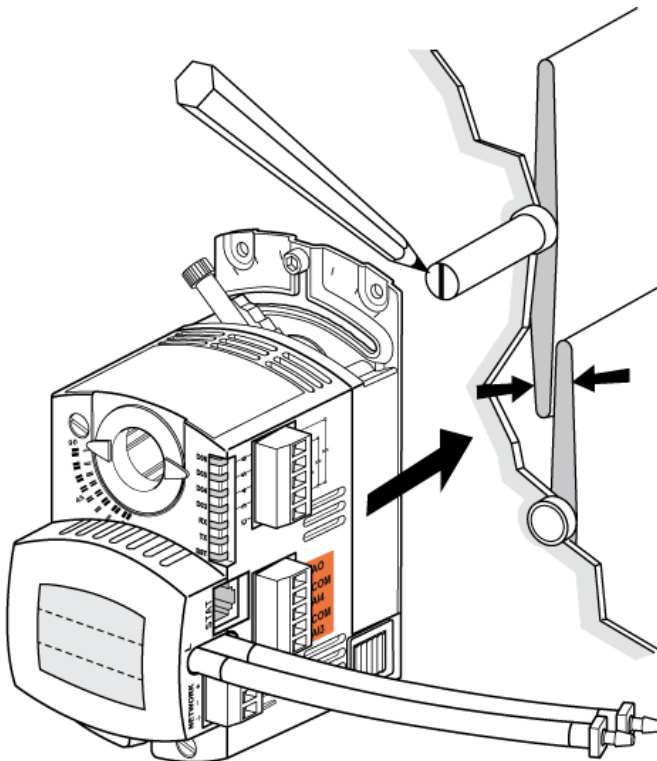
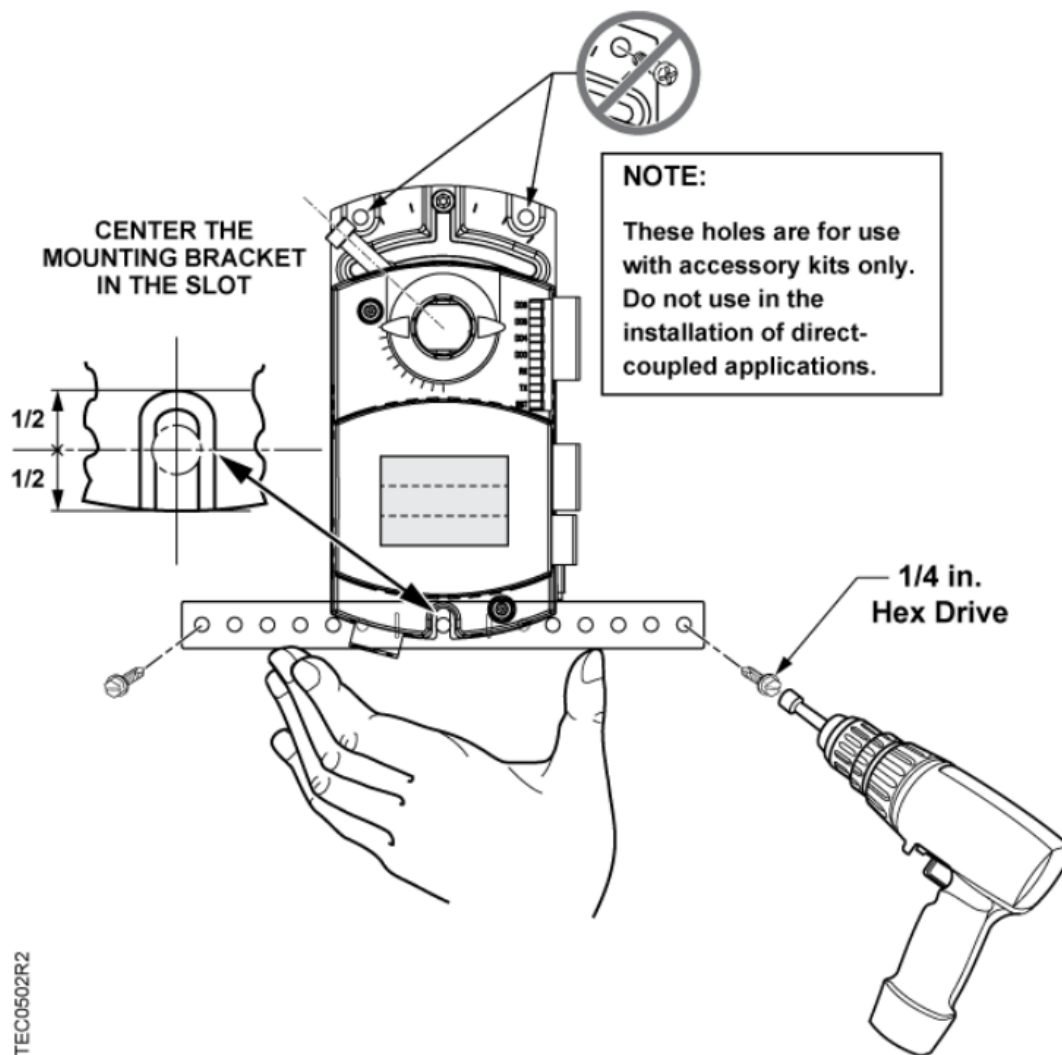


Figure 11: Installing the Mounting Bracket



To Wire the Daikin VAV Controller



WARNING

Electric shock hazard. Can cause personal injury or equipment damage.

This equipment must be properly grounded. Only personnel knowledgeable in the operation of the equipment being controlled must perform connections and service to the Daikin VAV Controller.



WARNING

Installations requiring CE Conformance

- All wiring for CE rated actuators must be Separated Extra Low Voltage (SELV) or Protective Extra Low Voltage (PELV) per HD384-4-41.
- Use safety-isolating transformers (Class III transformer) per EN 61558. They must be rated for 100% duty cycle.
- Over current protection for supply lines is maximum 4A.

Wiring Instructions

1. Connect the FLN as seen in [Figure 12](#).
2. Connect the power trunk¹. DO NOT apply power to the controller without first consulting the electrical specialist. This controller is designed to work with 2-wire AC power (Neutral and Phase (hot) at 24 Vac +/-20%. Use of the earth terminal is optional and if used it should be connected to the nearest earth ground (building steel, conduit or duct work (if earthed)).) The optional earth ground is connected near where the actuator is mounted. Refer to [Figure 13](#) for a visual aid in wiring the connector, and plugging in the connector.

¹ If a Room Temperature sensor with a CO₂ Sensor is to be used (P/N 250803700 or 250803800), a power module (P/N 250803900) for that sensor will be wired in parallel off of the 24 VAC Connector. For more detailed information, refer to [IM 1261](#).

Figure 12: FLN Wiring

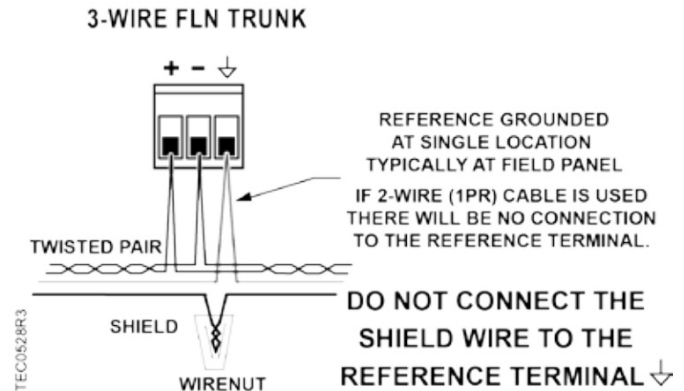
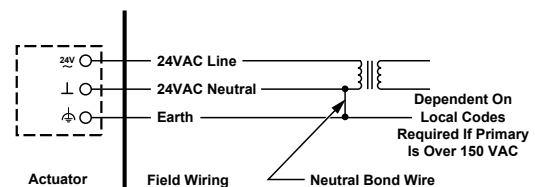
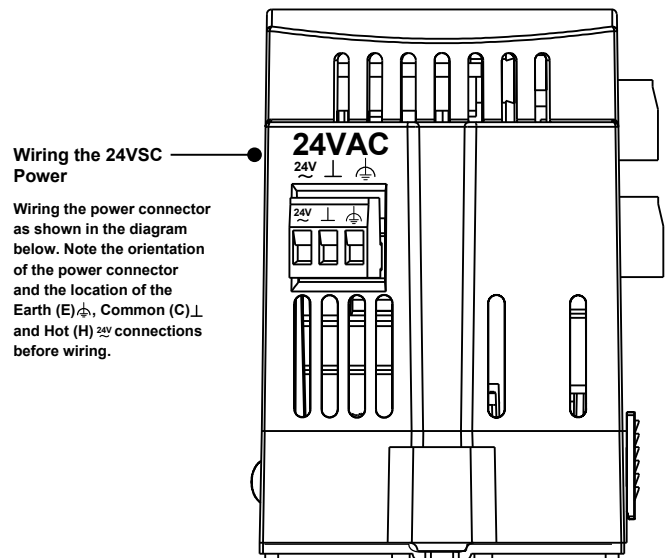


Figure 13: Power Wiring



AQM2200 Power Module

Install the appropriate field wiring (standard six-conductor room unit cables, plenum or non-plenum as required) from the Room Unit (Room Temperature Sensor). The maximum recommended length is 100 feet (30 m).

1. Ensure the power module must be located within 18 inches of the TEC, as dictated by the available lengths of the RJ-11 cable and the power wires.
2. Ensure that the label is visible, and mount the power module with the two provided #6 self-drilling screws. Use the two larger screw holes for mounting.
3. Connect the RJ-11 cable (Part Number 588-100A, not included) from the room unit to the RJ-11 connection

on the CO₂ Power Module. Make sure the cable is connected to the correct RJ-11 port marked RTS (Room Temperature Sensor.)

4. Connect the included RJ-11 cable (Part Number 550-201, from the RTS port on the TEC to the RJ-11 connection on the CO₂ Power Module. Make sure the cable is connected to the correct RJ-11 port marked TEC.
5. Terminate the CO₂ Power Module power wires to the TEC power connector (one wire to 24 VAC and the other to Neutral) or the 24 VAC power trunk. The CO₂ Power Module may be powered off the same power source as the TEC.

Digital Outputs (DO)

The Digital Outputs on the VAV Controller are dry output Triac type outputs. 24 VAC must be applied to the "C" pin of the DO connector. The side view of the controller shows output pin details.

By providing dry output Triac DO's, the application can switch either Phase or Neutral depending on application needs. In a 24 VAC circuit, neutral is determined by which side of the transformer is earth grounded. If neither side is earth grounded (at the transformer) then the 24 VAC is considered a floating (isolated) source. See Figure 14 and Figure 15 for examples of DO wiring.

Wiring DI Common (pin 4) to 10K Thermistor - 8Vdc (pin 2) incorrectly will cause the actuator to shut down. No damage will occur. When the wiring is corrected the controller will resume operation. Refer to Figure 16 for DI wiring examples.

Figure 14: Daikin VAV Controller with Electric Heat and Fan

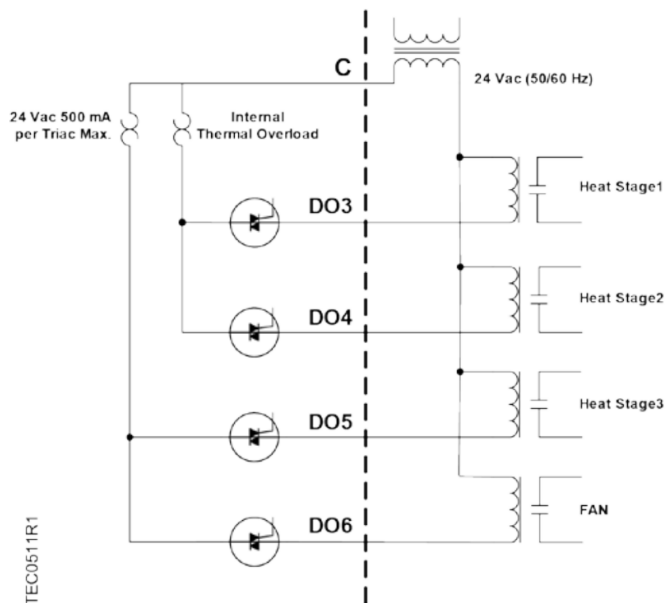


Figure 15: Daikin VAV Controller with Hot Water Reheat, Fan and Spare DO

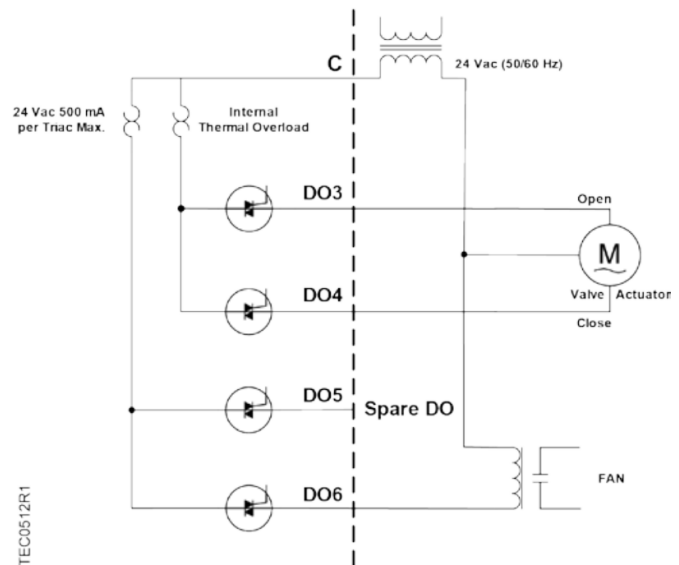
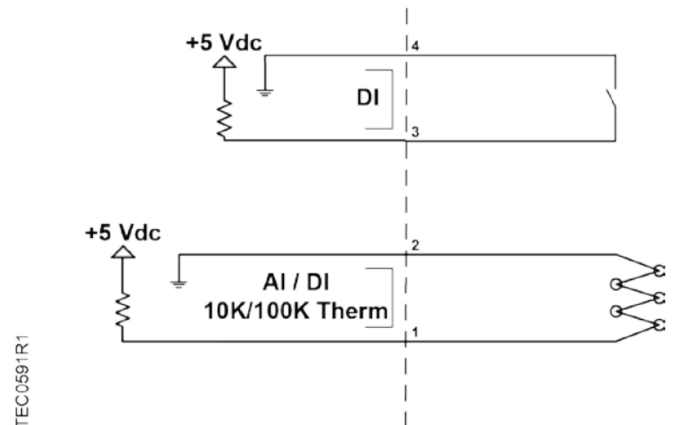


Figure 16: Wiring for D12/A13



DO/DI Wiring Diagrams

NOTE: The controller's DOs control 24 VAC loads only. The maximum rating is 12 VA for each DO. An external interposing relay is required for any of the following:

- VA requirements higher than the maximum
- 110 or 220 Vac requirements
- DC power requirements
- Separate transformers used to power the load

Figure 17 through Figure 24 are specific to the VAV application being used. Be sure to verify the wiring configuration utilized matches the VAV application.

Figure 17: Application 6630 VAV Cooling Only Wiring Diagram

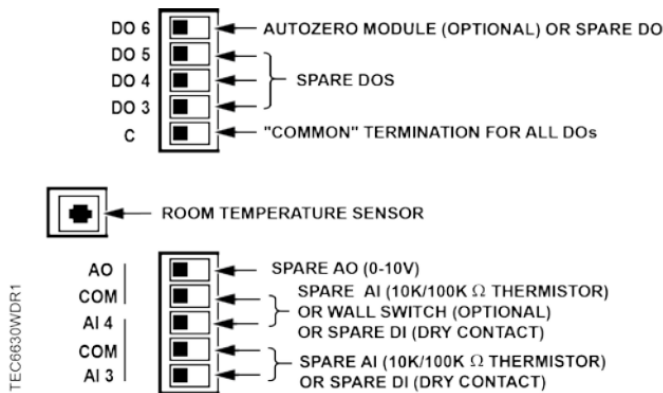


Figure 18: Application 6631 VAV Cooling and Heating Wiring Diagram

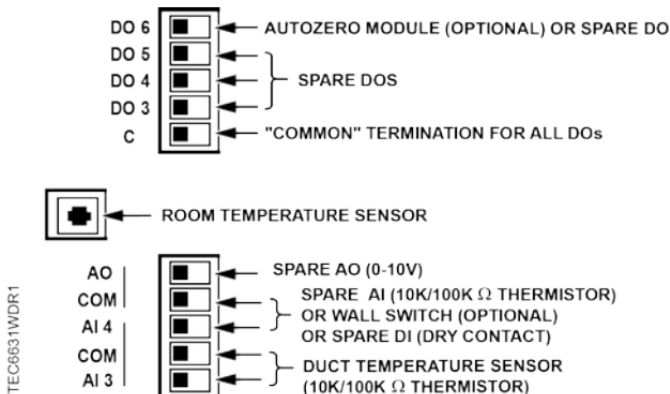


Figure 19: Application 6632 VAV with Electric Heat Wiring Diagram

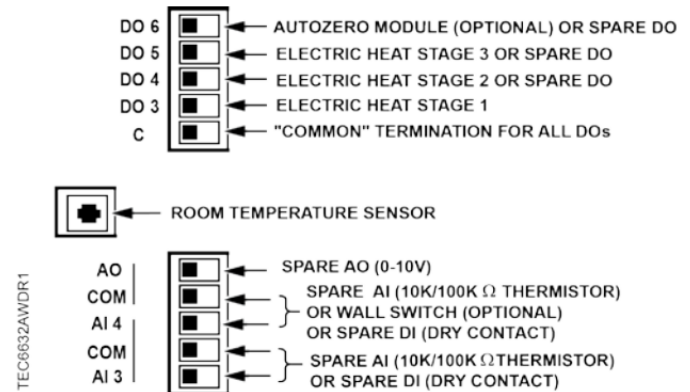


Figure 20: Application 6632 VAV with Baseboard Radiation Wiring Diagram

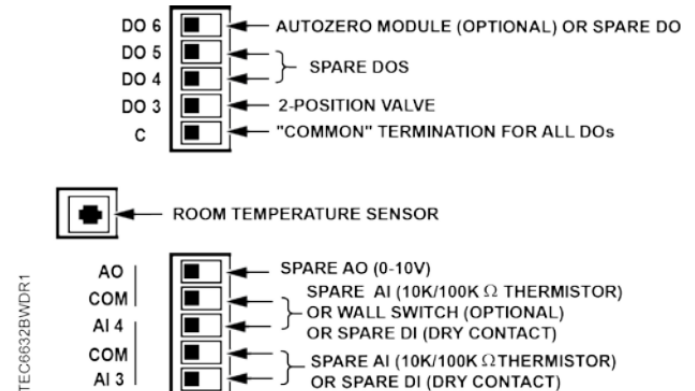


Figure 21: Application 6633 VAV with One Hot Water Valve Wiring Diagram

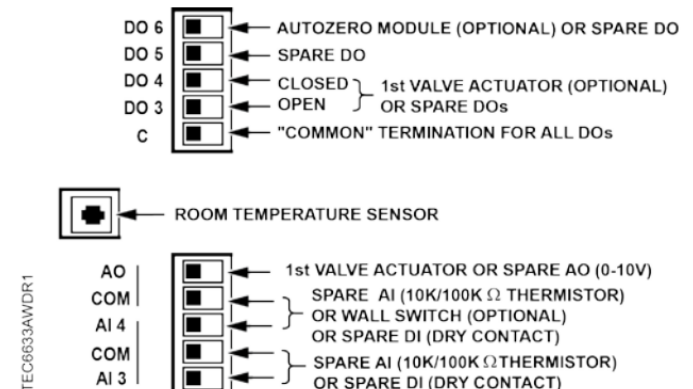


Figure 22: Application 6633 VAV with Two Hot Water Valves Wiring Diagram

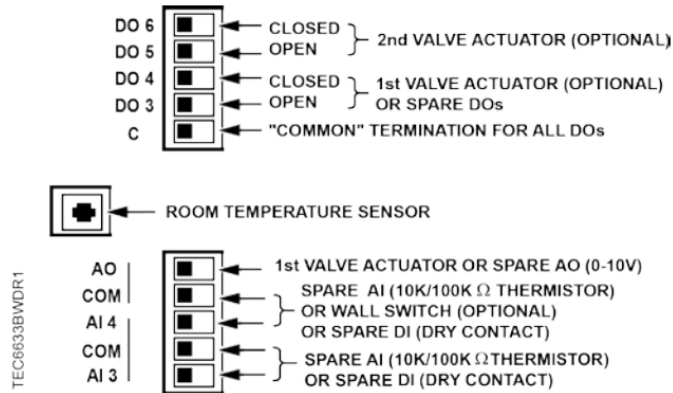


Figure 24: Application 6635/6637 VAV Series Fan or Parallel Fan and Hot Water Heat Wiring Diagram

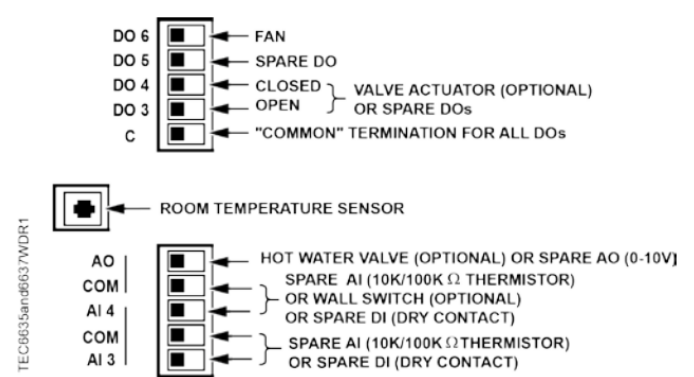


Figure 23: Application 6634/6636 VAV Series Fan or Parallel Fan and Electric Heat Wiring Diagram

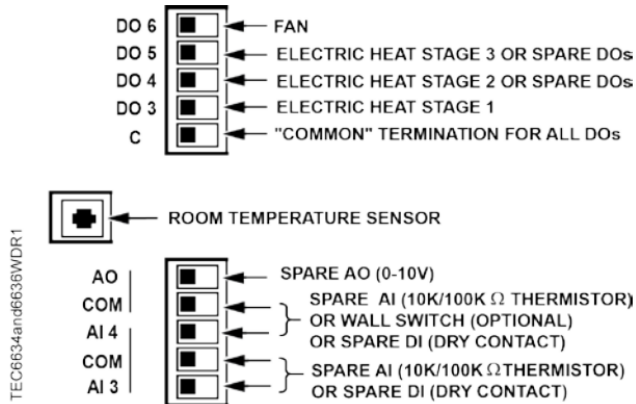
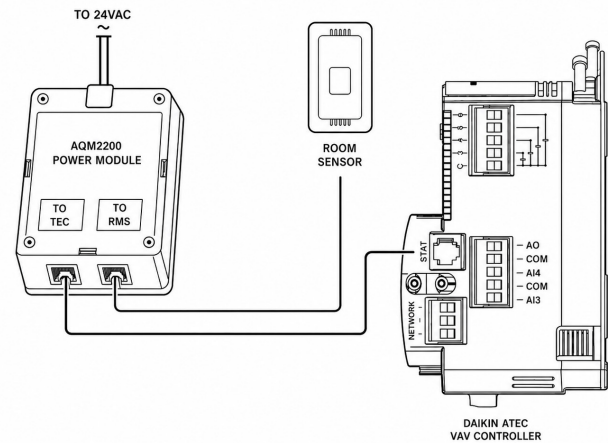


Figure 25: AQM2200 Power Module Wiring

AQM2200 Port Connection



AQM2200 Power Module

Product number: AQM2200

Expected installation time: 10 minutes

NOTE: The controller's DOs control 24 VAC loads only. The maximum rating is 12 VA for each DO. An external interposing relay is required for any of the following:

- VA requirements higher than the maximum
- 110 or 220 Vac requirements
- DC power requirements
- Separate transformers used to power the load

Contents

- AQM2200 Power Module
2.5" L × 3.0" H × 1.0" D
(63.5 mm × 76.2 mm × 25.4 mm)
- 550-201 RJ-11 18" cable

Required Tools

- Medium-duty drill with Phillips size 1 bit
- Small, flat-blade screwdriver

Prerequisites

Install the appropriate field wiring (standard six-conductor room unit cables, plenum or non-plenum as required) from the Room Unit (Room Temperature Sensor). The maximum recommended length is 100 feet (30 m).

Find the installation instructions [page 11](#).



CAUTION

Do not connect Series 1000 TEC Room Sensors (540-660B, 540-680FA, etc.) to the AQM2200 Power Module. Any attempt to do so will destroy the sensor.



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Your feedback is important to us. If you have comments about this document, please send them to SBT_technical.editor.us.sbt@siemens.com.

Parts and Accessories

There are two different versions of the controller. The newer (current) controller model has an analog output, which is not available on the older (legacy) model. It also has a different part number.

The parts and accessories supported by the current controller are shown in [Table 2](#)

NOTE: Temperature/CO₂/RH sensors listed in Table 2 are used only with the newer controller. These sensors are not compatible with the legacy controller.

[Table 3](#) shows the parts and accessories available with the older controller. The room temperature sensors listed in this table are not compatible with the newer controller.

To order Daikin VAV controller parts and accessories, contact Daikin Applied Parts customer service at 763-383-4500 or partsid@daikinapplied.com.

Table 2: Current Controller Parts and Accessories

Description	Part Number
Daikin VAV Controller	250802400
Room Temperature Sensor (blank front)	2508031
Room Temperature Sensor (includes display, setpoint adjust, and tenant override)	2508032
Temperature/CO ₂ /Relative Humidity Sensor (blank front)	250803800
Temperature/CO ₂ /Relative Humidity Sensor (includes display, setpoint adjust, and tenant override)	250803900
Temperature/CO ₂ /Relative Humidity Power Module	250803900
Duct Static Pressure Sensor	250803301
25-foot (7.6 m) cable	2508041
50-foot (15.2 m) cable	2508042
100-foot (30.5 m) cable	2508043

NOTE: Cables include connections.

Table 3: Legacy Controller Parts and Accessories

Description	Part Number
Daikin VAV Controller	2508021
Room Temperature Sensor	2508031
Room Temperature Sensor	2508032
25-foot (7.6 m) cable	2508041
Duct Static Pressure Sensor	250803301
50-foot (15.2 m) cable	2508042
100-foot (30.5 m) cable	2508043

NOTE: Cables include connections.

Technical Support

Contact the Daikin Applied Controls Customer Support group at 866-462-7829 for installation and troubleshooting assistance.



Daikin Applied Training and Development

Now that you have made an investment in modern, efficient Daikin equipment, its care should be a high priority. For training information on all Daikin HVAC products, please visit us at www.DaikinApplied.com and click on Training, or call 540-248-9646 and ask for the Training Department.

Warranty

All Daikin equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local Daikin Applied representative for warranty details. To find your local Daikin Applied representative, go to www.DaikinApplied.com.

Aftermarket Services

To find your local parts office, visit www.DaikinApplied.com or call 800-37PARTS (800-377-2787). To find your local service office, visit www.DaikinApplied.com or call 800-432-1342.

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