



Installation and Maintenance Manual

IM 1038-1

Group: **Controls**

Part Number: **IM 1038**

Date: **Ocotber 2026**

Daikin VAV Controller Room Sensor

Models 2508031 and 2508032



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Revision History

Publication	Date	Release Notes
IM 1038-1	October 2026	New AQM2200 module
IM 1038	March 2010	Initial release

Reference Documents

Publication	Company	Title	Source
IM 1037-4	Daikin Applied	Installation Manual – Daikin VAV Controller	www.DaikinApplied.com
IM 1063-2	Daikin Applied	Owner's Manual – Daikin VAV Controller	www.DaikinApplied.com
IM 1261	Daikin Applied	Installation Manual – Daikin VAV AQ _{M2200} Room Sensor	www.DaikinApplied.com

Limited Warranty

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

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General Information

This manual contains the information you need to install the Daikin VAV Controller on a 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 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 A 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.**

Getting Started

- Review these instructions before beginning.
- Confirm that appropriate field wiring is installed (standard six-conductor room sensor cables, plenum or non-plenum as required) within the maximum wiring run length for the individual equipment controller. The maximum recommended length is 100 feet (30 m).
- All wiring must comply with National Electric Code (NEC) and local regulations.

Description

These room sensors allow users to view and adjust points in the controller using the room sensor buttons and digital display.

Application

They work with Daikin VAV Controller. These devices incorporate a solid state or 10K NTC sensing element to detect temperature. The effective sensing and setpoint range is 55°F to 95°F (13°C to 35°C). These room sensors can be mounted on electrical boxes, stud-type mounting brackets, or drywall. Obtain the necessary mounting hardware and follow the appropriate mounting procedures for the type of installation required.

Figure 1: Temperature Room Sensor



The following section describes how to field install a new BACnet VAV Controller Room Sensor.

Expected Install Time: 20 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.

Required Tools and Materials

- Phillips sizes 1 and 2 screwdrivers
- Small and medium flat-blade screwdrivers
- 1/16-inch hex key
- Medium-duty electric drill
- 3/16-inch (4.8 mm) drill bit
- One-inch (25 mm) hole saw
- Small level
- Tape measure
- Marker or pencil

If using non-terminated or damaged cables, you also need:

- Room sensor connector tool (RJ-11 crimping tool)
- Room sensor connector kit (P/N 2508046)

Installing a new Daikin VAV Controller Room Sensor

Mounting Information

Always mount the room sensor vertically, on a flat wall.

Locate the room sensor:

- According to design specifications and local regulations.
- Where the air circulates around it freely (not in recessed areas or behind doors).
- Allowing a minimum of 4 inches (10 cm) free space above and below for proper airflow, the hex bit or passkey tool, and the computer communication cable.
- Away from drafts caused by doors, windows, outside walls, air registers, pipes, return air plenums, etc.
- Away from heat sources such as strong lights, fireplaces, direct sunlight, etc.
- On an inside wall (preferably), about 5 feet (1.5 m) above the finished floor or per code (ANSI, ADA, or local regulation).

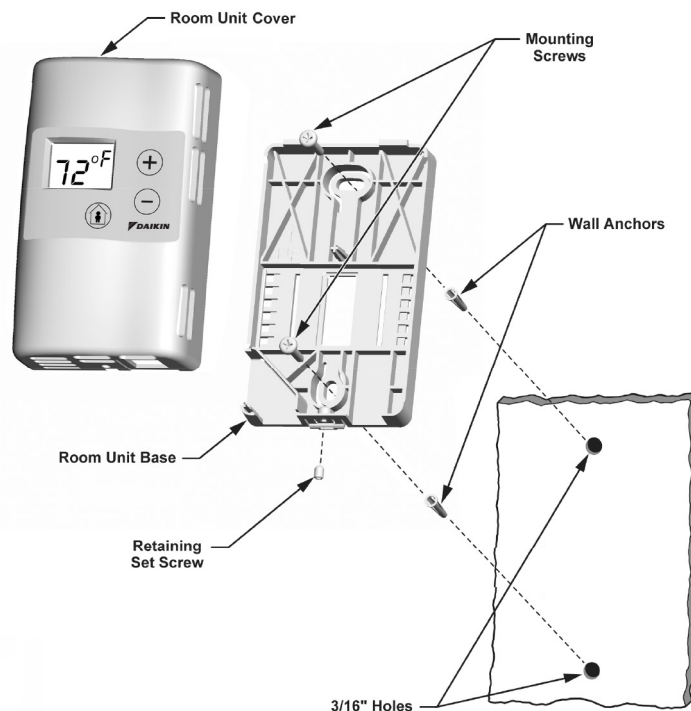
Drywall Mounting (No Rough-in), Typical

WARNING

For retrofits: Before cutting the cable, make sure it is disconnected from the Temperature Room Sensor port on the controller cable end.

1. Mark the center (cable) hole and the mounting hole locations, using the room sensor base plate as a template. See Figure 2.

Figure 2: Drywall Mounting (No Rough-in), Typical



2. Drill two 3/16-inch (4.8 mm) mounting holes and mount the two plastic wall anchors flush to below the wall surface for stable mounting of the device.
3. Cut a 1-inch (25 mm) center hole with a hole saw.
4. Pull about three inches (75 mm) of the cable through the hole in the base plate.
5. Mount the room sensor base plate on the wall, noting the "UP" arrow:
 - a. Install the two mounting screws provided, but do not tighten.
 - b. Level the room sensor base plate for appearance.
 - c. Tighten the two mounting screws to the room sensor base plate.
6. Do one of the following:
 - a. If the cable is terminated: Inspect the RJ-11 connector for damage.
 - b. If the cable is non-terminated or if the RJ-11 was damaged: Cut the cable, leaving about three inches (75 mm) on the room sensor side of the drywall, and attach an RJ-11 connector with an RJ-11 crimping tool. On the RJ-11 connectors, ensure that pin Number 1 connects to the same wire at each end of the cable.

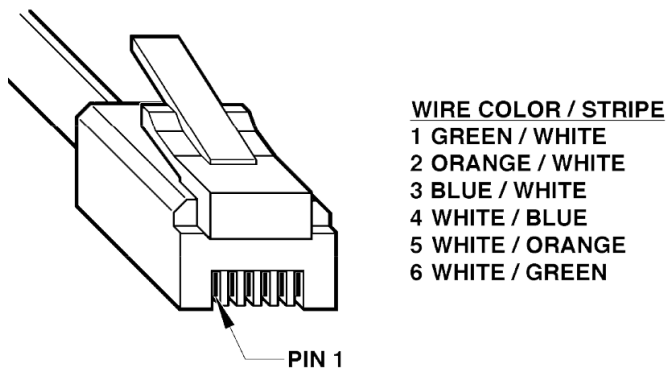
Electrical Box and Rough-in Mounting, Typical

CAUTION

Over-tightening may cause the room sensor base plate to crack or bend.

1. If a locator is attached to the rough-in device, remove the locator by removing the two screws and lightly rocking the locator to pull it free.
2. Untie the twist tie and pull about three inches (75 mm) of the room sensor cable through the hole in the base plate.
3. Mount the room sensor base plate on the wall, noting the "UP" arrow:
 - a. Install the two room sensor mounting screws provided, but do not tighten.
 - b. Level the room sensor base plate for appearance only.
 - c. Tighten the two mounting screws to the room sensor base plate.
4. Continue with Drywall Mounting (No Rough-in), Typical, Steps 7 through 11.

Figure 3: Terminating the RJ-11 Connector



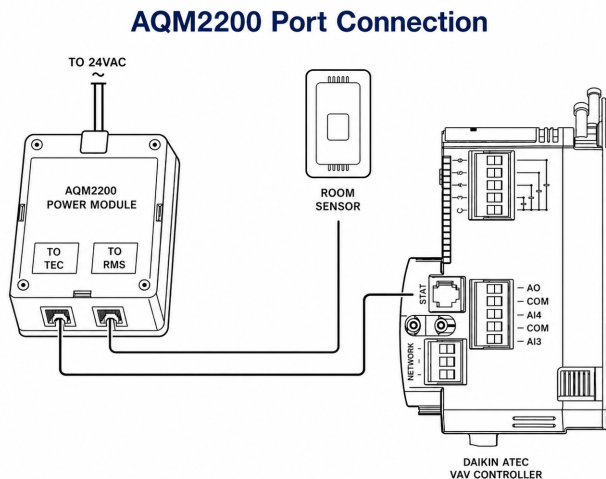
7. Plug the terminated cable into the RJ-11 connector on the back of the room sensor's printed circuit board (PCB).
8. Feed the extra cable back through the hole.
9. Snap the room sensor cover to the room sensor base plate by first hooking the room sensor front to the top latches, and then rotating the cover downward until it latches.
10. Loosen the safety set screw at the bottom of the base one or two revolutions to lock the cover to the base. Be careful not to loosen too far as the screws can be completely removed from the base.
11. Connect the room sensor to the Temperature Room Sensor port on the controller.

Installing the 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 AQM2200 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 AQM2200 Power Module. Make sure the cable is connected to the correct RJ-11 port marked TEC.
5. Terminate the AQM2200 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 AQM2200 Power Module may be powered off the same power source as the TEC.

Figure 4: Power Module Diagram



Daikin-Branded ATEC VAV Room Sensor Setup

Required Tools

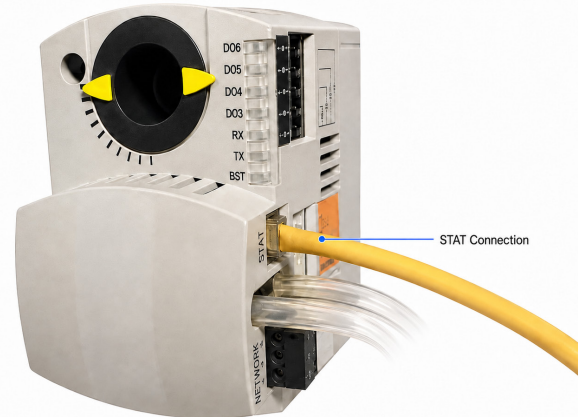
- Computer
- WCIS software
- WCIS cables
 - Daikin-branded WCIS cable
 - USB to serial adapter for the WCIS cable

NOTE: All software must be updated and all drivers must be installed.

Sensor Setup

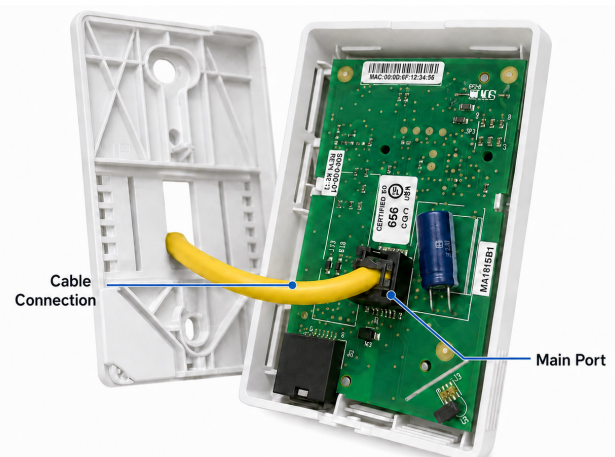
1. Ensure the RJ11 cable is securely connected to the sensor and the VAV controller.
 - a. ATEC controller: make sure the cable is connected to the STAT port.

Figure 5: ATEC STAT Port



- b. Sensor: internal to the sensor is the RJ11 port. Make sure this is firmly connected.

Figure 6: Sensor RJ11 Port



2. Connect the WCIS cable RJ11 to the port on the base of the sensor.

Figure 7: Sensor Connection



3. Once the connection is established to the computer the sensor will show "LAPTOP."

Figure 8: Established Connection



WCIS Setup

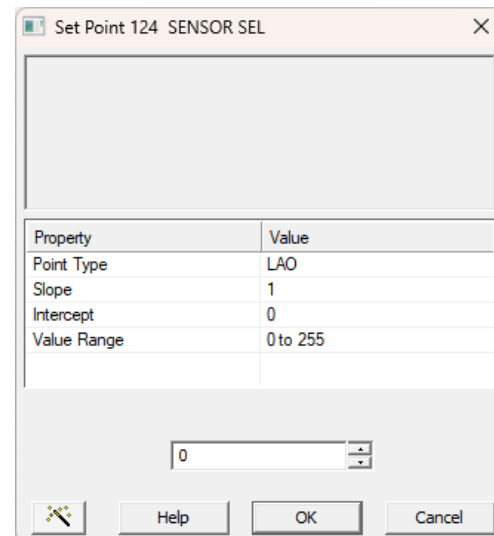
1. Navigate to point 124 for *SENSOR SEL*, and double-click to set up the point.

Figure 9: Point 124

{103}	AOV 1 OPEN	0.1	N	VOLTS	NONE
{124}	SENSOR SEL	0	N	NONE	NONE
{125}	RM CO2	100	N	PPM	NONE

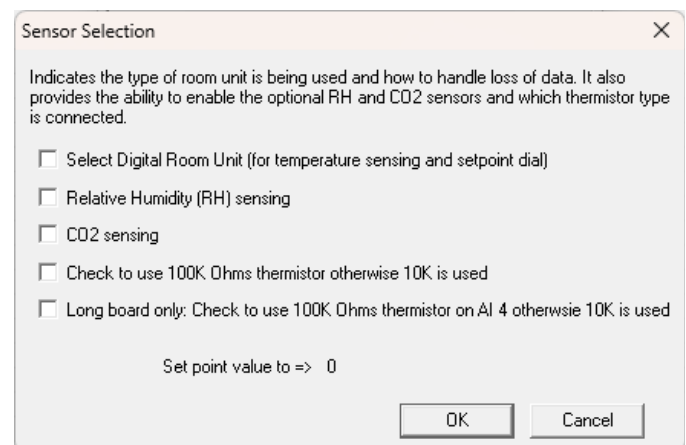
2. In the window that opens, click the magic wand on the bottom left.

Figure 10: Point Set-Up Wizard



3. Sensor Selection will open. Select the options your sensor has.

Figure 11: Sensor Selection



- When you select just temperature, the value is 1. If you select more, the value increases as each item is selected. Each point is an additive value that tells the controller what type of sensor is attached to the controller. Once you have selected the options for your sensor, click OK.

Figure 12: Initial Value

Figure 13: Increasing Value

- The value from your sensor selection will populate into the value input. You can click OK and WCIS will write the setting to the controller.

Figure 14: Value Population

Table 1: Options for Sensor Select

SENSOR SEL (Additive)	Description (include values to enable feature)
1	Select Digital Room Unit (for temperature sensing and setpoint dial)
2	Relative Humidity (RH) sensing
4	CO ₂ sensing
8	100K Ω thermistor on AI 3 (or input is 10K Ω)
16	100K Ω thermistor on AI 4 (or input is 10K Ω)

Examples:

- Temp (1) + RH (2) = a value of 3 for SS
- Temp (1) + RH (2) + CO₂ (4) = a value of 7 for SS

For questions about the procedure, please contact the Technical Response team at Ctitechsupport@daikinapplied.com or 866-462-7829.

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 4](#).



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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