

Technical Specifications

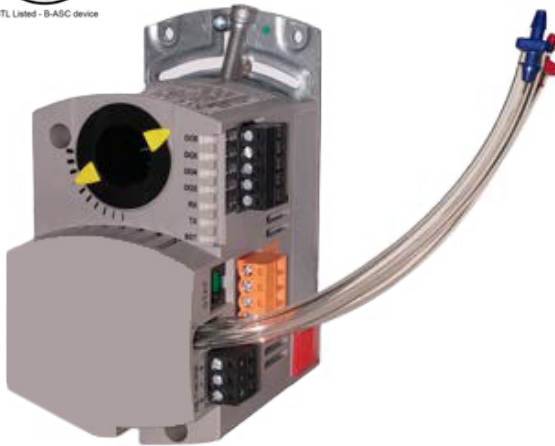
ED 19098

Group: **Controls**

Part Number: **ED 19098**
(Replaces **ASP 31-276**)

Date: **October 2017**

Daikin VAV Controller



Description

The Daikin VAV Controller provides high performance direct digital control (DDC) of pressure-independent, variable-air-volume zone-level routines. The Daikin VAV Controller can operate stand-alone or can be networked via BACnet to perform complex HVAC control, monitoring and energy management functions and is designed to reside on any BACnet control system.

Features

- Capable of network communication using BACnet MS/TP protocol.
- Controller integrated with actuator for ease of installation.
- Automated checkout procedure for ease of startup/commissioning and troubleshooting.
- PID control of HVAC systems to minimize offset and maintain tighter setpoint control.
- Requires only 5 VA, an advantage when sizing electrical capacity.
- Suitable for installation in plenum areas.
- Setpoints and control parameters assigned and changed locally or remotely.
- Electrically Erasable Programmable Read Only Memory (EEPROM) used for storing setpoints and control parameters—no battery backup required.
- Return from power failure without operator intervention.
- No calibration required, thereby reducing maintenance costs.

Applications

Operating independently, or as part of a BACnet system, the Daikin VAV Controller is capable of controlling the following VAV pressure-independent zone applications.

Daikin VAV Controller:

- VAV Cooling Only (Application 6630)
- VAV Cooling or Heating (Application 6631)
- VAV with Electric Reheat or Baseboard Radiation (Application 6632)
- VAV with Hot Water Reheat (Application 6633)
- VAV Electric Reheat with Series Fan (Application 6634)
- VAV Hot Water Reheat with Series Fan (Application 6635)
- VAV Electric Reheat with Parallel Fan (Application 6636)
- VAV Hot Water Reheat with Parallel Fan (Application 6637)

NOTE: For a detailed list of application specifics, please refer to the Daikin VAV Controller (OM 1063) on www.DaikinApplied.com.

Control algorithms are pre-programmed. The controller is ready to operate after selecting the application and assigning the unit's controller address. If desired, the operator may adjust the air volume setpoints in cfm (lps), room temperature setpoints, and other parameters. The controller is designed for operation and modification without vendor assistance.

Hardware

Daikin VAV Controller

The Daikin VAV Controller consists of an electronic controller, a differential pressure transducer and a damper actuator assembly. This controller provides all wiring terminations for system and local communication and power. The cable from the room sensor (purchased separately) connects to an RJ-11 jack on the controller. All other connections are removable terminal blocks.

The Daikin VAV Controller has two AI (10K Thermistor), DI (dry contact), one analog output (0-10 Vdc) and four Triac type digital outputs. In addition to controlling the integrated damper actuator, the controller interfaces with the following external devices (purchased separately):

- Room temperature sensor with optional setpoint dial and night override button
- Service and commissioning tools

Room Sensor

The room sensor connection to the controller board consists of a quick-connect RJ-11 jack. This streamlines the installation and reduces the Daikin VAV Controller's start-up time.

Differential Pressure Sensor

The Differential Pressure Sensor (on-board) is easily connected to the box's air-velocity sensing elements to provide measurement of the differential pressure. The measured value is converted to actual airflow in cfm (lps) by the Daikin VAV Controller.

Combination Temperature, Carbon Dioxide, and Relative Humidity Sensors

The Temperature/CO₂/Relative Humidity Sensor values are passed digitally to the Daikin VAV Controller from the room unit through the RJ-11 cable to the controller's RTS port.

Specifications

Daikin VAV Controller and Actuator	
Power Requirements:	
Power Source	24 Vac +/- %
Frequency	50/60 Hz
Power Consumption	5 VA plus loads
Inputs	Two analog (10K /100K Ω thermistor) or 2 digital inputs (dry contact), selectable
Outputs	One analog (0-10 Vdc) and 4 Triac digital outputs, 12 VA each (requires 24 Vac source to allow switching; phase or neutral)
Operating Temperature Range	+32°F to +122°F (0°C to +50°C)
Storage Temperature Range	-20°F to +140°F (-29°C to +60°C)
Humidity Range	10% to 95% RH, non-condensing
Regulatory Compliance	UL 916 PAZX cUL C22.2 No. 205 PAZX7 BTL Listed as B-ASC Device FCC Part 15, Class B CE EN60730-1/14 Light Industrial Immunity
Dimensions	5-9/16"H × 2-15/16"W × 4-3/16"D (142 mm × 75 mm × 106 mm)
Weight	1.26 lb (.572 kg)
Actuator Torque	44 lb-in 5Nm
Run time for 90°	90 sec. at 60 Hz (108 sec. at 50 Hz)
Nom. /Max Angle of Rotation	90° / 95°
Actuator Shaft Size	3/8" to 5/8" (8 to 16 mm) Dia. 1/4" to 1/2" (6 to 13 mm) Sq.
Minimum Shaft Length	3/4" (20 mm)

Transformer Requirements and Recommended Voltages	
Type	Class 2, 24 Vac, 50/60 Hz, SELV, PELV

Ordering Information

Description	Product 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)	250803700
Temperature/CO ₂ /Relative Humidity Sensor (includes display, setpoint adjust, and tenant override)	250803800
Temperature/CO ₂ /Relative Humidity Power Module	250803900
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