VAV-4040 Control Module

Variable Air Volume/Variable Volume and Temperature Controller

The VAV-4040 can be used on single-duct or dual-duct VAV boxes, boxes that have a reheat fan, or boxes that have built-in staged or modulating heat. The VVT mode allows the damper output to reverse its action (direct or reverse-acting damper) in response to the air temperature being supplied to it by an HVAC unit. The controller is designed to be used with Novar Controls' Futura Temperature Sensors (FTS-4 or FTS-4A with temperature setpoint adjustment). A 10,000-ohm, Type 2, thermistor temperature sensor should also be used with the VAV-4040 to monitor discharge air temperature.

Features

Novar Controls' new VAV-4040 covers the widest variety of VAV and VVT applications possible. Its features include:

- Integrated Belimo® Damper Actuator
- On-board differential pressure airflow sensor
- Air quality compensation/ventilation override using CO_2 or indoor air quality (IAQ) input
- Can accept CO_2 input directly (analog or digital sensor) or via the network
- Pressure-independent or pressure-dependent control
- Staged reheat control
- Tri-state or 2–10 VDC modulating reheat control
- Accommodations for external damper actuator (tri-state or 2–10 VDC)
- Series or parallel reheat fan control
- Integration with Novar Controls' Hawki® Advanced Air-Handler Controller
- Stand-alone control
- One output point available for "open" programming
- High quality, removable terminal strips
- Communicates with Novar Controls' Savvy®, Lingo®, and Envoi® executive modules

VAV-4040 Control Module

Specifications

Agency Approvals

Listed device: CUL/UL E90949
Standards used: UL 916, Energy Management Equipment, CSA C22.2, No. 205-M1983, Signal Equipment

Recognized component: CUL/UL E134292
Standards used: UL 873 Temperature-Indicating and Regulating Equipment, CSA C22.2, No. 24-93, Temperature-Indicating and Regulating Equipment

Power Requirements

Voltage: 24 VAC, Class 2
Consumption: 15 VA (not including external actuators)
Triac Outputs: 0.5 amps max each

Inputs and Outputs

Analog Outputs: Internal actuator, tri-state damper outputs, 2–10 volt signal for external damper or heating actuator

Digital Outputs: Heat 1, Heat 2, Reheat Fan

Analog Inputs: Temperature inputs are 10,000-ohm thermistor, Type 2. Zone temperature, supply-air temperature, setpoint reset adjustment, CO_2 (CO_2 signal: 0–10 VDC)

Digital Inputs: Timed Override and CO_2 (software-defined as analog or digital)

Operating Environment

Temperature: 32 to 122 F (0 to 50 C)
Humidity: 0 to 90% Relative, noncondensing

Network Communications

Method: RS-485
Cable: Belden 8761 or equivalent (two-conductor and shield) 8000 ft. max.
Baud Rate: 9600

Memory Backup

Control program parameters maintained in EEPROM.

Physical Dimensions

Height: 6 in.
Width: 8.25 in.
Depth: 2 in.
Weight: 1 lb 13 oz (Packaged Controller: 2 lb, 8 oz)

Coming Soon!

Within the next few months, Novar Controls will offer a digital thermostat that senses temperature and communicates with the VAV-4040. Its liquid crystal display (LCD) panel will display indoor air temperature and setpoint, as well as outside air temperature. Buttons on the front of the unit can be used to adjust the setpoint or initiate a schedule timed override. Technicians can use the buttons to access a service mode to adjust the setpoint or calibrate the airflow locally to perform air balancing procedures. The thermostat also enables the VAV-4040 to operate in stand-alone mode, providing temperature and airflow adjustment independently from Novar Controls' executive modules.

Novar Intelligent Building Systems (IBS)

Novar Controls Corporation is an operating company within the Intelligent Building Systems (IBS) sector of Novar plc, a global business with sales of approximately $2.5 billion. Novar IBS supplies around $1 billion of products and services to building operators, contractors, developers, and consumers worldwide. Employing approximately 6,500 people and operating in more than 30 countries worldwide, it is one of the largest businesses in its field.

Novar IBS provides a wide range of high quality, high technology solutions for fire detection and alarm, access control, security, energy management, and building controls, as well as leading solutions for electrical and data connectivity.

Specifications subject to change without prior notification.

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