

CONFIGURABLE VAV TERMINAL UNIT CONTROLLER

EXTERNAL DAMPER MOTOR

OVERVIEW

The HVAC building automation controls market requires a flexible, cost-effective VAV terminal unit DDC controller that works with an external damper motor.

Efficient Building Automation Corporation's Circon™ **VAV-332-XMV**, with many advanced features, increases occupant comfort levels, while optimizing energy efficiency. It comes complete with a damper control interface and one of the most accurate and reliable differential pressure sensors available.

APPLICATIONS

The VAV-332-XMV can be used to implement any single duct, pressure dependent or independent VAV control application. It accommodates series or parallel fan powered units or units without fans. For heating, the VAV-332-XMV supports three stages of electric reheat, and modulating or floating valve control for hot water heat.

To optimize energy efficiency, the VAV-332-XMV has several applications. The time-of-day schedule can adapt its control sequence to occupied, unoccupied or standby setpoints, the optimum start feature allows the zone to be efficiently conditioned for comfort prior to occupancy, and when used with a supervisory controller, the VAV-332-XMV allows implementation of ASHRAE standard 62.1-specified Ventilation Rate and IAQ procedures, and demand limiting sequences.

A versatile side loop provides three styles of control for a wide range of equipment including unit heater, baseboard heater, exhaust fan, lighting and more. The side loop together with other I/O saves the cost of additional controllers for simple applications

EBAC's no-cost Windows®-based configuration software for the VAV-332-XMV is fully compatible with Echelon Corporation's LNS® and Tridium® Inc.'s Niagara^{AX} platforms.

ORDERING INFORMATION

Part number: 10-0440



FEATURES

- LonMark Certified, with easy-to-use LNS plug-ins for seamless integration into interoperable LonWorks® networks
- Fast and easy-to-use Tridium Niagara^{AX} wizards for seamless integration into interoperable Niagara networks
- Nine VAV terminal unit control sequences allows use in any VAV application
- Easily mounts directly on VAV terminal unit
- 1 resistive input for space temperature with/without override, and 3 universal inputs
- 3 digital outputs and 1 analog output for fan start/stop, floating valve or multi-stage electric reheat control and perimeter reheat control
- Demand controlled ventilation feature allows occupant-based ventilation rate control
- Onboard soft clock, scheduling and trending decrease costs and increase flexibility
- Transmits alarms for local or remote annunciation
- A side loop provides independent control for additional simple HVAC equipment
- Floating outputs for external damper motor control



CIRCON

SPECIFICATIONS

I/O CAPABILITY

1 Space Temperature Input: 10 kΩ thermistor, Precon curve: Type II model 24 or Type III model 3
 3 Universal Inputs: Digital (dry contact), resistive (10 kΩ thermistor), or voltage(0-10 VDC)
 1 Pressure Sensor: 0.013"-1.75" H2O (3.2-438 Pa)
 3 Digital Outputs: Isolated triac, 800 mA max. – 30 mA min., at 24 VAC, short-circuit protected, auto-reset
 1 Analog Output: 0-10 VDC at 100 mA, short-circuit protected, auto-reset

COMMUNICATIONS

Transceiver: Echelon Free Topology Transceiver (FTT-10A @ 78 kbps)
 Wire Type: AWG22 to AWG16 stranded (use twisted pair wiring and copper conductors for network)
 Neuron®: 3150, 10 MHz

POWER SUPPLY

Controller: 24 VAC, 50-60 Hz, at 12 VA
 Fuse: 2.5 A slow-blow (Bussman GMD-2.5A, Littlefuse 23902.5A)
 External Loads: 1.2 A (absolute maximum) available to power external loads

MECHANICAL

Operating Temperature: 32°F to 122°F (0°C to 50°C)
 Relative Humidity: 5% to 95% RH (non-condensing)
 Weight: 12 oz. (320 grams)
 Enclosure Dimensions: 6.75" x 4.75" x 2" (172mm x 120mm x 51mm)
 Enclosure Material: PVC, inflammability class V0, approval UL94-5V
 Wire Type: AWG22 to AWG16 stranded
 Mounting: Two sheet metal screws

DAMPER MOTOR INTERFACE

2 Digital Outputs: Isolated triac – 0.8 A max / 30 mA min at 24 VAC, short-circuit protected, auto reset
 Drive clockwise or counterclockwise to drive damper
 Power Supply: 24 VAC, 50-60 Hz power required from external controller or supply
 Stroke Time: Software configurable

AGENCY LISTINGS AND REGULATORY COMPLIANCE

Class II device (when powered by a class II supply)
 CSA 22.2 #205-M1983, #950-M89
 UL916 certification for Energy Management Equipment
 Part 15, Class A of the FCC Rule for Radio Frequency Devices
 EMC Directive 89/336/EEC
 LonMark 3.4 Certified, Functional Profile: 8502 SCC-VAV



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