

FULLY PROGRAMMABLE VAV TERMINAL UNIT CONTROLLER

EXTERNAL DAMPER MOTOR

OVERVIEW

The HVAC building automation controls market requires a flexible, economical, fully programmable VAV terminal unit DDC controller for unique or custom applications that work with an external damper motor.

Efficient Building Automation Corporation's Circon™ VAV-332-XPR comes complete with a damper control interface, one of the most accurate and reliable differential pressure sensors available, and preconfigured functional blocks. Combined with the power of the Circon BASIC programming language, the VAV-332-XPR provides exceptional flexibility and is all you need in a terminal unit VAV DDC controller.

APPLICATIONS

The VAV-332-XPR can be used to implement any unique or custom single duct, pressure independent or dependent VAV control application when configurable-only controllers do not meet your needs. The VAV-332-XPR can control custom solutions such as dual duct, VVT zone dampers, and room pressurization, and up to three stages of reheat, and analog, modulating or floating valve control. The VAV-332-XPR can accommodate series or parallel fan-powered terminal units, or units without fans.

Along with the configurable control blocks and the input/output points, EBAC's Circon BASIC programming language can be used to implement the control sequences. Circon BASIC is flexible and powerful, allowing the user to create tailored control sequences for any VAV design.

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

ORDERING INFORMATION

Part number: 10-0441



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
- Fully programmable with flexible and easy-to-use Circon BASIC programming language
- Easily mounts directly on VAV terminal unit damper shaft
- 1 resistive input for space temperature with/without override, and 3 universal inputs including voltage for demand control ventilation
- 3 digital outputs and 1 analog output for fan start/stop, floating valve or multi-stage electric reheat control and perimeter reheat control
- PI, actuator, and damper functional blocks simplify programming effort
- Onboard soft clock, scheduling and trending decrease costs and increase flexibility
- Transmits alarms for local or remote annunciation
- Floating outputs for external damper motor control



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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