

FULLY PROGRAMMABLE VAV TERMINAL UNIT CONTROLLER

WITH INTEGRATED 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.

Efficient Building Automation Corporation's Circon™ **VAV-332-PRG** comes complete with an integral damper motor, 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-PRG provides exceptional flexibility and is all you need for a terminal unit VAV DDC controller.

APPLICATIONS

The VAV-332-PRG 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-PRG 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-PRG 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-PRG and the Circon BASIC Compiler are fully compatible with Echelon Corporation's LNS® and Tridium® Inc.'s Niagara^{AX} platforms.

ORDERING INFORMATION

Part number: 10-0439



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



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 and Motor:	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:	1 lb. 11 oz. (780 grams)
Enclosure Dimensions:	9" x 5.28" x 2.125" (229mm x 134mm x 54mm)
Enclosure Material:	Polylac PA-776+, FR/ABS; approval UL 94-5V
Wire Type:	AWG22 to AWG16 stranded
Mounting:	Directly on shaft with one screw

DAMPER MOTOR

Model:	Belimo LMB-24- 3-T with stall protected brushless DC motor and push button clutch
Torque:	45 in-lb (5.14 Nm)
Power Supply:	Supplied from VAV-332-PRG
Running Time:	95 seconds
Angle of Rotation:	95 degrees from adjustable
Fits Shaft Diameter:	5/15" to 23/32" (8.5mm to 18.2mm)

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



EFFICIENT BUILDING AUTOMATION CORPORATION

401 – 8342 130th Street, Surrey BC, Canada V3W 8J9
 Telephone: +1 604.248.4404 Facsimile: +1 604.248.4405
 Website: www.circon.com



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