Unit Ventilator Controller — PL-M2000-UNV

Product Description

The Prolon M2000-UNV Unit Ventilator Controller is designed to control a variety of 2-Pipe and 4-Pipe Unit Ventilator systems. The on-board microcontroller offers precise digital control to maximize performance. The available control sequences are fully configurable, either locally or remotely, using free software. The M2000 UNV uses PI (Proportional-Integral) control loops to optimize HVAC management and offers a variety of functions such as 2-pipe automatic mode change based on water temperature, automatic purge cycles to verify water temperature and prevent stagnation in coils, economizer, face & bypass sequences, and more. The M2000 UNV will share zone demand data when connected to a Prolon network.

Features

- Designed for hydronic systems controlling a space temperature using a single space temperature sensor
- Internal clock with configurable schedules and calendars
- A manual/off/auto switch for each of the eight outputs
- Remote monitoring and configuration with FREE Prolon Focus software
- Stand-alone or networked (up to 127 nodes)
- Proportional integral (PI) control loops maximize performance
- 5 digital outputs and 3 analog outputs equipped with self-resetting fuses
- Automatic changeover between heating and cooling on 2-pipe systems
- On/Off or modulating valve control for cooling and heating
- Face & Bypass Control Sequence available with frost protection
- Optional Economizer Sequence and CO2 control
- Configurable unoccupied mode sequences
- Multi speed fan control options
- Several configurable safety and efficiency limits available, including freeze protection

Technical Specifications

SUPPLY	24 VAC ±10%, 50/60 Hz, Class 2
POWER	5 VA (consumption), 40 VA (input)
INPUTS	9 configurable universal inputs (outside temp / hot and cold-water supply temps / supply air / alarm contact / proof of fan / room setpoint / zone temperature / CO2 input). Input signals (10k-3 thermistor / dry contact / 4-20mA)
DIGITAL OUTPUTS	5 triac outputs, 10-30 VAC source, 300 mA max (self-resetting fuse)
ANALOG OUTPUT	3 x 0-10 VDC outputs, 40 mA max (self-resetting fuse)
INDICATION LIGHTS (LED)	State of each output / Communication / Power / State of microprocessor
MICROPROCESSOR	PIC18F6722, 8 bits, 40 MHz, 128KB FLASH memory
CASING	Molded ABS, UL94-HB
COMMUNICATION	Modbus RTU (RS485), up to 127 nodes
BAUD RATES	9600, 19200, 38400, 57600, 76800, 115200
CONNECTION	Removable screw-type terminal blocks (max 16 AWG) and RJ45 modular jacks
DIMENSIONS	5.39” x 4.41” x 2.25” (137mm x 112mm x 57mm)
WEIGHT	1.05 lbs (0.48 kg)
ENVIRONMENT	-4 to 122 °F (-20 to 50 °C) Non-Condensing
CERTIFICATION	UL916 Energy Management Equipment, CAN/CSA-C22.2, RoHS, FCC part 15: 2012 class B

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