PROLON



Datasheet

Fan Coil Unit Controller (PL-M2000-FCU)

Description

The PL-M2000-FCU Fan Coil Unit controller is designed to control a variety of 2-pipe and 4-pipe hydronic heating and cooling units. 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 PL-M2000-FCU 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, secondary backup heat source control, and more. The PL-M2000-FCU 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
- Separate On/Off or modulating (PWM) aux heat output available
- Configurable unoccupied mode sequences
- Multi speed fan control options
- Several configurable safety and efficiency limits available

Technical Specifications

- **Supply**: 24 VAC ±10%, 50/60 Hz, Class 2
- **Power**: 5 VA (consumption), 40 VA (input)
- **Inputs**: 8 configurable universal inputs (outside temp /hot and cold-water supply temps / supply air / leak alarm / proof of fan / room setpoint / zone temperature / Alarm input). Input signals (10k-3 thermistor / dry contact)
- **Digital Outputs**: 5 triac outputs, 10-30 VAC source, 300 mA max (self-resetting fuse)
- **Analog Outputs**: 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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