



Datasheet

Fan Coil Unit Controller (PL-M2000-FCU)

Description

The 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 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 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 \pm 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