



## Datasheet

# Rooftop Controller (PL-M2000-RTU)

## Description

The M2000 RTU rooftop controller is designed to control a variety of different rooftop units or HVAC air treatment equipment. 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 RTU uses PI (Proportional-Integral) control loops to optimize HVAC management and offers a variety of functions such as economizer, preheating, CO2 levels, static pressure control and more. The M2000 RTU also acts as a Master controller when connected to a ProLon network.

## Features

- 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)
- Dehumidification sequences available when networked with a ProLon humidity controller
- Proportional integral (PI) control loops maximize performance
- 5 digital outputs and 3 analog outputs equipped with resettable fuses
- Built-in protection sequences with configurable temperature limits and minimum delays
- Control up to 3 stages of heating and 4 stages of cooling
- Configurable unoccupied mode sequences
- FlexiZone system facilitates multiple zone management by evaluating the average weighted demand of the zones using customized groups

## Technical Specifications

**Supply:** 24 VAC  $\pm 10\%$ , 50/60 Hz, Class 2

**Power:** 5 VA (consumption), 40 VA (input)

**Inputs:** 9 configurable analog inputs (outside temperature / return / supply / mixed air / room, dry contact for clogged filter / schedule override / proof of fan / room setpoint / CO2 levels / static pressure / auxiliary temp). Input signals (thermistor / dry contact / 4-20mA / 0-5 VDC) individually configurable for each input

**Digital Outputs:** 5 triac outputs, 10-30 VAC source, 300 mA max (resettable fuse)

**Analog Outputs:** 3 x 0-10 VDC outputs, 40 mA max

**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" (137 mm x 112 mm)

**Environment:** 32-122 °F (0-50 °C) Non-Condensing

**Certification:** UL916 Energy Management Equipment, CAN/CSA-C22.2, RoHS, FCC part 15: 2012 class B