PROLON



Datasheet

Heat Pump Controller (PL-M2000-HP)

Description

The PL-M2000-HP heat pump controller is designed to control a variety of Heat Pump units and 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 PL-M2000-HP uses PI (Proportional-Integral) control loops to optimize Heat Pump management and offers a variety of functions such as economizer, preheating, emergency auxiliary heating, static pressure and more. The PL-M2000-HP also acts as a Master controller when connected to a Prolon network.

Features

- Internal clock with configurable schedules and calendars
- Works in Air-To-Air mode or Water-To-Air mode (configurable)
- 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)
- Supports both Modbus and BACnet communication protocols
- 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 2 compressor stages and 2 stage auxiliary heating stages
- 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 ±10%, 50/60 Hz, Class 2
- **Power**: 5 VA (consumption), 40 VA (input)
- **Inputs**: 9 configurable analog inputs (outside temperature / return / supply / zone / water supply / dry contact for clogged filter / schedule override / proof of fan / alarm, room setpoint, static pressure). 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
- **Communication**: Modbus RTU (RS485) or BACnet MS/TP (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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