Datasheet
Heatpump Controller
PL-M2000-HP

Description

The M2000 HP heat pump controller is designed to control a variety of heatpump 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 M2000 HP uses PI (Proportional-Integral) control loops to optimize heatpump management and offers a variety of functions such as economizer, preheating, emergency auxiliary heating, static pressure and more. The 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

Wiring: Removable screw-type terminal blocks (max 16 AWG) and RJ45 modular jacks

Dimensions: 137 mm x 112 mm (5.39" x 4.41")

Environment: 0-50 ºC (32-122 ºF) Non-Condensing

Certification: UL916 Energy Management Equipment, CAN/CSA-C22.2, RoHS