



## Datasheet

# Standalone Heatpump Controller (PL-M2000-HPS)

## Description

The M2000 HPS 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 M2000 HPS 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.

## Features

- Designed for unitary systems using a single space temperature sensor
- 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)
- 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

## 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 / 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) 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