



## Datasheet

# Heatpump Controller (PL-C1000-HP)

## Description

The C1000 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 C1000 HP uses PI (Proportional-Integral) control loops to optimize heatpump management and offers a variety of functions such as economizer, preheating, emergency auxiliary heating and more. The C1000 HP also acts as a Master controller when connected to a ProLon network.

## Features

- Works in Air-To-Air mode or Water-To-Air mode (configurable)
- Remote monitoring and configuration with FREE ProLon Focus software
- Stand-alone or networked (up to 127 nodes)
- Proportional-Integral (PI) control loops maximize performance
- 4 digital outputs and 1 analog output equipped with resettable fuses
- Built-in protection sequences with configurable temperature limits and minimum delays
- Control up to 2 compressor stages with up to 2 auxiliary heating stage
- 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:** 2 VA (consumption), 32 VA (input)
- **Inputs:** 4 configurable inputs with selectable functions (outside temp / return temp / supply temp / water intake temp / night setback / proof of fan / alarm)
- **Digital Outputs:** 4 triac outputs, 10-30 VAC source, 300 mA max (resettable fuse)
- **Analog Output:** 1 output 0-10 VDC / 2-10 VDC / 0-5 VDC, 40 mA max (resettable 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) or BACnet MS/TP (RS485) up to 127 nodes
- **Baud Rates:** 9600, 19200, 38400, 57600, 76800, 115200
- **Connection:** Removable screw-type terminal blocks (16 AWG max) and RJ45 modular jacks
- **Dimensions:** 6.2" x 5.2" x 2.5" (157mm x 132mm x 64mm)
- **Weight:** 0.85 lbs (0.39 kg)
- **Environment:** 32-122 °F (0-50 °C) Non-Condensing
- **Certification:** RoHS, FCC part 15: 2012 class B