PROLON


## Datasheet

# Single-Zone Rooftop Controller (PL-C1050-RTUS)

## Description

The C1050 RTUS 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 C1050 RTUS uses PI (Proportional-Integral) control loops to optimize HVAC management and offers a variety of functions such as preheating, constant cooling supply control and night setback.

## Features

- Designed for unitary systems using a single space temperature sensor
- 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 stages of heating and 4 stages of cooling -or- full modulation
- Configurable unoccupied mode sequences

## Technical Specifications

- **Supply**: 24 VAC ±10%, 50/60 Hz, Class 2
- **Power**: 2 VA (consumption), 32 VA (input)
- **Inputs**: Outdoor – thermistor 10K
  Return – thermistor 10K
  Supply – thermistor 10K
  External clock or Proof of fan – dry contact
- **Digital Outputs**: 4 triac outputs, 10-30 VAC source or sink, 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) up to 127 nodes
- **Baud Rates**: 9600, 19200, 38400, 57600, 76800, 115200
- **Connection**: Removable screw-type terminal blocks (max 16 AWG)
- **Dimensions**: 6.2" x 5.2" x 2.5" (157mm x 132mm x 64mm)
- **Weight**: 0.85 lbs (0.39 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