PROLON

Datasheet

Boiler Controller (PL-C1050-BLR)

Description

The C1050 BLR boiler controller is designed to control a variety of different boiler 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 C1050 BLR uses PI (Proportional-Integral) control loops to optimize boiler management and offers a variety of functions such as outdoor reset for the supply water temperature, lead-lag sequences for pumps and boiler stages, optional three-way valve sequence, safety limits and more.

Features

- Pump activity based on outside temperature or call for heat (or both)
- Configurable pump exercise sequence for extended periods of inactivity
- Supply water setpoint reset based on outside temperature
- Control up to 2 boiler stages (multiple boilers or a single multistage boiler)
- Control 1 modulating boiler with optional backup stage.
- Various lead-lag sequences for the pumps and boilers
- Offset the supply water setpoint based on a network received demand or occupancy
- Optional control sequence for a three-way valve
- 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

Technical Specifications

- **Supply**: 24 VAC ±10%, 50/60 Hz, Class 2
- **Power**: 2 VA (consumption), 32 VA (input)
- **Inputs**: Outside air – thermistor 10K
  Return Water– 10 K thermistor
  Supply Water– 10 K thermistor
  Proof of pump – 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) for the valve
- **Indication lights (LED)**: State of each output / Communication / Supply / 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 rate**: 9600, 19200, 38400, 57600, 76800, 115200
- **Connection**: Removable screw-type terminal blocks (16 AWG max)
- **Dimensions**: 6.2" x 5.2" x 2.5" (157 mm x 132 mm x 64 mm)
- **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

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