PROLON



Datasheet

Boiler Controller (PL-M2000-BLR)

Description

The PL-M2000-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 PL-M2000-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 valve and boiler modulation, 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 4 boiler stages (multiple boilers or a single multistage boiler or combination)
- Control up to 2 modulating boilers with optional backup stage
- Various lead-lag sequences for the pumps and boilers
- Internal clock with configurable schedules and calendars
- Offset the supply water setpoint based on a network received demand or occupancy
- Optional control sequence for a three-way valve
- A manual/off/auto switch for each of the eight outputs
- Remote monitoring and configuration with FREE Prolon Focus software
- Standalone 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
- Dedicated input that requests maximum heat setpoint upon contact closure
- Dedicated input that deactivates all boilers upon contact closure

Technical Specifications

- **Supply**: 24 VAC ±10%, 50/60 Hz, Class 2
- **Power**: 5 VA (consumption), 40 VA (input)
- **Inputs**: 7 configurable analog inputs (outside temp / supply temp / return temp / dry contacts for proof of pumps, max heat request and boiler disable). 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 (resettable fuse)
- **Indication lights (LED)**: State of each output / Communication / Power / State of microprocessor
- **Microprocessor**: PIC18F6722, 8 bits, 40 MHz, 128Ko 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 (16 AWG max) 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

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