



Datasheet

Boiler Controller (PL-M2000-BLR)

Description

The M2000 BLR boiler controller is designed to control a variety of different boiler units and systems. The on-board micro-controller offers precise digital control to maximize performance. The available control sequences are fully configurable, either locally or remotely, using free software. The 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 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)
- 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 sequences for a three-way valve or modulating boiler with backup
- 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

Technical Specifications

Supply: 24 VAC \pm 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" (137 mm x 112 mm)

Environment: 32-122 °F (0-50 °C) Non-Condensing

Certification: UL916 Energy Management Equipment, CAN/CSA-C22.2, RoHS