



Datasheet

Boiler Controller (PL-C1000-BLR)

Description

The C1000 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 C1000 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 periods of inactivity
- Supply water setpoint reset based on outside temperature
- Control up to 2 boiler stages (multiple boilers or a single multistage boiler)
- 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 $\pm 10\%$, 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) and RJ45 modular jack

Dimensions: 6.5" x 5.3" (165 mm x 135 mm)

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

Certification: RoHS, FCC part 15: 2012 class B