

# Flame Safeguard Controller 5004-M-85

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A state-of-the-art flame safeguard controller designed for single burner and boiler applications with one or two scanners. Unlike other flame safeguard controllers that require a multitude of amplifiers, programmers, and purge timers, the Preferred 5004-M-85 has just one processor with a built-in universal amplifier that accepts UV, IR, and self-checking UV scanner inputs, as well as flame rod inputs. In addition, Purge times and Main Trial For Ignition (MTFI) times are field-selectable.

## Features Include

- Every unit interfaces to infrared, ultraviolet, ultraviolet self-check or flame rod sensors. Sensor specific plug-in amplifiers are not required
- Single or Dual Flame Sensors
- Field Selectable Purge Time
- Field Selectable Pilot Trial for Ignition (PTFI) Time
- Selectable running interlock short test
- RS485 Modbus Communication
- Local LCD display for status and troubleshooting
- Sequence Status Lights
- Jacks for direct flame strength measurement 0-5VDC
- Plug-in Field Wiring Terminals
- Field Selectable Check for Power Failure
- Field Selectable check for limits bypassed function
- Early Spark Termination
- Pilot Test Mode
- Optional 22 Point Annunciator (QA 5004-85)
- Remote/Local reset from lockout state

## Specifications:

### Mechanical

Enclosure: 7" L x 5" W x 2" D

Weight: 2 lbs

Operating Temp: -40° F to +140° F  
(-40° C to +60° C)  
UV scanners -20° C to 60° C,  
IR scanner -30° C to 65° C

### Electrical

Voltage: 120 VAC +10% - 15%, 50/60 Hz

Power consumption: 2 VA

Flame Failure Response Time: 2.5 to 3.5 seconds

Purge Time: 30, 60, 90, 150, 180, 300,  
450, or 900 seconds  
(DIP switch selectable)

Pilot Trial for Ignition Time: 3, 5, or 10 seconds  
(DIP switch selectable)

Flame Sensor Inputs (2): Infrared, Ultraviolet, Flame Rod

Total connected 120 VAC load must not exceed 15 A.

## Compatible Flame Sensors:

Flame Rod	
Ultraviolet, non self-checking	Model 5004-01
Ultraviolet, non self-checking	Model 5002-01NC
Ultraviolet, self-checking	Model 5002-01

## Modbus Communications

The operation of the 5004-M-85 can be monitored via the RS485 Modbus communications link. Modbus also provides access to the Historical Data in the 5004-M-85: The last 6 Lockout reasons, burner run hours, and burner start cycles.

## Ordering Information

Description	Catalog Number
FSG Controller w/ Integral Display. Universal UV, IR, UV Self-Check, and Flame Rod Input. DIP switch selectable purge, MTFI time, RS-485 Modbus Communications	5004-M-85



5004-M-85 Flame Safeguard Controller Chassis

Specs found here

