Spectra™ Pro Flame Sensor Signal Processor

To Enhance UV & IR Flame Sensor System Performance & Capability for Industrial Burners, Incinerators, Process Heaters, Furnaces & Boilers

The SPECTRA™ PRO Signal Processor is an optional supplement to AMETEK's SPECTRA BC11 and GT30 Flame sensors. Used in conjunction with these flame sensors, the SPECTRA PRO takes the 4-20mA sensor output and provides signal gain, three relay outputs, frequency discrimination, continuous system self check, Modbus communication, visual indicators for system health and flame status and redundant power input for the sensor.

The SPECTRA PRO's frequency iscrimination feature allows it to filter out background radiation from hot, glowing boiler walls and also radiation interference from neighboring burners or pilots. This discrimination capability ensures that when a flame is extinguished, the relay trips immediately because there are no background radiation effects that could provide a false flame on condition.

All of the functionality of the SPECTRA PRO is easily programmable using AMETEK's AmFlame PC interface software. In addition to configuration, AmFlame provides real time monitoring of the flame sensor output and the condition of the three output relays. AmFlame will also keep track of all program setting, changes and can record sensor output data for analysis.

FEATURES AND BENEFITS

1	Software Configurable Gain and Threshold — enables the user to set signal level and flame on/off thresholds
2	Flame Status Relay and Indicator — two flame status output relays and one LED to indicate flame on/off condition
3	Flame Monitoring — 4-20 mA flame signal output and modbus communications for remote monitoring
4	Continuous Electronic Self-Checking — dedicated relay and LED indicate system functionality
5	Redundant Power Supply — dual 24 VDC power inputs to signal processor provide backup power to flame sensor
6	Certifications — meets FM requirements for Flame Standard and Class I Div. 2 electrical safety

AMETEK®

POWER INSTRUMENTS

SPECIFICATIONS

INPUTS
- 4-20mA according to ANSI/ISA S50.1, 20 to 30 VDC

RELAY CONTACTS
- (3) Dry relay contacts
  - (2) Flame ON/OFF
  - Health status
- 4A @ 120 VAC or 30 VDC

ANALOG OUTPUT
- 4-20mA signal proportional to flame intensity

VISUAL INDICATORS
- Flame ON - Green LED
- Health status - Green LED

COMMUNICATIONS
- Modbus secondary
- RS-232 for configuration
- RS-485 for flame monitoring

SIGNAL PROCESSING
- Software configurable gain & set points
- Flame on/off response time <30 msec

POWER
- 24 VDC, 100mA maximum

ENVIRONMENTAL
- Operating temperature: 32° to 131°F (0° to 55°C) continuous operation
- Humidity: 5-95% noncondensing

CERTIFICATIONS
Factory Mutual approved for industrial burner applications, according to:
- 7610 Standard, Combustion Safeguards and Flame Sensing
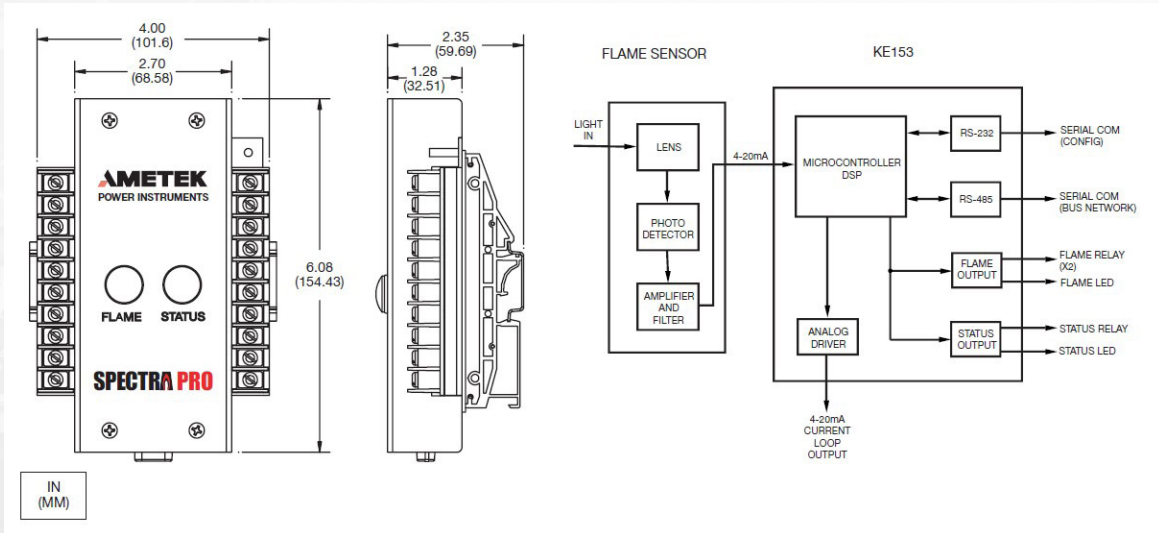- 3611 Standard, Class 1 Division 2 Electrical Equipment Groups A, B, C and D
- CE approved

OPTIONAL OPTIONS
MOUNTING STYLES
- Available in DIN rail or wall mount

ELECTRICAL CABLE, P/N 8TL41AAA1
- 10 feet long
- Straight connector

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POWER INSTRUMENTS

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