

# **Phoenix Integrated Scanners**

Phoenix scanners provide unparalled ease of installation and operation. With fully automatic flame characterization and optimum gain detection initiated from the streamlined user interface.



### Features & Benefits

- FIREYE **85UVF** self-checking scanners are used to detect 295 to 340 nanometers wavelength ultraviolet emissions.
- TYPICAL UV APPLICATIONS: Duct Burners, Industrial Gas Burners, Refinery Applications, Low NOx Burners, Waste Gas Units and Incinerators.
- Fireye 851RF self checking scanners are used to detect 830 to 1100 nanometers wavelength infrared emissions. They are suited for continuous or non-continuous burner operation.
- Typical IR Applications: Duct Burners, Industrial Oil Burners, Refinery Applicaions, Waste Oil Units and Incinerators.
- NEMA 4X & IP66 Class I Division 2 Groups A, B, C, D.
- Reliable Interface
   Simple 4 button keypad and informative LED's.
- COMPATIBILITY UV, IR and CEX versions.

### **Product Overview**

The Fireye Phoenix flame scanners are microprocessor based devices utilizing a solid state flame detection sensor. The flame detectors incorporate an internal flame relay with automatically set ON/OFF thresholds, thereby eliminating the need for a remote flame amplifier or flame switch.

Phoenix scanners detect the amplitude of the modulations (the flame "flicker") that occur within the targeted flame, over a wide frequency. During the detector setup procedure, the amplitudes of the target flame are automatically stored by the flame detector, together with optimum ON/OFF criteria. The appropriate sensor gain is automatically selected. Phoenix scanners incorporate full self diagnostics and electronic self checking.

The Phoenix 85UVF/IRF is available in multiple models differentiated by detection cell type, levels of hazardous area certifications and agency approvals.

The Phoenix 85UVF/IRF flame scanner is powered by 24Vdc. Electrical connection is via an 8-pin electrical quick-disconnect (QD) for the Standard models and internal terminal blocks for CEX models. An analog 4-20mA output of flame strength is standard.



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#### Mechanical

Housing: Standard Models: GE Valox CEX Models: Painted Aluminum

Weight: Standard Models: 3.3 lbs. (1.5 kg) CEX Models: 9.5 lbs. (4.3 kg)

Environmental: Standard Models: NEMA 4X & IP66 CEX Models: Exd IIc T6 rated, ATEX certified

Mounting: 1" NPT or 1" BSP (mounting flange ordered separately)

Temperature Rating:  $-40^{\circ}$  F to  $+150^{\circ}$  F  $(-40^{\circ}$  C to  $+65^{\circ}$  C)

Humidity: 0% to 95% relative humidity, non-condensing

Cooling/Purge Air: Supply clean, dry, cool air 3/8" NPT or BSP connection

**Optical** UV Models 295 to 340 nanometers

IR Models 830 to 1100 nanometers K3 Models 310 to 500 nanometers

**Electrical** 

Input Power: 24 Vdc, +20%, -15% supply current 200 mA

Status Indication: Multiple LED indication for flame signal strength, flame relay, ready,

target, background select and fault codes

Electrical Connection: Standard Models: 8-Pin quick disconnect (QD), use 59-546-xx cable

CEX Models: internal terminal blocks

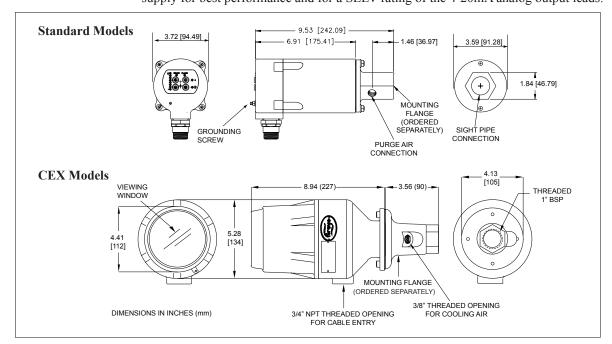
Relay Outputs: Flame Relay SPST (N.O.)

Fault Relay SPST (N.C.)

Contact Rating: Minimum: 10mA @ 5 Vdc

Maximum: 2A @ 30 Vdc, 2A @ 230 Vac (Resistive load)

Analog Output: Optically isolated 4-20mA dc current referenced to 24 Vdc common, maximum connected load: 750 Ohms. Fireye recommends the 60-2685-X 24 Vdc power supply for best performance and for a SELV rating of the 4-20mA analog output leads.



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