



# Phoenix Integrated Scanners

*Phoenix scanners provide unparalleled 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 85IRF** 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 Applications, 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 Fireeye 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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Phoenix-CS2  
Rev April 18, 2013



## 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° F to +150° F (-40° C to +65° 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<br>CEX Models: internal terminal blocks  |
| Relay Outputs:         | Flame Relay SPST (N.O.)<br>Fault Relay SPST (N.C.)   |
| Contact Rating:        | Minimum: 10mA @ 5 Vdc<br>Maximum: 2A @ 30 Vdc, 2A @ 230 Vac (Resistive load)<br>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. |

