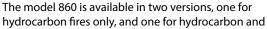


ULTRAVIOLET-INFRARED FLAME DETECTOR Omniguard[®] model 860

The Omniguard® model 860 UV/IR flame detector is designed to detect unwanted fires, and output appropriate alarm information. The model 860 senses ultraviolet radiation and infrared radiation in the appropriate wavelengths for very early fire detection. Using the patented Fire Event Analysis (FEA) algorithm, it is also able to distinguish between real fire and non-fire events providing superior false alarm immunity. The technology has proven itself over decades of reliable service.



certain non-hydrocarbon fires. This dual capability provides the unique capability of providing fire detection for a broad range of fuels with a single unit. Both versions are available with an automatic self-test function to monitor the detector's ability to sense fires, and report a fault condition when impaired. Typical applications for the Omniguard® 860 model are refineries, turbine enclosures, petrochemical plants, tank farms, powerplants, compressor stations, LPG failities, LNG facilities, and hangars.

Specifications

Performance ratings

Responsive to hydrocarbon (gasoline, propane, methane, alcohol, JP-4, JP-3, etc). Also responsive to non-hydrocarbon (hydrogen, silane, hydrazine, etc) flames when special dual-pass IR sensor is used.

- Third-party performance certified to detect:
- Saturating signal source in 50 milliseconds
- 1 square foot gasoline fire at 50 feet in 1 second
- 4 square foot aviation fuel fire at 100 feet in 5 seconds or less
- 100 square foot aviation fuel fire at 250 feet in 5 seconds or less
- Methane plume flame at 35 feet in 1 second
- Additional performance with dual-pass infrared sensor:
- Silane plume flame 24 inches at 35 feet in 60 milliseconds
- Hydrogen plume flame 20 inches at 35 feet in 3 seconds
- Hydrazine 8 inch pool fire at 80 feet in 9.4 seconds

Environmental ratings

Rated:

Class I, Division 1, Groups B, C & D (explosion proof) Class II, Division 1, Groups E, F & G (dust ignition proof) NEMA Type 4X weatherproof, dust-tight, watertight CE008 $\overleftarrow{\text{Ex}}$ II 2 G/D Ex db IIB + H₂ T5 Gb for gas Ex tb IIIC T100°C Db IP66 for dust

Standard housing is copper-free aluminium conversion coated to MIL-C-5541C, Class 3 (white). Optional stainless steel housing available with passive finish per MIL-S-5002C, Type 1.

Key features

- b Patented Fire Event Analysis (FEA) algorithm for superior false-alarm immunity
- 6 Five-year warranty on sensors from date of delivery. Three-year warranty on components or manufacturing defects from date of delivery
- ง Field of view 120 degrees
- b Robust weatherproof enclosure for indoor or outdoor applications
- In FM, CSA, IECEx, ATEX, SIL2, Russian Fire Certificate, EMC, LVD, CSFM
- ง Advanced through-thelens diagnostic self-test
- ა Long range detection
- ง Self-contained, explosion-proof enclosure
- ง Field configurable relays and sensitivity
- State-of-the-art microprocessor control
- ⁶ High intensity, localized indication of fire or fault

Omniguard[®] model 860

Specifications (continued)

Operating temperature range: -40° to +85°C (-40° to +185°F)

Spectral response

Ultraviolet peak sensitivities of 0.22 μm

Infrared

- Standard: peak sensitivities of 4.4 μm
- Dual pass: peak sensitivities of 2.9 μm and 4.4 μm

Detector inputs

Inputs

range

- nominal voltage
- l voltage 24 VDC (ripple voltage <240mV) 20 to 30 VDC

Power consumption

- standby 90 mA • alarm 110 mA
- auto and manual test 250 mA

Detector outputs Relay

пејау	
• relays (2)	fire, trouble, dry contacts, hermetically
	sealed
 rated 	2 A at 28 VDC. User selectable NO or NC
 fire relay 	user selectable latching or non-latching

Current loop (standard version): 0 to 20 mA output

- 20 mA = Fire
- 16 mA = UV warning
- 15 mA = IR warning
- 4 mA = Normal
- 3 mA = Fire relay coil fault
- 1 mA = Self-test fault
- 0 mA = Current loop fault

Programmable RS-485 serial output.

Mechanical considerations

Weight	2.4 kg (5 lbs) (aluminum)
	6.3 kg (13 lbs) (stainless steel)
Height x width x depth	114 x 140 x 153 mm
	(4.5 x 5.5 x 6.0 in)
Conduit entry	3/4-14 NPT or M20-1.5

Optional accessories

Swivel mount	No 20856 (used with aluminum)	
	No 24784 (used with stainless steel)	
Portable test unit	Model 540 / 545	
Air shield kit	No 8001023	
Rain shield	No 23546	

Ordering information	on	
To order, please specify		
Туре	Omniguard [®] model 860	
Designation	Ultraviolet-infrared flame detector	
Ordering number	860 - X X X X X 	
Fire type 0 Hydrocarbon 1 Hydrocarbon/non-hydrod	carbon	
Housing material/conduit entry 0 aluminium, 3/4-14 NPT (white) 2 stainless steel, 3/4-14 NPT 3 aluminium, M20-1.5 (white) 5 stainless steel, M20-1.5		
Test feature0 no self-test1 auto self-test		

Fire relay configuration

- 0 latching
- 1 non-latching

Approvals

0 FM, CSA, IECEx, ATEX, SIL2, Russian Fire Certificate, EMC, LVD, CSFM



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