



ULTRAVIOLET FLAME DETECTOR

Omniguard® model 660

The Omniguard® model 660 UV flame detector is designed to detect unwanted fires, and output appropriate alarm information. The model 660 senses ultraviolet radiation in the appropriate wavelength for extremely fast fire detection. The model 660 will sense both hydrocarbon and non-hydrocarbon fires, a technology which has proven itself over decades of reliable service.

The model 660 is available in two versions, one for standard industrial applications where a maximum operating temperature of 85°C is the norm, and a second which is capable of operating at a maximum sustained temperature of 125°C. This version is especially well suited for turbine enclosure and high temperature industrial applications. 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® 660 model are turbine enclosures, power-plants, compressor stations, LPG facilities, LNG facilities, and hangars.



Specifications

Performance ratings

Responsive to hydrocarbon (gasoline, propane, methane, alcohol, etc) and non-hydrocarbon (hydrogen, silane, hydrazine, magnesium, etc) flames.

Third-party performance certified to detect saturating signal source in 15 milliseconds, 1 square foot gasoline flame at 50 feet in 1 second typical. Horizontal performance envelope of 120°.

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
CE0081 Ex II 2 G/D
Ex db IIB + H₂ T5 Gb for gas on 660-0XXXX
Ex tb IIIC T100°C Db IP66 for dust on 660-0XXXX
Ex db IIB + H₂ T4 Gb for gas on 660-1XXXX
Ex tb IIIC T135°C Db IP66 for dust on 660-1XXXX

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

- Available in special high temperature version, -40°C to +125°C (-40° to +257°F)
- Five-year warranty on sensors from date of delivery. Three-year warranty on components or manufacturing defects from date of delivery
- Field of view 120 degrees
- Robust, weatherproof enclosure for indoor or outdoor applications
- FM, CSA, IECEx, ATEX, SIL2, Russian Fire Certificate, EMC, LVD, CSFM
- Advanced through-the-lens diagnostic self-test
- Long range detection
- Self-contained, explosion-proof enclosure
- Field configurable relays and sensitivity
- State-of-the-art microprocessor control
- High intensity, localized indication of fire or fault
- No radioactive source used

Omniguard® model 660

Specifications (continued)

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

Special high temperature version:
-40° to +125°C (-40° to +257°F).

Spectral response

Ultraviolet peak sensitivity of 0.22 µm

Detector inputs

Inputs

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

Power consumption

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

Detector outputs

Relay

- 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
- 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 43808-2 115VAC, US and Canada
43808-3 100-240VAC

Air shield kit No 8001023

Rain shield No 23546

Ordering information

To order, please specify

Type Omniguard® model 660
Designation Ultraviolet flame detector
Ordering number 660 - X X X X X

Fire type

- 0 Industrial temperature fire detector
- 1 High temperature fire detector

Housing material/conduit entry

- 0 aluminum, 3/4-14 NPT (white)
- 2 stainless steel, 3/4-14 NPT
- 3 aluminum, M20-1.5 (white)
- 5 stainless steel, M20-1.5

Test feature

- 0 no self-test
- 1 auto self-test

Fire relay configuration

- 0 latching
- 1 non-latching

Approvals

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

