MULTI-SPECTRUM INFRARED FLAME DETECTOR
Omniguard® model 760

The Omniguard® Model 760 multi-spectrum infrared flame detector is designed to detect fires and output appropriate alarm information. In a breakthrough technological advance, the model 760 senses infrared radiation in five discreet infrared (IR5) wavelengths for early fire detection. The model 760 utilizes the patented Omniguard® Fire Event Algorithm (FEA) for superior false alarm immunity.

The multi-spectrum sensor information, combined with the sophisticated algorithm, enables the model 760 the ability to quickly detect hydrocarbon and certain non-hydrocarbon fueled fires. The model 760 also features 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® 760 model are refineries, pipelines, production platforms, turbine enclosures, power plants, compressor stations, LNG facilities, LPG facilities, tank farms, hangars, and petrochemical plants.

Specifications
Performance ratings

Responsive to hydrocarbon and non-hydrocarbon flames.

Third-party performance certified to detect:
Normal sensitivity
• 1 square foot gasoline fire at 75 feet in <1 second
• 1 square foot n-Heptane fire at 75 feet in <1 second
Enhanced sensitivity
• 1 square foot gasoline fire at 100 feet in <1 second
• 1 square foot n-Heptane fire at 100 feet in <1 second
Long distance sensitivity
• 1 square foot gasoline fire at 200 feet in <1 second
• 1 square foot n-Heptane fire at 200 feet in <1 second
• 4 square foot JP-5 fire at 200 feet in <5 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)
    Type 4X weatherproof, dust-tight, watertight
    CE0081 $\langle Ex \rangle$ II 2 G/D
    Ex db IIB+H_2 T5 Gb for gas
    Ex tb IIIC T100°C Db IP66 for dust

Housings
Copper-free aluminum conversion coated to MIL-C-5541C, Class 3 (white)
Stainless Steel 316 housing with passive finish per MIL-S-5002C, Type 1

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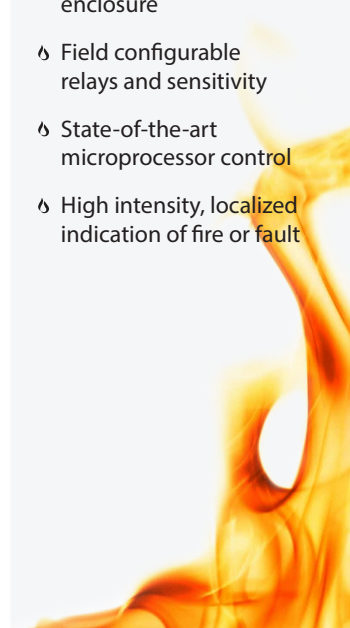-40° to +85°C (-40° to +185°F)

Operating humidity
0-95% RH (non-condensing)
(withstands up to 100% RH for short periods)

Specifications continue on next page...

Key features
⟐ Patented Fire Event Analysis (FEA) algorithm for superior false-alarm immunity

⟐ Five-year warranty on sensors from date of delivery, three-year warranty on components or manufacturing defects from date of delivery

⟐ Field of view 90 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

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Specifications (continued)

Spectral response
Infrared peak sensitivities of
2.2 µm, 2.9 µm, 3.7 µm, 4.4 µm, and 5.8 µm

Detector inputs
Inputs
• nominal voltage	24 VDC (ripple voltage <240mV)
• range	20 to 30 VDC

Power consumption
• standby	80 mA
• alarm	100 mA
• auto and manual test	160 mA

Detector outputs
Relay
• relays (2)	fire, trouble, dry contacts, hermetically sealed
• fire relay	user selectable latching or non-latching
• rated	2 A at 30 VDC, User selectable NO or NC

Current loop: 0 to 20 mA output
- 20 mA = Fire
- 16 mA = Fire IR warning
- 15 mA = Ref IR warning
- 4 mA = Normal
- 3 mA = Fire relay coil fault
- 2.5 mA = Block fault
- 1.5 mA = Exceedance fault
- 1 mA = Self-test fault
- 0 mA = Current loop fault

RS485 MODBUS RTU

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 125 mm
	(4.5 x 5.5 x 4.9 in)
Conduit entry	3/4-14 NPT or M20-1.5

Optional accessories	Art.no
Swivel mount (SS304)	20856 (for aluminum detectors)
Pole mount 2" (SS316L)	26803 (for swivel mount 20856)
Swivel mount (SS316)	24784 (for stainless steel detectors)
Pole mount 2" (SS316L)	26807 (for swivel mount 24784)
Portable test unit	545
Air shield assembly	19797
Rain shield/Sun shield (SS316L)	27976

Ordering information

To order, please specify
Type:	Omniguard® model 760
Designation:	Multi-spectrum infrared flame detector
Ordering number:	760 - X X X X X

Fire type
0 Hydrocarbon/non-hydrocarbon

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
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

For information on the specific certifications and approvals each Omniguard® Flame Detector holds please visit: www.omniguardbyfirefly.com/flamedetectors

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