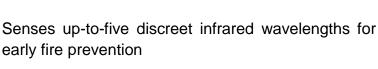
Sentry IT Data Sheet – Multi-Spectrum IR Flame Detector, Model 3976



- Fire Event Analysis (FEA) algorithm for superior false-alarm immunity
- 90° field of view and 200ft long range detection
- Automatic through-the-lens diagnostic self-test
- Weather and explosion proof enclosure

Overview

The model 3976 multi-spectrum infrared flame detector is designed to detect unwanted fires and output appropriate alarm information. In a breakthrough technological advance, the model 3976 senses infrared radiation in five discrete infrared wavelengths for early fire detection.

The multi-spectrum sensor information, combined with the sophisticated algorithm, enables the model 3976 the ability to quickly detect hydrocarbon and non-hydrocarbon fueled fires. The model 3976 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 model 3976 are refineries, pipelines, production platforms, turbine enclosures, power plants, compressor stations, LNG facilities, LPG facilities, tank farms, hangars, and petrochemical plants.

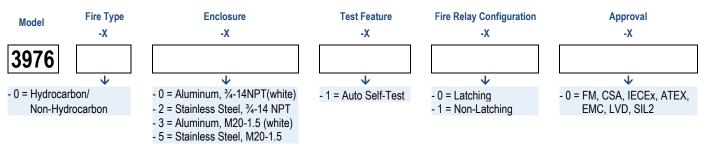
Features & Benefits

- Fire Event Analysis (FEA) algorithm for superior false-alarm immunity.
- Field of view 90 degrees.
- Robust, weatherproof enclosure for indoor or outdoor applications (Type 4X).
- Advanced through-the-lens diagnostic self-test.
- Field configurable relays and sensitivity.
- High intensity, localized indication of fire or fault.

- Five-year warranty on sensors from date of delivery. Three-year warranty on components or manufacturing defects from date of delivery.
- Long range detection.
- FM, CSA, IECEx, ATEX, SIL2, EMC, LVD.
- Self-contained, explosion-proof enclosure.
- State-of-the-art microprocessor control.

| Performance Ratings | | Detector Inputs | | | Environmental Ratings | |
|---|-----------------|--|---------------|-------------------------------------|---|---------------------------------------|
| Normal sensitivity | | Inputs: | | | Class I, Division 1, Groups B, C & D (explosion proof) | |
| 1 sq. ft. gasoline fire at 75 ft. in <1 sec | | Nominal Voltage | | 24 VDC (ripple voltage <240mV) | Class II, Division 1, Groups E, F & G (dust ignition proof) | |
| 1 sq. ft. n-Heptane fire at 75 ft. in <1 sec | | Range | | 20 to 30 VDC | Type 4X weatherproof, dust-tight, watertight | |
| Enhanced sensitivity | | Power consumption: | | | CE0081 🕢 II 2 G/D | |
| • 1 sq. ft. gasoline fire at 100 ft. in <1 sec | | Standby | | 80 mA | Ex db IIB+H ₂ T5 Gb for gas | |
| 1 sq. ft. n-Heptane fire at 100 ft. in <1 sec | | Alarm | | 100 mA | Ex tb IIIC T100°C Db IP66 for dust | |
| Long distance sensitivity | | Auto and mar | nual test | 160 mA | | |
| • 1 sq. ft. gasoline fire at 200 ft. in <1 sec | | Detector Outputs | | | Standard housing is copper-free aluminum conversion coated to MIL-C-5541C, Class 3 (white). | |
| • 1 sq. ft. n-Heptane fire at 200 ft. in <1 sec | | Relay: | | | | |
| 4 sq. ft. JP-5 fire at 200 ft. in <5 sec | | Relays (2) | fire, trouble | , dry contacts, hermetically sealed | v sealed Optional stainless steel housing available with passive | |
| Operating Temperature Range -40º to 185ºF (-40º to 85ºC) | | Rated 2 A at 28 VDC. User selectable NO or NC Fire relay user selectable latching or non-latching | | | finish per MIL-S-5002C, Type 1. | |
| | | | | | | |
| Mechanical Specifications | | Current loop (standard version): 0 to 20 mA output • 20 mA = Fire | | | | |
| Weight (aluminum): 2.4 kg (5 lbs) | | | | | | |
| | 6.3 kg (13 lbs) | • 16 mA = Warning fire IR | | | APPROVED | |
| Height x width x depth: 114 x 140 x 125 mm (4.5 x 5.5 x 4.9 in) | | 5 mA = Warning ref IR 3 mA = Fire relay coil fault 1.5 mA = Exceedance fault | | | SIL-2 CERTIFIED | |
| | | | | | | · · · · · · · · · · · · · · · · · · · |
| Spectral Response | | | | | | |
| Infrared peak sensitivities of 2.2 μm, 2.9 μm, 3.7 μm, 4.4 μm, 5.8 μm | | • 0 mA = Current loop fault | | | | |
| | | • 4 mA = Normal | | | *Specifications subject to change without notice | |
| | | RS-485 Serial | | | Specifications subject to change without notice | |

Ordering Information: The following part number is essential in selection of the correct product. Please build up the desired part by inserting the code for each element into the appropriate space (i.e. 3976-0-0-1-0-0).



Accessories:

3900-01 SS Tilt Mount for Aluminum Enclosures

3900-03 Air Shield Model # 3976

3900-07 Universal Tester Multi IR & UV/IR #3966, 3976, 3986

3900-09 Charger for Tester # 3900-06 & # 3900-07

3900-15 2" Pole Mount Kit for # 3900-02 Bracket

3900-02 SS Tilt Mount for Stainless Steel Enclosures

3900-05 SS Sun Shade/Rain Guard

3900-08 Battery Pack for Tester # 3900-06 & # 3900-07

3900-14 2" Pole Mount Kit for # 3900-01 Bracket