D181 1IR+UV – MULTI-SPECTRUM FLAME DETECTOR

The detectors are supplied with Alarm / Auxiliary / Fault relays, 0-20 mA analog and RS485 outputs. They can store 200 events and 6 FireGraphs in their FRMA memory.

APPLICATIONS

- Airports & Aircraft Hangars
- Warehouse & Storage Facilities
- Manufacturing & Food Processing
- Diesel Generators & Fuel Storage
- Battery Rooms & Charging Facilities
- Compressor Stations
- Paint Booths
- Paint & Solvent Storage Facilities
- Recycling Centers
- Power Plants

STANDARD FEATURES

- Multi-Spectrum 1IR + UV design
- Detects Hydrocarbon and Non-Hydrocarbon fires with the highest false alarm immunity
- Standard outputs: Warning / Alarm / Fault / Auxiliary relays, 0-20mA and RS485
- 200 event history log & 6 FireGraphs®
- Adjustable Time/Verification Delay up to 20 seconds
- Automatic Self-Test checking electronic circuitry and Optical Path Integrity test with OptiRadar®
- Copper free aluminum enclosure, powder coated finish
- Test Mode for manual testing
- Integral cable harness for easy field wiring
- Solar Blind
- Heater Option to avoid condensation and icing
- High False Alarm immunity to external non-fire sources
- Manufactured in the USA with a 5-year warranty
- RFI & EMC compliant
- Meets SIL 2 requirements
- FM/CFM/CSFM Approved
- NEMA 4 (IP66/67) Enclosure

PRODUCT DESCRIPTION

The Detectors Incorporated Model D181 Multi-Spectrum 1IR +UV Flame Detector is the most advanced optical flame optical flame detector designed to respond to both Hydrocarbon and Non-Hydrocarbon fires while rejecting False Alarm sources. The D181 detector sense UV radiation in the Ultraviolet spectrum and Infrared radiation in 1 discrete bands of IR spectrum for detecting fires. Flame response and false source rejection for the D181 models is accomplished by utilizing the Convolution Method and Advanced DSP (Digital Signal Processing) in conjunction with hard coded algorithms identifying specific wavelengths of energy. The detector is able to respond to Hydrocarbon and Non-Hydrocarbon fires at a distance of 100+ feet. All this while rejecting False sources.
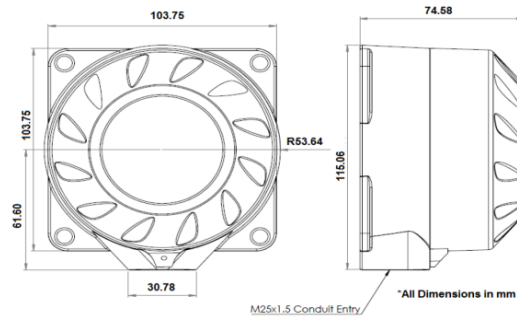
The D181 detector is designed for a multitude of applications. The detector will respond to a 1 ft. x 1 ft. n-Heptane or IPA fires from 100 feet within approximately 3-5 seconds. The Model D181 series is a stand-alone fire & flame detector in watertight NEMA 4 (IP66/67) Aluminum enclosure. The detectors feature automatic self-test for continuously checking the optical path integrity while monitoring the electronics to ensure utmost reliable operation and fault reporting.

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PRODUCT LISTINGS

FM APPROVED

Canada FM

3260

LISTING FIRE SERVICE

CE Mark

Meets or exceeds MIL-STD 810C. In compliance with FM3260-2003

Specifications subject to change without notice.

Find latest revision at **www.hochiki.com**

F0265 02/2021

D181 1IR+UV – MULTI-SPECTRUM FLAME DETECTOR

GENERAL	
Field-of-View	100° Horizontal and Vertical
Spectral Sensitivity	UV: 180-260 nanometers IR: 4.3-4.6 microns (1 discrete band)
Detection Range	12"x12" n-Heptane fire – 80 ft (24.4m)
Response Time	Typically 3-5 seconds
ELECTRICAL	
Operating Voltage	24 VDC nominal (18-31), Regulated
Power Consumption	Standby: 60 mA @ 24 VDC Alarm: 90 mA @ 24 VDC Heater: Optional, 120 mA additional
Output Relays:	Alarm / Auxiliary / Fault SPDT-contacts rated 2A @ 24 VDC Alarm & Auxiliary relays: De-Energized Fault relay: Energized Aux. relays settings: .3, 3, 10, 20 seconds
Analog Output	0-20 mA Stepped - Source
Communication	RS485 ModBus
Visual Indications	Green LED - Normal Red LED - Alarm
Conduit Entries	Standard: (2) M25 Optional M25 x 3/4" NPT adapter
Wiring	12 AWG (3.3 mm^2) - 22 AWG (33 mm^2)
MECHANICAL	
Enclosure Material	360 Copper-Free Aluminum, Powder Coated
Weight	2.5 lbs. (1.1 kg)
Mounting	Stainless steel swivel arm – order separately DA-002 6.6 lbs. (3 kg)
ENVIRONMENTAL	
Humidity Range	5 to 95% relative humidity, non-Condensing
Temperature Range	-40° to +185° F (-40° to +85°C) FM. -55° to +185°F (-48.3° to + 85°C) with Heater Option
Vibration	In compliance with FM 3260-2003, Meets or Exceeds MIL-STD 810C
Enclosure Type	NEMA 4 & 4X, IP66/IP67
ORDERING INFORMATION AND ACCESSORIES	
D181	UV/3-IR Multi -Spectrum Flame Detector in an aluminum enclosure. See Price List for option/ordering guide
DA-002	316 S.S. Mounting Arm
DA-003	Air Purge Kit for D181
DA-004	Test Light only for Single IR D1
DA-007	Weather Shield
DA-008	Detector Key Test Station
HW-AM25-0002	M25 x ¾" Brass Adaptor