Flame Detectors on industrial safety

IR3 Detector   **UV/IR Detector**

FX-20EX / FX-20EX-S

UV/IR Flame Detector

in reliable false alarm immunity

The new FX-20EX UV/IR Flame Detector detects fuel and gas fires at long distances with the highest immunity to false alarms.
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The FX-20EX UV/IR can detect a 0.1m² gasoline pan fire at 30m in less than 5 seconds.

Its new features include RS484/ RS232 compatibilities for digital communications; lower power requirements; and a compact, lighter design and FX-20 series are approved to ATEX by DNV for explosion-proof.

FEATURES & BENEFITS

- **UV/IR Spectrum** – for medium distance detection and high false alarm immunity

- **Compact & lighter design**

- **Enclosures :** (Options)
  - Aluminium
  - Stainless (ST 316L) : for Offshore Facilities

- **User Selectable** (Sensitivity / Functions)

- **Multiple output options**
  - Relays for Alarm and Fault
  - 0-20mA (stepped)
  - RS-485 / RS-232 spectrum monitoring

- **Lower power requirement**
  (35mA –standby / 75mA – alarm)

- **Ex cable gland / 2-meter cable assembled**
  & provided for users' easy installation

- **Certifications**
  - ATEX approved by DNV for explosion-proof
  - KFI (Korea) / CE marking

APPLICATIONS

Offshore Oil & Gas Installations
Onshore Oil & Gas Installations and pipelines
Petrochemical plants
Chemical plants
Shipbuilding facility
Automotive industry

Storage tank farms
Power generation facility
Petrochemical plants
Painting industry
Warehouse
Waste disposal facility
Explosive & Munitions

Flame Detectors on industrial safety

GENERAL SPECIFICATIONS

Spectrum Response	UV /IR (Dual Bands)

Spectrum Response (at highest sensitivity setting for 0.1m² pan fire)	**Fuel**	**Distance**	**Fuel**	**Distance**
	n-Heptane	30m	Ethanol	20m
	Gasoline	30m	IPA	25m
	Diesel	20m	(isopropyl Alcohol)	
	LPG*	20m	Methanol	20m
	*0.5m high / 0.2m width plume fire			

Response Time	Typically 5 seconds
Adjustable Time Delay	Up to 20 seconds
Sensitivity Range	4 sensitivity ranges for 0.1 sq-m n-Heptane pan fire from 15m to 65m
Field of View	Horizontal 90°, Vertical 90°
Built-in-Test	Manual (optionally Automatic)
Temperature Range	Operating/Storage: -40℃ to 75℃
Humidity	Up to 95% non-condensing

ELECTRICAL SPECIFICATIONS

Operating Voltage	24VDC norminal (17-31VDC)
Power Consumption	Standby: max. 35mA Alarm: max. 75mA
Cable Entry	1 x M20 (ISO)
Wiring	AWG 16-26 (Str 1.5mm² to 0.13mm²)
Electromagnetic Compatibility	EMI/RFI protected to EN61000 series
Electrical Interface	The detector includes twelve(12) terminals with four(4) wiring options

OUTPUTS

Relays	Alarm, Fault SPST volt-free contacts rated 5A at 30VDC or 250VAC
0-20mA (stepped)	Non-isolated "Source" configuration Fault: 0 +1mA Bit Fault: 2mA±10% Normal: 4mA±10% Warning: 16mA±10% Alarm: 20mA±10% Resistance Loop: max. 800Ω
RS-485 (option)	RS-485 Modbus compatible communication link that can be used in computer controlled installations
RS-232C (option)	Three IR channels spectrum monitoring with PC

MECHANICAL SPECIFICATIONS

Materials Enclosure options	- Heavy duty copper free aluminium (less than 1%) with bright grey anodizing finish - Stainless Steel 316L with electro polish finish
Mounting(Tilt Mount) Options	- Heavy duty copper free aluminium (less than 1%) with grey epoxy enamel finish - Stainless Steel 316L with electro polish finish
Dimensions	Detector: 83(D) x 126(L) mm
Weight	Detector (aluminium): 1.0 kg Detector (ST 316L): 2.7 kg Tilt mount (aluminium/ ST 316L): 0.3kg / 0.5kg
Water and Dust	IP66 and IP67 per EN60529

APPROVALS

Hazardous Area	ATEX Ex II 2 G Exd IIC T6, -40℃ to +75℃ (DNV 09 ATEX 0000)
Performance	KFI (Korea) EN54-10 (designed to meet)