

▶ FS20X

UV/IR optical flame detector



Technical specifications

Field of view: 90° horizontal vision cone, ± 45° from axis

Sensitivity: 4 levels switch selectable – very high (60 m), high (45 m), medium (30 m) and low (15 m)

Response time:

- 3 to 5 seconds to 0,1 m² n-heptane fire at 30 m
- 3 to 10 seconds to 0,1 m² n-heptane fire at 60 m

Power supply : 24 Vcc nominal (18-32 Vcc) - regulated

Analog output: 0 to 20 mA stepped–source or sink user selectable

Communication: ModBus RS-485 or RS-485 FireBus II

Output relays:

- Fire alarm: Contacts NO and NC selectable
- Auxiliary: Contacts NO and NC selectable
- Fault: Contacts NO and NC selectable

Visual indicators: Green (power), red (alarm), yellow (fault)

Housing: Aluminium NEMA4 (IP66), tamper-evident with openings NPT 3/4" (M25 optional), 316 stainless steel available.

Ingress protection: IP66

Mounting: Swivel bracket assembly - optional

Temperature range: -40°C to 85°C

Humidity range: 5 to 98% relative humidity, non-condensing

Weight: 1,8 kg (Aluminum) or 3,4 kg (stainless steel)

Certifications:

ATEX/IECEx: II 2 G Ex db IIC T4 (Ta : -40 à + 110 °C),

FM: Class I, division 1 & 2, group B, C & D; Class II, Div. 1 & 2, groups E, F et G; Class III

CE: EN6100-6-4 and EN50130-4 INMETRO CU-TR compliant

SIL Classification: FMEDA

Product description

The **FS20X** is an efficient and reliable UV / IR optical flame detector combining ultraviolet and infrared sensors, thus increasing immunity to false alarms by measuring two different flame spectra.

If the detector's UV signal is degraded due to thick fumes or a contaminated lens, the IR sensor will trigger the fire alarm despite reduced sensitivity and slower response time.

▶ **Combination of 2 different sensors**

To trigger a fire alarm, the UV / IR flame detector must simultaneously receive information from the UV and IR sensors. In case of an arc weld, the UV sensor will be energized but the IR sensor will not detect heat, there will be no fire alarm. Similarly, in front of an object emitting a large heat source, the IR sensor will react but the UV sensor will not be triggered.

▶ **Two high performance microprocessors**

Two microprocessors guarantee performance and measurements reliability with a very short response time. The master microprocessor performs high-speed digital sampling and signal processing calculations, while the slave microprocessor processes various sensor data such as self-diagnosis, interface communication, events and data storage.

▶ **Up to 60 meters range**

The FS20X detector has a detection range greater than 60 m (with a very high sensitivity setting) able to detect a heptane reference fire of 0.1 m². Its vision cone is, in terms of volumetric coverage, significantly superior to most UV / IR detectors on the market.

▶ **Main features**

- Technology suitable for hydrogen, hydrocarbons (petrol, ethanol, methane), paper, wood fires and more
- Two high performance microprocessors for better measurements integrity in very short response time
- Immunity to arc welding and rejection of false alarms in all ambient conditions.
- 4 sensitivity levels selectable by switch for each particular case adaptation
- PC software and interface module for diagnosis, data and event log downloads
- Visual indicators : Green (power), red (alarm), yellow (fault)
- Minimum maintenance for error-free operation