FF756N

16521 UV/IR² Flame Detector in Eexd - IIC T6 Flame Proof Housing

General

The FF756N is a Ultra-Violet, dual Infrared (UV/IR²) flame detector in a flame proof (Exd) housing. It is designed to protect hazardous areas where open fires may be expected and detects almost all flames, including hydrocarbon fires with 4.3µm emissions through to invisible fires such as hydrogen.

The UV/IR² sensors are sensitive to flickering, low frequency (1-15 Hz) infrared radiation emitted by flames during combustion.

Operation

The FF756N has a UV sensor and two IR sensors which respond to different wavelengths of both the ultra-violet and the infrared spectrum. The signals from these sensors are processed by the detector and checked for characteristics of a flame. The simultaneous detection of both the UV and the IR light by the sensors will signal an alarm. False alarms from flickering sunlight, arc welding and lightning are eliminated by a combination of UV and dual IR signal processing techniques.

The FF756N has selectable output options of relay contacts or 4-20mA signal, as standard.

Applications

- Chemical Plants
- Nuclear Power Sites
- Engine Rooms
- Spray Booths
- Pharmaceutical Production
- Military Applications
- Marine Industry
- Printing
- Refi neries
- Fuel Loading Racks
- Storage Tanks
- Aircraft Hangers
- Petrochemical Onshore/Offshore
- Biomass Storage and Handling
- LNG/LPG Production

Details

- Highest immunity to false sources like arc welding, lightning, and solar blind
- Tolerant of fumes, vapours, dust and mist
- Unaffected by convection currents, draughts or wind
- Suitable for indoor and outdoor areas
- Proven response to multiple fuel types due to multi-spectrum detection
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- Selectable output options,response speed and sensitivity levels
- Built in auto and manual test
- Low current consumption

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Technical specifications

Electrical

Operating voltage	14 to 30 VDC
Current consumption	8 mA (Quiescent - RL2 energised) 4 mA (Quiescent - current loop, RL2 off) 3 mA (Quiescent - RL2 off) 28 mA (Alarm - RL1 & RL2 energised) 20 mA (Alarm - current loop, RL1 & 2 off) 28 mA (Alarm - RL1 energised)
Cable specification	1.0 to 4.0 mm²

Detection

Field of view	< 90° Cone
Range	< 50 m
Lateral detection	< 45°
Optical wave length (all languages)	185 to 260 nm (UV)
	0.75 to 2.7 µm (IR)
Response time (all languages)	8 s @ 25 m (n-Heptane - yellow flame of 0.3 x 0.3 m @ 25 m)
	12 s @ 25 m (Methylated Spirit - clear flame of 0.5 x 0.5 m @ 25 m)
	16 s @ 25 m (Hydrogen - non-visible flame of 0.1 x 0.5 m @ 12 m)

Output

Output quantity	2
Output type and rating	Normally open or Normally closed (< 1 A @ 50 VDC - < 30 W resistive load)
Programmable	Latching or non-latching

Physical

Physical dimensions	150 x 146 x 137 mm (h x w x d)
Net weight	2.5 kg
Colour	Red
Mounting type	Surface mount
Cable entries	3 x 20 mm
Material (body)	Copper free aluminium alloy
Fixing centres	58 mm

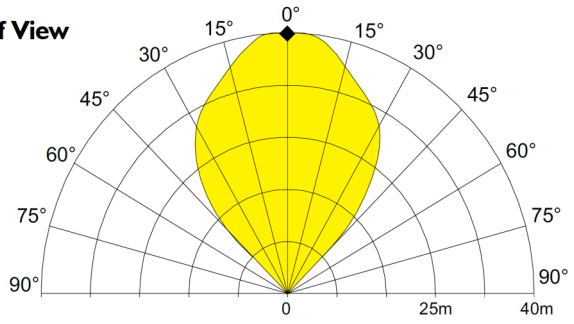
Environmental

Vandal proof	No
Operating temperature	-10 to +55°C
Storage temperature	-20 to +65°C
Relative humidity	< 95% noncondensing
Environment	Exd, Indoor, Outdoor
IP rating	IP66

Regulatory

Compliancy	CE, REACH, RoHS 3, WEEE
Certification	CENELEC/ATEX, CPR
Voluntary marks	LPCB, VdS
Standards	EN54-10
ATEX certified:	Ex II 2GD Ex d IIC T6 Gb (Zone 1, 21, 2 and 22)

Field of View



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