



## Flame Detection

### Talentum® 16221

## Flameproof (Exd) UV/IR<sup>2</sup> Flame Detector High Ambient Temperature

The Talentum® flameproof Ultra-Violet, dual Infra-Red (UV/IR<sup>2</sup>) Flame Detector 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/IR<sup>2</sup> Flame Detector is sensitive to flickering, low frequency (1-15Hz) infra-red radiation emitted by flames during combustion.

This detector has a UV sensor and two IR sensors which respond to different wavelengths of both the ultra-violet and the infra-red 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 Talentum® UV/IR<sup>2</sup> detector has selectable output options of relay contacts or 4-20mA signal, as standard.

#### Features

- Highest immunity to false sources
- Solar blind
- High ambient temperature applications
- Tolerant of fumes, vapours, dust and mist
- Suitable for indoor and outdoor areas
- Unaffected by convection currents, draughts or wind
- Proven response to multiple fuel types
- Multi-spectrum detection
- Selectable output options
- Selectable response speed
- Selectable sensitivity levels
- Built in auto and manual test
- Low current consumption
- Fast response to fire



#### Applications

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

### Mechanical Specification

Housing Material	Copper Free Aluminium Alloy
Housing Colour	Red
Dimensions	150(H) x 146(W) x 137(D) mm
Weight	2.5kg
Cable Gland Entries	3 x 20mm
Wiring	1.0 to 4.0mm <sup>2</sup>

### Electrical Specification

Supply Voltage	14 to 30Vdc
Quiescent Current	8mA, RL2 energised 4mA, current loop, RL2 off 3mA, RL1 off
Alarm Current	28mA, RL1 & RL2 energised 20mA, current loop, RL1 & 2 off 9mA, RL1 energised
Power Up Time	2 seconds max.
Test Signal Voltage	14 to 30Vdc
Relay Outputs	
- Programmable	Normally Open or Normally Closed Latching or Non-latching
- Ratings: Current	1.0A Max.
Voltage	50Vdc Max.
Power	30W Max. (Note: Resistive Loads Only)

### Environmental

Operating Temperature	-10°C to +85°C
Storage Temperature	-20°C to +85°C
Relative Humidity	95% Non condensing
IP Rating	IP66

### Performance

Range - Class 1*	0.1m <sup>2</sup> n-heptane at 25m
- Class 3	0.1m <sup>2</sup> n-heptane at 12m (see EN54:10 for sensitivity settings)
Field of View	90° min. Cone
Spectral Response	
- UV	185 to 260nm
- IR	1.0 to 2.7µm

### Approvals

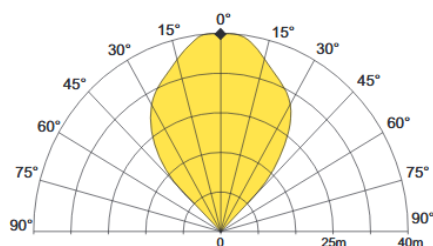
ISseP ATEX	ISseP03ATEX012X
------------	-----------------

### Response Characteristics – High Sensitivity

Fuel	Flame Size m (ft)	Distance m (ft)	Average Response time (seconds)
n-Heptane* (Yellow flame)	0.3 x 0.3 (1 x 1)	25 (82)	12
Methylated Spirit* (Clear flame)	0.5 x 0.5 (1.6 x 1.6)	25 (82)	25
Hydrogen (non-visible flame)	0.1 x 0.5 (0.3 x 1.6)	12 (39)	8

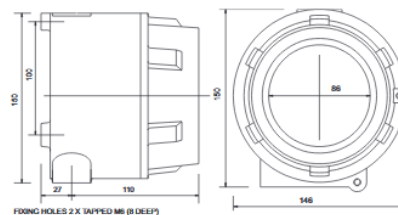
\* has been tested and approved at Class I

### Field of View

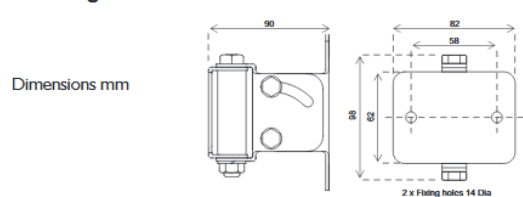


To meet the requirements of EN54:10 clause 5.4, where the ratio of the response points Dmax: Dmin should not exceed 1.41, the horizontal and vertical viewing angles max should not exceed ±30°.

### Flame Detector



### Mounting Bracket



For more information on these products, please contact us:



T: 00353 47 86274 / 00353 47 86663

E: Sales@irishsafety.com