Talentum® 16541

Stainless Steel Flameproof (Exd) IR² Flame Detector

The Talentum® flameproof dual Infra-Red (IR²) Flame Detector is designed to protect specialist 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 IR² Flame Detector is sensitive to flickering, low frequency (1-15Hz) infra-red radiation emitted by flames during combustion even if the lens is contaminated by a layer of oil, dust, water, vapour or ice.

This detector has two IR sensors which respond to different IR wavelengths in order to discriminate between flames and spurious sources of radiation. False alarms from flickering sunlight are avoided by a combination of filters and signal processing techniques.

The Talentum® IR² detector has selectable output options of relay contacts or 4-20mA signal, as standard.

Features

- High immunity to false sources
- Increased environmental protection
- Tolerant of fumes, vapours, dust and mist
- Suitable for indoor 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

Approvals

ATEX & IECEx certified:
Ex II 2GD Ex d IIC T4 Gb
Ex tb IIIC T135°C Db IP66 A21
[Zones 1, 21, 2 and 22]

SIL 2 rated.
Visit www.ffeuk.com for up to date approvals information.

Applications

- Chemical Plants
- Waste Recycling
- Nuclear Power Sites
- Engine Rooms
- Spray Booths
- Pharmaceutical Production
- Military Applications
- Marine Industry
- Coal Handling
- Printing
- LNG/LPG production

Accessories

07127 Adjustable Mount Stainless Steel (316)
07310 Stainless Steel Weather Shield (316)

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Mechanical Specification

Housing Material	316 Stainless Steel
Housing Colour	Natural
Dimensions	150(H) x 146(W) x 137(D) mm
Weight	6kg
Cable Gland Entries	3 x 20mm
Wiring	1.0 to 4.0mm²

Electrical Specification

Supply Voltage	14 to 30Vdc
Quiescent Current	8mA, RL2 energised
	4mA, current loop, RL2 off
	3mA, RL2 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 +55°C
Storage Temperature	-20°C to +65°C
Relative Humidity	95% Non condensing
IP Rating	IP66

Performance

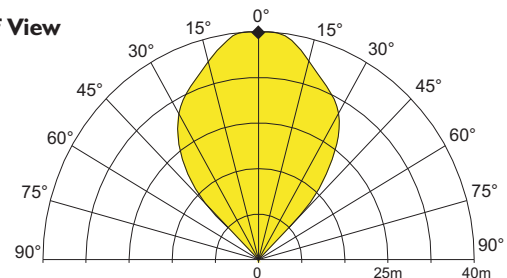|	
Range - Class 1*	0.1m² n-heptane at 25m
- Class 3	0.1m² n-heptane at 12m
	(see EN54:10 for sensitivity settings)
Field of View	90° min. Cone
Operating Wavelength Band - IR	0.75 to 2.7μm

Approvals

SIL 2	C127_CT003_(2.0)
Baseefa ATEX	Baseefa08ATEX0270
Baseefa IECEx	IECEx BAS 08.0073

Response Characteristics – High Sensitivity

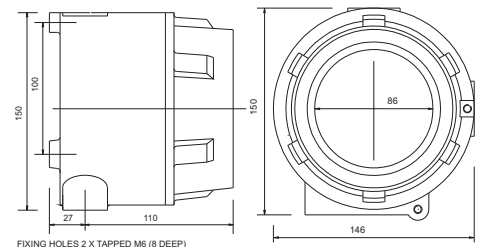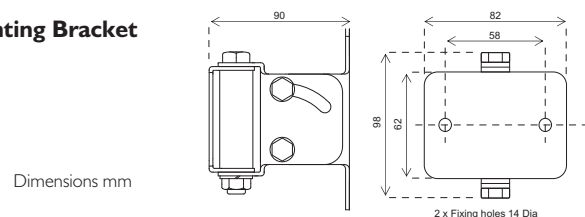| Fuel	Flame Size m (ft)	Distance m (ft)	Average Response time (seconds)
n-Heptane* (Yellow flame)	0.3 x 0.3 (1 x 1)	25 (82)	12
Methylated Spirit* (Clear flame)	0.5 x 0.5 (1.6 x 1.6)	25 (82)	25
Hydrogen (non-visible flame)	0.1 x 0.5 (0.3 x 1.6)	12 (39)	8

* has been tested and approved at Class 1

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 αmax should not exceed ±30°.

Flame Detector

FIXING HOLES 2 X TAPPED M6 (8 DEEP)

Mounting Bracket

Dimensions mm

2 x Fixing holes 14 Dia

Installation Recommendations

Please refer to our User Manual for mounting and wiring instructions. The installation of Talentum® flame detectors should be undertaken in accordance with recognised national or international standards and codes of practice.

Document Part No: 24-0053-02

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