

## TALENTUM®

### FLAME DETECTOR IR2 EX D

16511-00

The Talentum® IR2 Flameproof Dual Infra-Red (IR2) Flame Detector is designed to protect hazardous areas where open fires may be expected and detects almost all flames, including hydrocarbon fires with 4.3 µm emissions through to invisible fires such as hydrogen.

The IR2 Flame Detector is sensitive to flickering, low frequency (1-15 Hz) 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 4-20 mA signal, as standard.



#### FEATURES

- High immunity to false sources
- 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

Worldwide approvals include EN54-10, LPCB, ATEX, and IECEx certification. Visit [ffeuk.com](http://ffeuk.com) for up-to-date approvals information.

#### APPLICATIONS

- |                     |                           |
|---------------------|---------------------------|
| Chemical plants     | Nuclear power sites       |
| Coal handling       | Pharmaceutical production |
| Engine rooms        | Printing                  |
| LNG/LPG production  | Spray booths              |
| Military and marine | Waste recycling           |

#### ACCESSORIES

- |          |                             |
|----------|-----------------------------|
| 07127-00 | Adjustable Mounting Bracket |
| 07279-00 | Weather Shield [SS]         |
| 12555-00 | Air Purge (Ex d Housing)    |
| 1800-101 | Talentum Test Torch         |



**TALENTUM®****FLAME DETECTOR IR2 EX D****I6511-00****MECHANICAL SPECIFICATION**

Housing material	Copper free aluminium alloy
Housing colour	Red
Dimensions	152(h) x 149(w) x 134(d) mm
Weight	2.3 kg
Cable gland entries	3 x 20 mm
Wiring	1.0 to 4.0 mm <sup>2</sup>

**ELECTRICAL SPECIFICATION**

Supply voltage	14 to 30 VDC
Quiescent current	8 mA, RL2 energised 4 mA, current loop, RL2 off 3 mA, RL2 off
Alarm current	28 mA, RL1 & RL2 energised 20 mA, current loop, RL1 & 2 off 9 mA, RL1 energised
Power-up time	2 seconds max.
Self test voltage	14 to 30 VDC
Relay outputs	Programmable operation including latching or non-latching
Relay maximum ratings	
Current	0.75 A
Voltage	48 VDC
Power	30 W
(Note: resistive loads only)	
Refer to User Manual for further details	

**ENVIRONMENTAL**

Operating temperature	-10°C to +55°C
Storage temperature	-20°C to +65°C
Relative humidity	95% non condensing
IP rating	IP66

**PERFORMANCE**

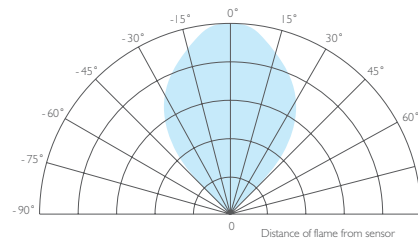
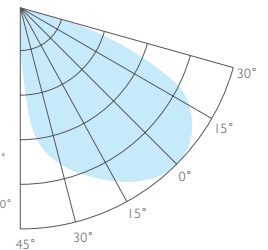
Range	
High (Class 1)*	0.1 m <sup>2</sup> n-Heptane at 25 m
Low (Class 3)	0.1 m <sup>2</sup> n-Heptane at 12 m (see EN54-10 for sensitivity settings)
Field of view	90° min. Cone
Operating wavelength	
IR	1.0 to 2.7 μm
* Has been tested and approved at Class I	

# Flame Detection

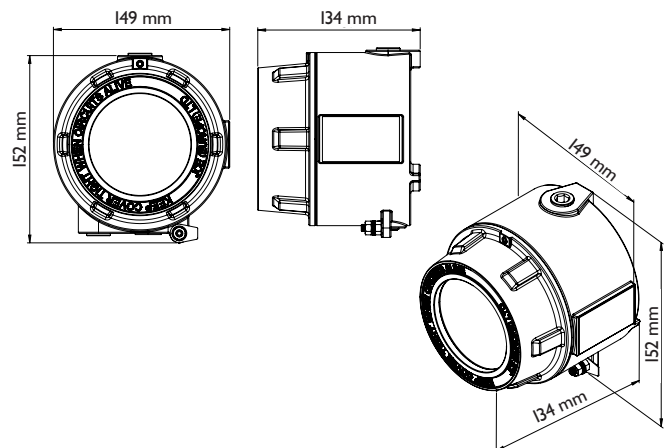
**RESPONSE CHARACTERISTICS - HIGH SENSITIVITY**

Fuel	Flame size m <sup>2</sup> (in <sup>2</sup> )	Distance m (ft)	Approval
n-Heptane* (Yellow flame)	0.1 (144)	25 (82)	EN54-10
Methylated spirit* (Clear flame)	0.25 (400)	25 (82)	EN54-10

\* has been tested and approved at Class I

**FIELD OF VIEW****HORIZONTAL****VERTICAL**

To meet the requirements of EN54-10:2002 clause 5.4 (Directional Dependence), viewing angles must not exceed ±20°.

**DIMENSIONS****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.



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Specifications and wiring information are provided for information only and are believed to be accurate. FFE Ltd assumes no responsibility for their use. Data and design are subject to change without notice. Installation and wiring instructions are shipped with the products and should always be used for actual installation. For more information, contact your Sales Representative. Document Part No: 24-0246-05