

# Talentum<sup>®</sup> Flame Detector IR2

16581-00

The Talentum<sup>®</sup> Flame Detector IR2 is designed to protect 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 Flame Detector IR2 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 IR2 has selectable output options of relay contacts or 4-20 mA signal, as standard.



## FEATURES

|   |
|---|
| Highest immunity to false sources                   |
| Tolerant of fumes, vapours, dust and mist           |
| Suitable for indoor areas                           |
| Detects flames through glass                        |
| 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, with AFNOR and LPCB certification. Visit [ffeuk.com](http://ffeuk.com) for up to date approvals information.

## APPLICATIONS

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

## ACCESSORIES

|          |                             |
|----------|-----------------------------|
| 07127-00 | Adjustable Mounting Bracket |
| 12545-00 | Weather Shield [SS]         |
| 1800-101 | Talentum Test Torch         |
| 12556-00 | Air Purge Kit               |

SCAN THE QR CODE  
TO EXPLORE THE TALENTUM  
PRODUCT RANGE



# Talentum® Flame Detector IR2

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### MECHANICAL SPECIFICATION

|                     |  |
|---------------------|--|
| Housing material    | Die cast zinc alloy (ZA12)                               |
| Housing colour      | Blue RAL 240 50 35                                       |
| Dimensions          | 142(h) x 108(w) x 79(d) mm<br>(5½"(h) x 4¼"(w) x 3⅛"(d)) |
| Weight              | 1.75 kg (3.8 lbs)  |
| Cable gland entries | 2 x 20 mm (2 x ¾")                                       |
| Wiring              | 1.0 to 4.0 mm <sup>2</sup> (12 - 18 AWG)                 |

### ELECTRICAL SPECIFICATION

|  |   |
|--|---|
| Supply voltage                           | 14 to 30 Vdc  |
| Quiescent current                        | 8 mA, RL2 energised<br>4 mA, current loop, RL2 off<br>3 mA, RL2 off                   |
| Alarm current                            | 28 mA, RL1 & RL2 energised<br>20 mA, current loop, RL1 & 2 off<br>9 mA, RL1 energised |
| Power-up time                            | 2 seconds max.  |
| Test signal voltage                      | 14 to 30 Vdc  |
| Relay outputs                            | Programmable operation<br>including latching or<br>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 (+14°F to +131°F) |
| Storage temperature   | -20°C to +65°C (-4°F to +149°F)  |
| Relative humidity     | 95% non condensing               |
| IP rating             | IP65                             |

### PERFORMANCE

|   |  |
|---|--|
| Range                                     |  |
| High (Class 1)*                           | 0.1 m <sup>2</sup> n-heptane at 25 m (82ft)  |
| Low (Class 3)                             | 0.1 m <sup>2</sup> n-heptane at 12 m (39ft)<br>(see EN54:10 for sensitivity<br>settings) |
| Field of view                             | 90° min. Cone  |
| Operating wavelength                      |  |
| IR  | 1.0 to 2.7 µm  |
| * Has been tested and approved at Class I |  |

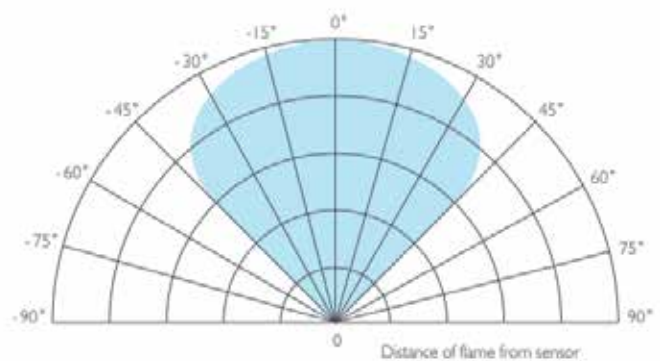
### RESPONSE CHARACTERISTICS – HIGH SENSITIVITY

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

Response time: typically 4 seconds

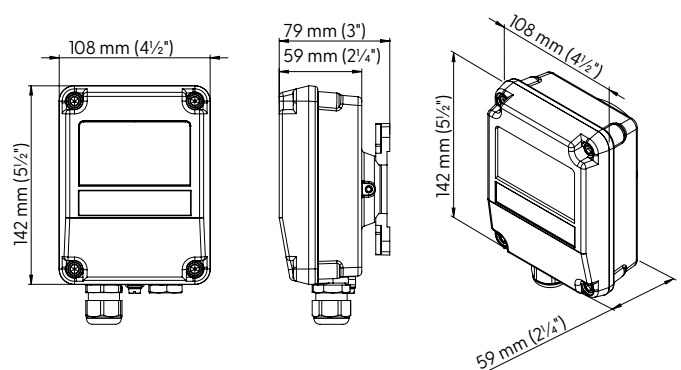
\* Has been tested and approved at Class I

### FIELD OF VIEW



To meet the requirements of EN54-10:2002 clause 5.4 (Directional Dependence), viewing angles must not exceed ±30°.

### 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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