talentum®
Specialist flame detection

Datasheet

Talentum®
Flame Detector IR3 Intrinsically Safe (Ex i)
[EN] 16579-00



The Talentum® Intrinsically Safe (Ex i) triple Infra-Red (IR3) Flame Detector 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 IR3 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 three 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® IR3 detector has selectable output options of relay contactsor 4-20mA signal, as standard.

FEATURES
Excellent immunity to false sources
Tolerant of fumes, vapours, dust and mist
Suitable for use in Zone 0, 1 or 2
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

APPROVALS
Worldwide approvals include EN 54-10, VdS, LPCB and ATEX. Visit **ffeuk.com** for the up-to-date approval information.

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

ACCESSORIES	
07127-00	Adjustable Mounting Bracket (SS)
12545-00	Weather Shield (SS)
12556-00	Air Purge Adapter
1800-101	Talentum Test Torch

SCAN THE QR CODE
TO EXPLORE THE TALENTUM
PRODUCT RANGE

Talentum®
Flame Detector IR3 Intrinsically Safe (Ex i)
[EN] 16579-00

Datasheet

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 (5½"(h) x 4¼"(w) x 3⅛"(d))
Weight	1.75 kg (3.8 lbs)
Cable gland entries	2 x M20
Wiring	1.0 to 4.0 mm² (12 – 18 AWG)

ELECTRICAL SPECIFICATION	
Supply voltage	14 to 30 Vdc
Current consumption	Dependent on mode of operation (including 4-20 mA mode and relay function selection)
Quiescent current	3 - 8 mA
Alarm current	9 - 28 mA
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	EN: -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 m² n-heptane at 25 m (82 ft)
Low (Class 3)	0.1 m² n-heptane at 12 m (39¼ ft)
	(see EN 54-10 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	

RESPONSE CHARACTERISTICS – HIGH SENSITIVITY			
Fuel	Flame size m² (in²)	Distance m (ft)	Approval
n-Heptane* (Yellow flame)	0.1 (144)	25 (82)	EN 54-10
Methylated spirit* (Clear flame)	0.25 (400)	25 (82)	EN 54-10

Response time: typically 4 seconds
*Has been tested and approved at Class 1

FIELD OF VIEW

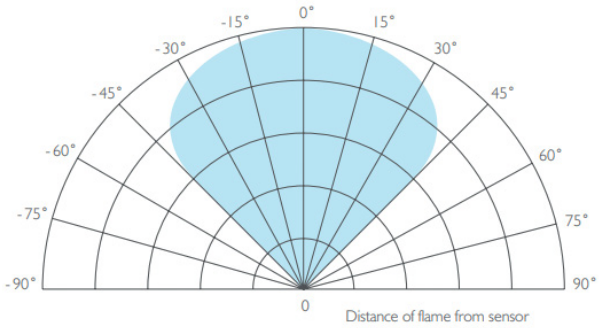
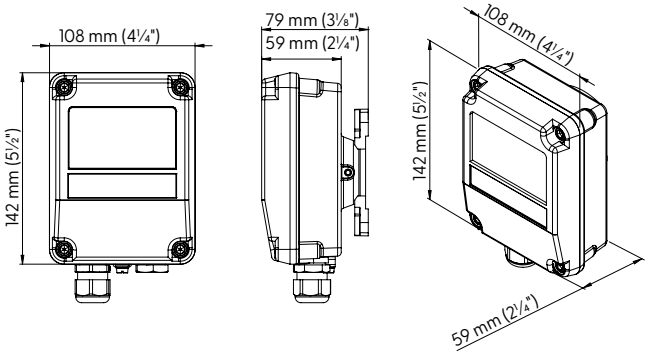


Figure 5. Relative range as a function of viewing angle (standard housing models)

To meet the requirements of EN 54-10:2002 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.

FFE Limited, 9 Hunting Gate, Hitchin, Hertfordshire SG4 0TJ, UK
t: +44 (0) 1462 444 740 **e:** sales@ffeuk.com **w:** ffeuk.com
FFE Limited, 1455 Jamike Ave Ste 200, Erlanger, KY 41018-3147, USA
t: +1 859 957 1570 **e:** america@ffeus.com **w:** ffeus.com

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: 24-0252-07