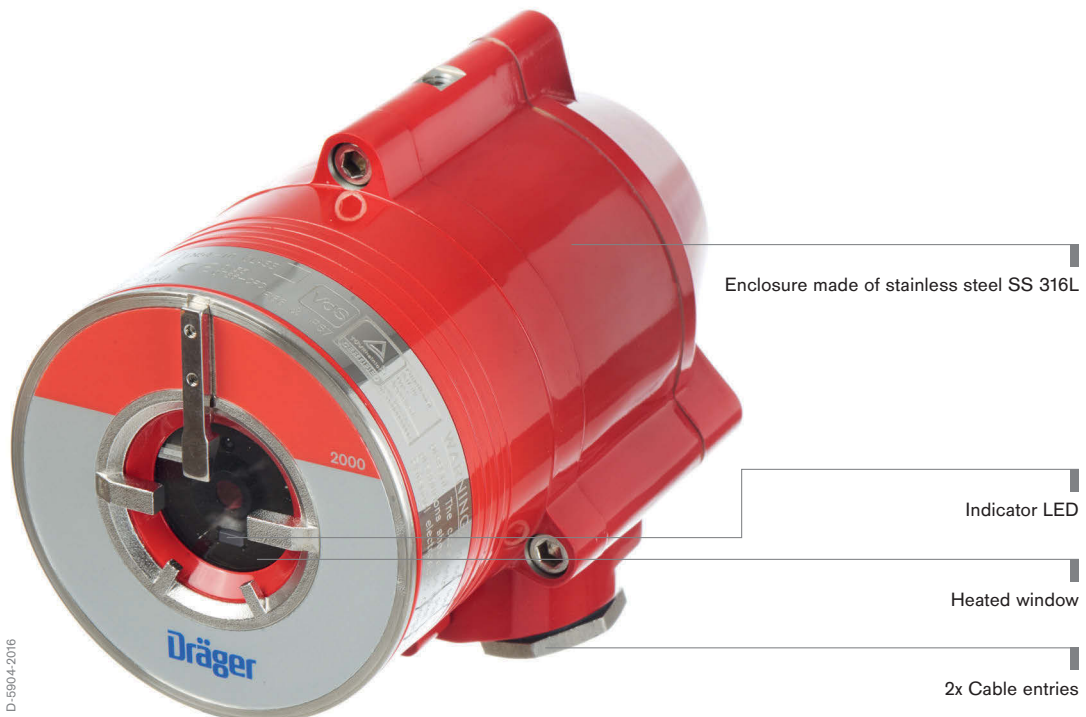


Dräger Flame 2000 (IR) Flame Detection

With its highly sensitive IR sensor the Dräger Flame 2000 detects hydrocarbon-based fires. It offers high reliability against false alarms.



Benefits

Fast and reliable detection

The Flame 2000 works with a highly sensitive IR-sensor in a wavelength range of 4.5 µm. This enables very fast detection of hydrocarbon-based fires. This degree of reliability complies with the IEC 61508 safety integrity requirements of SIL2.

Moreover, the flame detector has HART® and RS-485 Modbus interfaces and requires very little power.

Prevention of false alarms

The Flame 2000 is immune to sources of interference. This prevents false alarms. Frequent error sources such as sunlight or other IR sources no longer present a problem. Moreover, the sensitive detection ensures that the detector does not falsely set off an alarm for fires emanating from other areas.

Robust and resistant

The housing is very resilient and weatherproof. The viewing window is heated to protect it from icing and fogging up. This allows you to operate the Flame 2000 reliably under the most diverse environmental conditions.

Simple check

The Built-in-Test (BIT) automatically checks the electronics and the optics of the Flame 2000. You can also perform the check manually. A tri-coloured LED at the front of the detector provides a quick status indication. Green indicates normal operation, yellow indicates a fault and red indicates a fire alarm.

System Components



D-6806-2016

Dräger REGARD® 7000

The Dräger REGARD® 7000 is a modular and therefore highly expandable analysis system for monitoring various gases and vapours. Suitable for gas warning systems with various levels of complexity and numbers of transmitters, the Dräger REGARD® 7000 also features exceptional reliability and efficiency. An additional benefit is the backward compatibility with the REGARD®.



D-1130-2010

Dräger REGARD® 3900 Series

The devices of the Dräger REGARD® 3900 series can be used as standalone controllers. You can configure up to 16 measuring channels. In addition, the modular setup enables you to customise the control units to the demands of your plant. You can also embed further features to existing alarms.

Accessories



D-51319-2015

Flame Simulator

The Flame Simulator emits radiation in a unique sequential pattern corresponding to and recognizable by the detector as fire. This allows the detectors to be tested under simulated fire conditions without the associated risks of an open flame.

Accessories



D-5921-2016

Weather Cover

The Weather Cover protects the detector from different weather conditions, such as snow or rain.



D-5925-2016

Laser Pointer

Does the detector cover the area that needs protection? Is it located correctly and does the detector's cone of vision cover the most dangerous spot? This accessory enables the installer to optimise detector location and its actual detection area coverage.



D-5926-2016

Air Shield

The Air Shield allows the installation of detectors of the Dräger Flame 2000 series under tough environmental conditions where they may be exposed to oil vapors, sand, dust and other particulate matter.

Related Products



D-5903-2016

Dräger Flame 2100 (UV)

A short response time and high reliability against false alarms are the features of the Dräger Flame 2100. Its UV sensor is quick to detect hydrocarbon- or hydrogen-based fires.



D-5905-2016

Dräger Flame 2350 (UV and IR)

The Dräger Flame 2350 combines UV and IR sensors for the detection of hydrocarbon-based fires. This combination of sensors offers you more security and fewer false alarms.



D-5902-2016

Dräger Flame 2370 (UV&IR)

An extremely short response time and very high reliability against false alarms are the features of the Dräger Flame 2370. It is quick and reliable in detecting hydrocarbon- and hydrogen-based fires, as well as hydroxyl flames, and fires resulting from metallic or inorganic materials. The Flame 2370 can detect a fire flash in less than 20 milliseconds.



D-5900-2016

Dräger Flame 2500 (IR3)

With its triple IR sensor The Dräger Flame 2500 detects hydrocarbon-based fires even over greater distances. Moreover, it offers a high reliability against false alarms.

Related Products



D-11957-2016

Dräger Flame 2570 (UFI)

Extreme short response time and high reliability against false alarms characterise the Dräger Flame 2570. The ultra fast triple IR flame detector detects hydrocarbon based fire to distance of up to 90 metres.



D-5801-2016

Dräger Flame 2700 (Multi-IR)

With its multichannel IR sensor the Dräger Flame 2700 detects hydrocarbon- and hydrogen-based fires. Thereby it offers a high reliability against false alarms.

Technical Data

Type	Explosion proof IR flame detector for hydrocarbon-based fires	
Spectral Response	IR = 4.4 – 4.6 μ m	
Measuring Performance	Field of view	Horizontal 90°; Vertical 90°
	Response Time	Typically 5 seconds
	Sensitivity Ranges	2 Sensitive ranges for 1 ft ² (0.1 m ²) n-Heptane pan fire from 15 ft (5 m) to 50 ft (15 m)
Detection Range (at highest Sensitivity Setting for 1 ft ² (0.1 m ²) pan fire)	Fuel	ft / m
	n-Heptane / Gasoline	50 / 15
	Diesel Fuel / JP5 / Kerosene	37 / 11
	Ethanol 95 %	25 / 7.5
	Methanol	25 / 7.5
	IPA (Isopropyl Alcohol)	25 / 7.5
	Methane*	29.5 / 9
	LPG*	29.5 / 9
	Polypropylene Pellets	37 / 11
Office Paper	20 / 6	

* 30" (0.75 m) high, 10" (0.25 m) width plume fire

Electrical Data

Output Signals	0 – 20 mA (stepped), HART®
Fault Signal	0 +1 mA
BIT Fault Signal	2 mA \pm 10 %
Normal Signal	4 mA \pm 10 %
Warning Signal	16 mA \pm 5 %
Alarm Signal	20 mA \pm 5 %
Relays	Alarm, Fault and Auxiliary SPST volt-free contacts rated 2 A at 30 VDC
RS485	Modbus compatible communication link
Power supply	24 VDC nominal (18 – 32 VDC)
Power Consumption	Standby: Max. 90 mA (110 mA with heated window) Alarm: Max. 130 mA (160 mA with heated window)

Ambient Conditions

Temperature	-55 to +75 °C / -67 to +167 °F (operating) -55 to +85 °C / -67 to +185 °F (option and storage)
Humidity	Up to 95 % non-condensing (withstands up to 100 % RH for short periods)

Enclosure

Material	Stainless steel SS 316
Material Option	Heavy duty copper free aluminum, red epoxy enamel finish
Connecting Thread	2 x 3/4" – 14NPT or 2 x M25 x 1.5 mm
Weight	Detector SS 316L 2.8 kg / aluminum 1.3 kg Tilt mount 1.0 kg
Dimensions Detector	101.6 x 117 x 157 mm
Ingress Protection	IP66 and IP67, NEMA 250 6P

Approvals

ATEX and IECEx	Ex II 2 G D		
	Ex db eb op is IIC T4 Gb	Ex db eb op is IIC T4 Gb	Ex db eb mb op is IIC T4 Gb
	Ex tb op is IIIC T96°C Db (Ta -55 °C to +75 °C)	Ex tb op is IIIC T106°C Db (Ta -55 °C to +85 °C)	Ex tb op is IIIC T98°C Db (Ta -55 °C to +75 °C)

Technical Data

FM/FMC/CSA	Class I Div. 1, Groups B, C & D Class II/III Div. 1, Groups E, F & G
Safety Integrity Level	SIL2 certified by TÜV (EN 61508)
Performance Approval	EN 54-10 (VdS) FM 3260
CE marking	EMI/RFI protected to EN 61326-3 and EN 61000-6-3

Ordering Information

Dräger Flame 2000 (R-111SC)	68 13 919
Dräger Flame 2000 (R-211SC)	68 13 920
Dräger Flame 2000 (R-311SC)	68 13 921
Dräger Flame 2000 (R-211AC)	68 13 941
Dräger Flame 2000 (R-311AC)	68 13 942
Dräger Flame 2000 (R-112SF)	68 13 960
Dräger Flame 2000 (R-212SF)	68 13 961
Dräger Flame 2000 (R-312SF)	68 13 962
Dräger Flame 2000 (R-222SC)	68 14 158

Accessories

Dräger Flame Simulator FS-1300 (IR)	68 13 975
Dräger Flame 2x0 Air Shield	68 13 977
Dräger Flame 2x0 Duct Mount	68 13 978
Tilt Mount Dräger Flame	68 13 979
Weather cover Dräger Flame (SS)	68 13 189
Weather cover Dräger Flame (ABS)	68 13 190
Dräger Flame 2x0 Laser Pointer	68 13 890
Dräger Flame Pole Mount 3"	68 13 323
Dräger Flame Pole Mount 2"	68 13 322
Dräger Flame USB RS-485 Kit	68 13 994
Battery Pack for Dräger Flame Simulator FS-1x00	68 13 889

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Notes

Notes

Not all products, features, or services are for sale in all countries.
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