Dräger Flame 2350 (UV&IR)
Flame Detection

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.

Benefits

Fast and reliable detection

The Dräger Flame 2350 combines UV und IR sensors. These ensure that it is reliable in detecting 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 two sensors incorporated in the Flame 2350 offer detection in the shortwave UV range and in the IR spectrum. Frequency, intensity and duration of the measuring signals are analysed. An alarm is set off only when both sensors meet the reaction criteria. This way the Flame 2350 prevents false alarms. 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 2350 reliably under the most diverse environmental conditions.

Simple check

The Built-in-Test (BIT) automatically checks the electronics and the optics of the Flame 2350. 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-5904-2016

Dräger Flame 2000 (IR)

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


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-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 reliablility 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-5901-2016

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 UV/IR flame detector for hydrocarbon-based fuel and gas fires	
Spectral Response	UV = 0.185 – 0.260 µm IR = 4.4 – 4.6 µm	
Measuring Performance	Field of view	Horizontal 100°; Vertical 95°
	Response Time	Typically 3 seconds. 200 msec to flash fire
Detection Range (at highest Sensitivity Setting for 1 ft² (0.1 m²) pan fire)	Fuel	ft / m
	n-Heptane / Gasoline	93 / 28
	Diesel Fuel / JP5 / Kerosene	70 / 21
	Methanol	57 / 17
	IPA (Isopropyl Alcohol)	70 / 21
	Methane*	60 / 18
	Ethanol 95 %	57 / 17
	Polypropylene Pellets	60 / 18
	Office Paper	33 / 10
	LPG*	60 / 18

* 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 ±10 %
Normal Signal	4 mA ±10 %
Warning Signal	16 mA ±5 %
Alarm Signal	20 mA ±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 316L
Material option	Heavy duty copper free aluminum, red epoxy enamel finish
Connecting thread	2 x 3/4" – 14 NPT 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 T 96 °C Db	Ex tb op is IIIC T 106 °C Db	Ex tb op is IIIC T 98 °C Db
	(Ta -55 °C to +75 °C)	(Ta -55 °C to +85 °C)	(Ta -55 °C to +75 °C)
FM/FMC/CSA	Class I Div. 1, Groups B, C & D		
	Class II/III Div. 1, Groups E, F & G		

Technical Data

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 2350 (L4B-111SC)	68 13 925
Dräger Flame 2350 (L4B-211SC)	68 13 926
Dräger Flame 2350 (L4B-212SC)	68 13 927
Dräger Flame 2350 (L4B-311SC)	68 13 928
Dräger Flame 2350 (L4B-312SC)	68 13 929
Dräger Flame 2350 (L4B-111AC)	68 13 945
Dräger Flame 2350 (L4B-211AC)	68 13 946
Dräger Flame 2350 (L4B-212AC)	68 13 947
Dräger Flame 2350 (L4B-311AC)	68 13 948
Dräger Flame 2350 (L4B-312AC)	68 13 949
Dräger Flame 2350 (L4B-112SF)	68 13 966
Dräger Flame 2350 (L4B-212SF)	68 13 967
Dräger Flame 2350 (L4B-312SF)	68 13 968

Accessories

Dräger Flame Simulator FS-1200 (UV&IR,UV)	68 13 974
Dräger Flame 2xx0 Air Shield	68 13 977
Dräger Flame 2xx0 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 2xx0 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

Notes

Notes

9101 992 | 17.04-2 | HQ | PP | Subject to modifications | © 2017 Drägerwerk AG & Co. KGaA

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