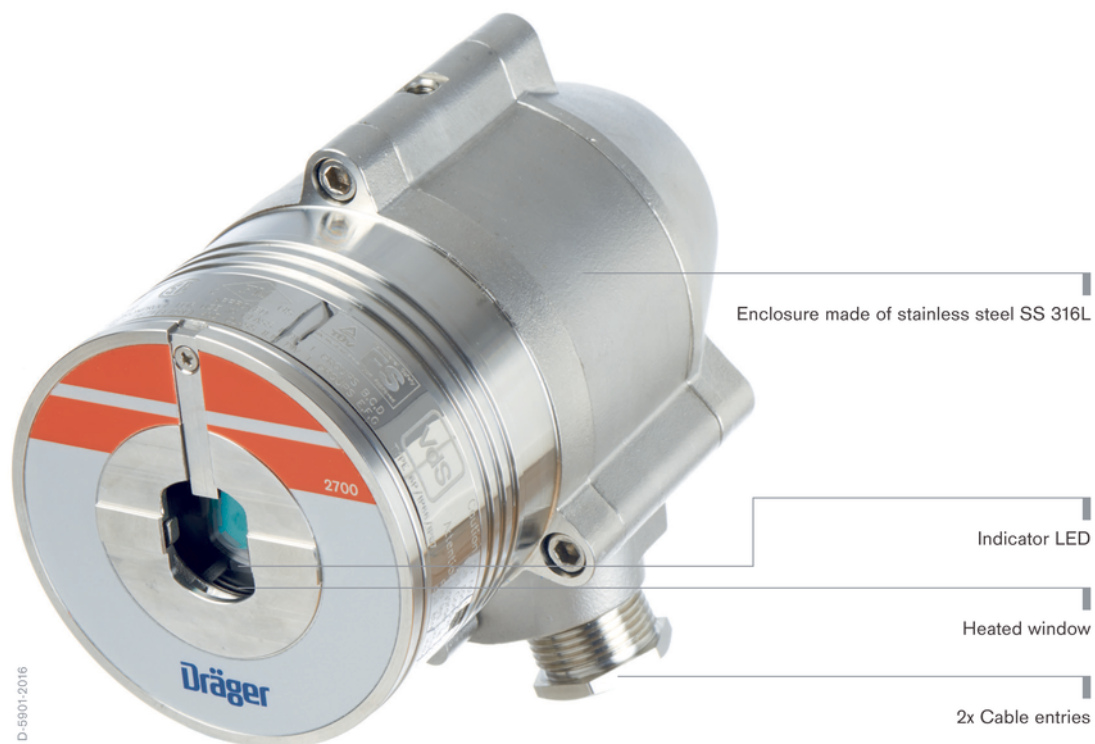


Dräger Flame 2700 Flame Detection

Working in areas with combustible gases, vapor, or materials requires fire/ flame detection as a life-saving necessity. The best solutions must combine state-of-the-art technology with rugged durability and be ready to reliably work in any situation. The Dräger Flame 2700 multi-IR incorporates several detection algorithms to simultaneously detect both CO₂ & H₂O peaks, and reduce false alarms.



Benefits

Reliability you can count on

The Dräger Flame 2700 is a Multi IR Flame Detector specifically designed to detect hydrocarbon and hydrogen flames at long distances. Its high immunity to false alarms and superior performance features makes it ideal for a large number of applications.

Built to resist

The Flame 2700 is one of the most weather resistant detectors currently on the market. It comes with features for various extremes, such as a heated window to protect against icing and condensation.

A sharp eye for greater safety

With the ability to detect a 1 ft² (0.1 m²) gasoline pan fire at 213 ft (65 m), or a hydrogen flame at 98 ft (29 m) in less than 5 seconds, the Flame 2700 offers the best in reliability. Additionally, its MTBF minimum of 150,000 hours ensures a longer and hassle-free operating period—a big plus for the safety of your workers and operations.

Intelligent design

The Flame 2700 is built with operating convenience in mind. Its lower power requirements and compact, lighter design make installation and maintenance easier.

Reliability

Functional safety is a concept applicable across all industry sectors. It is fundamental to enabling complex technology and provides assurance that the safety-related systems will offer necessary risk reduction. The Dräger Flame 2700 is highly reliable and complies with the IEC 61508 Safety Integrity Requirements of SIL2.

Automatic and manual optics checks (BIT)

Automatic checks of the detector electronics and optics helps, to ensure that no fault goes undetected. Additionally, the test can be triggered manually at any time.

Easily visible status LED

A tri-colored LED on the front of the detector provides a simple status indication to personnel in close proximity. Green indicates normal operation, yellow indicates a fault, and red indicates the presence from radiation a fire.

Benefits

Simple installation and commissioning

Installation is simple! The detector is easily installed with a stainless steel tilt mount, enabling the detector to be rotated up to 60 degrees in all directions. This offers flexibility in positioning the detector in relation to potential fire sources.

Further benefits and features:

- Multi spectrum design—for long distance detection and high false alarm immunity
- Advanced Digital Processing of the Dynamic Characteristics of Fire (flickering, threshold correlation, and ratio)
- Sensitivity selection—to ensure no zone crossover detection
- Automatic and Manual Built-In-Test (BIT)—to assure continued reliable operation
- Heated window—for operation in harsh weather conditions (snow, ice, condensation)
- Multiple output options for maximum flexibility and compatibility
- 3 Relays for Alarm, Fault and Auxiliary
- 0–20 mA (stepped)
- HART® Protocol for maintenance and asset management
- RS-485, Modbus compatible
- Approved to Safety Integrity Level 2 (SIL2—TÜV)
- Ex approvals for worldwide application: ATEX, IECEx, FM/FMC, CSA

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



Weather Cover

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



Laser Pointer

Does the detector cover the area that needs protection? Is it located correctly? 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.

Services



Dräger Service

When your operation's safety equipment is backed by over 125 years of experience and supported by the same team that engineered it, you can rely on service and rental solutions that are tailored to meet your unique needs. With Dräger's safety solutions, you get complete peace of mind, budget security, and full-service support that you can count on every step of the way. That's the Dräger Service Advantage.

Related Products

D-5904-2016



Dräger Flame 2000

Working in areas with combustible gases, vapors, or materials requires fire/flare detection as a life-saving necessity. The best solutions must combine state-of-the-art technology with rugged durability and be ready to reliably work in any situation. Flame 2000 uses an advanced infrared (IR) and optical sensor to provide maximum sensitivity to carbon dioxide spectral bands.

D-5903-2016



Dräger Flame 2100

Working in areas with combustible gases, vapors, or materials requires fire/flare detection as a life-saving necessity. The best solutions must combine state-of-the-art technology with rugged durability and be ready to reliably work in any situation. The Dräger Flame 2100 is a single spectrum optical detector using an ultra-violet sensor to detect flames, while eliminating interference from solar-radiation and other non-fire UV sources.

D-5905-2016



Dräger Flame 2350

Working in areas with combustible gases, vapors, or materials requires fire/flare detection as a life-saving necessity. The best solutions must combine state-of-the-art technology with rugged durability and be ready to reliably work in any situation. The Dräger Flame 2350 is a dual spectrum optical detector, using a combination of ultra-violet and infrared sensors to detect fires at a high speed response time of 200 milliseconds.

D-5902-2016



Dräger Flame 2370

Working in areas with combustible gases, vapors, or materials requires fire/flare detection as a life-saving necessity. The best solutions must combine state-of-the-art technology with rugged durability and be ready to reliably work in any situation. The Dräger Flame 2370 is a dual spectrum optical detector, using a combination of ultra-violet and infrared sensors to detect fires at a high speed response time of 20 milliseconds.

Related Products



Dräger Flame 2500

Working in areas with combustible gases, vapours or materials requires fire/flare detection as a life-saving necessity. The best solutions must combine state-of-the-art technology with rugged durability and be ready to reliably work in any situation. The Dräger Flame 2500 features three infrared sensors to identify fire events with exceptional sensitivity and extreme immunity to false alarms.

Technical Data

Type	Explosion-proof IR flame detector for hydrocarbon and hydrogen based fires	
Spectral Response	Multi IR Bands 2 to 5 µm	
Measuring Performance	Field of view	Horizontal 67°; Vertical 70° for Gasoline Horizontal 80°; Vertical 80° for Hydrogen
	Response Time	Typically 5 seconds
	Sensitivity Ranges	4 Sensitive ranges for 1 ft² (0.1 m²) n-Heptane pan fire from 50 ft (15 m) to 215 ft (65 m)
Detection Range (at highest Sensitivity Setting for 1 ft² (0.1 m²) pan fire)	Fuel	ft / m
	n-Heptane / Gasoline	215 / 65
	Diesel Fuel / JP5 / Kerosene	150 / 45
	Ethanol 95 %	135 / 40
	Methanol	115 / 35
	IPA (Isopropyl Alcohol)	135 / 40
	Hydrogen*	125 / 38
	Methane / LPG*	150 / 45
	Polypropylene Pellets	115 / 35
	Ammonia**	60 / 18
	Silane**	7 / 2
	Office Paper	82 / 25

* 30" (0.75 m) high, 10" (0.25 m) width plume fire; ** 20" (0.5 m) high, 8" (0.2 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
Connecting Thread	2 x 3/4" – 14NPT or 2 x M25 x 1.5 mm
Weight	Detector SS 316L 2.8 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 d e IIC T5 Gb	Ex d e IIC T4 Gb	Ex d e mb IIC T4 Gb

Technical Data

	Ex tb IIIC T96°C Db (-55 °C ≤ Ta ≤ +75 °C)	Ex tb IIIC T106°C Db (-55 °C ≤ Ta ≤ +85 °C)	Ex tb IIIC T98°C Db (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		
Safety Integrity Level	SIL2 certified by TÜV (EN61508)		
Performance Approval	EN54-10 (VdS)		
	FM3260		
CE marking	EMI/RFI protected to EN61326-3 and EN61000-6-3		

Ordering Information

Dräger Flame 2700 (M-112SF)	68 13 956
Dräger Flame 2700 (M-212SF)	68 13 957
Dräger Flame 2700 (M-222SF)	68 13 958
Dräger Flame 2700 (M-312SF)	68 13 959
Accessories	
Flame Simulator FS-1400 (M)	68 13 976
Dräger Flame 2xx0 Duct Mount	68 13 978
Tilt Mount Flame Detector	68 13 979
Weather cover Flame Detector (SS)	68 13 189
Weather cover Flame Detector (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 Flame Simulator FS1x00	68 13 889
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