

## Dräger Flame 1750 H2 (IR3) Hydrogen Flame Detector

Dräger Flame 1750 is an explosion proof triple IR hydrogen (H<sub>2</sub>) flame detector that can also detect hydrocarbon fires. Its superior performance allows it to respond to a hydrogen plume fire at 40m (131 ft) in 5 seconds.



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## Benefits

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### Fast and safe detection

The Dräger Flame 1750 H<sub>2</sub> is a triple IR flame detector. It detects hydrogen-based fires even at long distances. In just five seconds, it notifies you of a hydrogen fire (1-metre flame) at a distance of up to 40 metres. Due to its certified reliability, the Flame 1750 H<sub>2</sub> meets the IEC 61508 requirements for safety integrity according to SIL 2.

The flame detector also has HART® and RS-485 interfaces and has low energy consumption.

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### Developed for hydrogen

The Dräger Flame 1750 H<sub>2</sub> was specially developed for the detection of hydrogen fires. Its three IR sensors measure only in the 2 to 4 µm range relevant to hydrogen flames, which can help reduce the false alarm rate. Common sources of false alarms, such as hot CO<sub>2</sub> or welding work, are less likely to occur.

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### Robust and durable

The housing is robust and weatherproof. To protect against icing and fogging, the window is heated automatically. This allows you to operate the Flame 1750 H<sub>2</sub> even in tough environmental conditions, e.g. in temperatures from -50 °C to +85 °C (-58F to 185F).

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### Simple verification

The built-in self-test "Advanced Optical Verification" (AOV) automatically checks the electronics and optics of the Flame 1750 H<sub>2</sub>. The three-colour LED on the front allows you to quickly see the device status. Green stands for normal operation, yellow indicates an error and red signals a fire alarm.

## System Components



D-68006-2016

### Dräger REGARD 7000

The Dräger REGARD 7000 is a modular and highly expandable control system for monitoring various gases and vapors. Ideal for gas warning systems with various levels of complexity and numbers of transmitters, the Dräger REGARD 7000 delivers exceptional reliability and efficiency. An additional benefit is the controller's backward compatibility with the REGARD.



D-39957-2021

### Dräger REGARD 3000

Monitor various gases and vapors with the modular Dräger REGARD 3000 control system. Its multi-colored light signals the status of your gas detection system. The controller allows for up to three I/O modules: Analog Input, Relay Output, and Modbus Gateway. You can monitor up to 4 analog transmitters and control up to 8 relays.

## Accessories



ST-8006-2008

### Dräger FS-5000

The Dräger FS-5000 flame simulator is used to simulate the presence of fire or flames to test the correct operation of the Dräger Flame 5000 or the Dräger Flame 3000. It can test Dräger Flame Detectors at distances up to 8 meters (26 ft). With reduced need for scaffold or ladders to access the detector, maintenance costs can be decreased.

## Related Products

D-15819-2021



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### Dräger Flame 1500 (IR3)

The Dräger Flame 1500 flame detector uses its triple IR sensor to detect hydrocarbon fires even at great distances. It provides excellent false alarm immunity as approved by FM while maintaining a response time of under 4 seconds.

D-49075-2012



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### Dräger Flame 3000

The Dräger Flame 3000 is an imaging based explosion proof flame detector. This visual flame detection system uses digital image processing and advanced algorithms to process and interpret flame characteristics. This principle offers an extended field of view and fewer false alarms.

D-49077-2012



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### Dräger Flame 5000

In today's industrial workplaces, flame detection is essential for protecting both people and facilities. The Dräger Flame 5000 is an explosion-proof flame detector based on advanced color imaging technology. Each detector operates as a standalone unit and incorporates an integrated closed circuit television (CCTV) system, digital signal processing, and software algorithms to process live video images and interpret the characteristics of a flame.

## Technical Data

### Dräger Flame 1750 H<sub>2</sub>

Type	Explosion-proof IR flame detector	
Spectral range	Three wavelengths in the range from 2 µm to 4 µm	
Field of view	Horizontal 90°, vertical 90°	
Response time	4 seconds (typical)	
Sensitivity settings	Standard (30 m) and High (40 m)	
Measuring range*	Hydrogen	40 m (131 ft)
	n-Heptane	12 m (30 ft)
	Methane (0.9 m (36") plume)	30 m (100 ft)
	Methanol	20 m (65 ft)
	Methylated Spirits	20 m (65 ft)
*Fire pan 0.3 m <sup>2</sup> (1ft <sup>2</sup> ), flare 0.6 m (3 ft)		

### Electrical data

Relay	Alarm: SPST 2A @ 30VDC Normally Open Fault: SPST 2A @ 30VDC Normally Closed
Signal output	0 to 20 mA
Communication	RS485, HART® 7
Supply voltage	24 VDC nominal (18 to 32 VDC)
Power consumption	Minimum 3 W / Maximum 12 W with heating

### Housing

Material	Aluminium or 316 stainless steel, powder-coated
Cable gland	Dual M25 or ¾"NPT
Weight	2.5 kg (5.5 lbs.) aluminium or 6 kg (13.2 lbs.) stainless steel
Dimensions	220 mm x 100 mm (8.7 in x 3.9 in)
Protection class	IP66, NEMA 4X

### Environmental conditions

Temperature	-50 to +85 °C (-58 to +185 °F)
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### Approvals

ATEX	Ex II 2 G Ex db IIC T4 Gb IP66
IECEX	Ex II 2 G Ex db IIC T4 Gb IP66
FM/FMC	Class 1 Zone 1 A Ex db IIC T4
	Class 1 Div. 1, Groups B, C, D T4
Functional Safety	SIL2 (IEC 61508-1-3)
American Fire Service Listing	FM Class 3260
European Fire Services Listing	EN 54-10 (VdS)

## Ordering Information

Dräger Flame 1750 H <sub>2</sub> (mounting bracket included)	Order number
Dräger Flame 1750 H <sub>2</sub> , Aluminium, 2 x M25	3724447
Dräger Flame 1750 H <sub>2</sub> , Aluminium, 2 x ¾" NPT	3724445
Dräger Flame 1750 H <sub>2</sub> , Stainless steel, 2 x M25	3724446
Dräger Flame 1750 H <sub>2</sub> , Stainless steel, 2 x ¾" NPT	3724444
Accessories	Order number
Dräger FS-5000 Test Lamp	4209307
Heavy duty marine mounting bracket	3701298
Sun protection – Flame 1x00/3x00/5x00	3701299
Blind plug ¾" NPT nickel plated brass (qty 3)	8344041
Blind plug ¾" NPT stainless steel (qty 1)	4544321
Blind plug M25 nickel plated brass (qty 1)	3721366
Blind plug M25 stainless steel (qty 1)	3721367
Mounting clamp – 2" pole	3701300
Mounting clamp – 3" pole	3701301
Mounting clamp – 4" pole	3701302
Converter – USB to RS485 Flame	3724466

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