

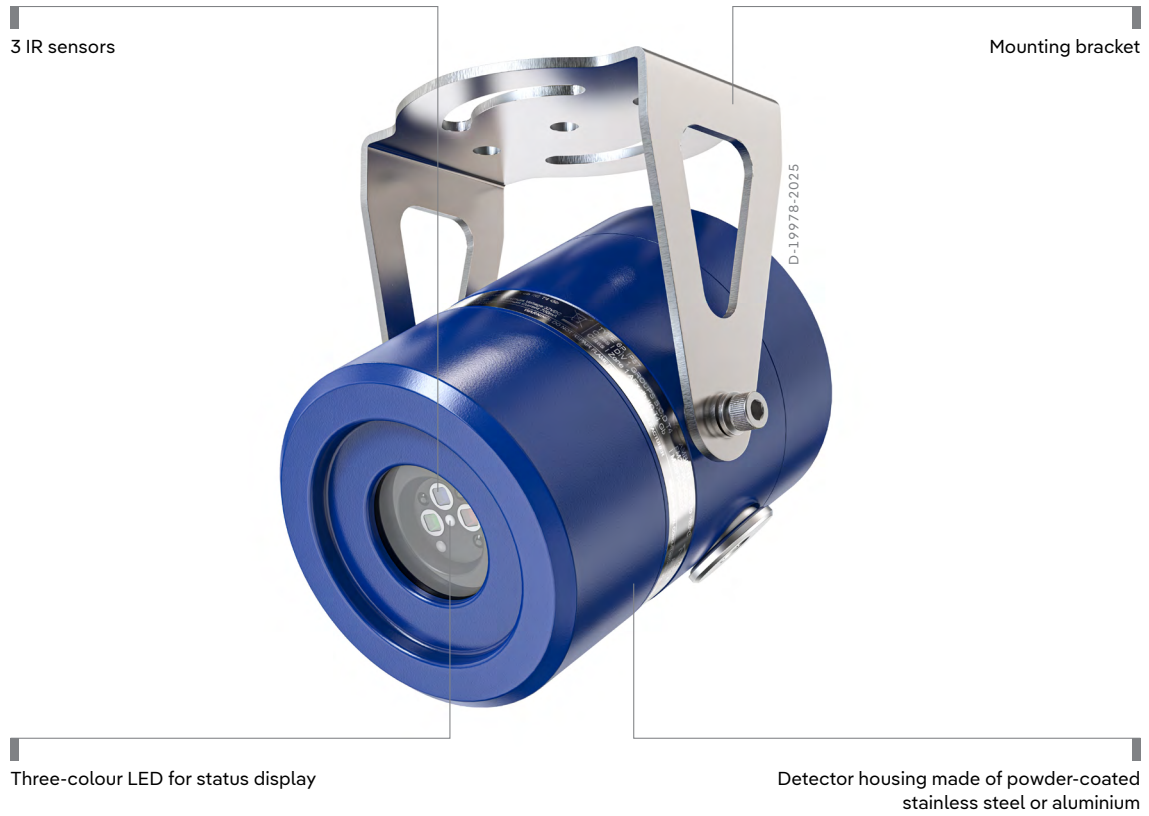


# Dräger Flame 1750 IR3 H<sub>2</sub> Flame Detector

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With its triple IR sensor, the Dräger Flame 1750 H<sub>2</sub> detects hydrogen-based fires. It offers you high reliability against false alarms and its good measurement performance remains even at extreme temperatures.

# Dräger Flame 1750 IR3 H<sub>2</sub>



# Benefits

## 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 a greater distance. 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.

## 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, guaranteeing high performance and a low false alarm rate. Common sources of false alarms, such as hot CO<sub>2</sub> or welding work, are no longer a problem for you.

## Robust and durable

The housing is very robust and weatherproof. To protect against icing and fogging, the window can be heated automatically. This allows you to operate the Flame 1750 H<sub>2</sub> reliably even under extreme environmental conditions, e.g. in temperatures from -60 °C to +85 °C.

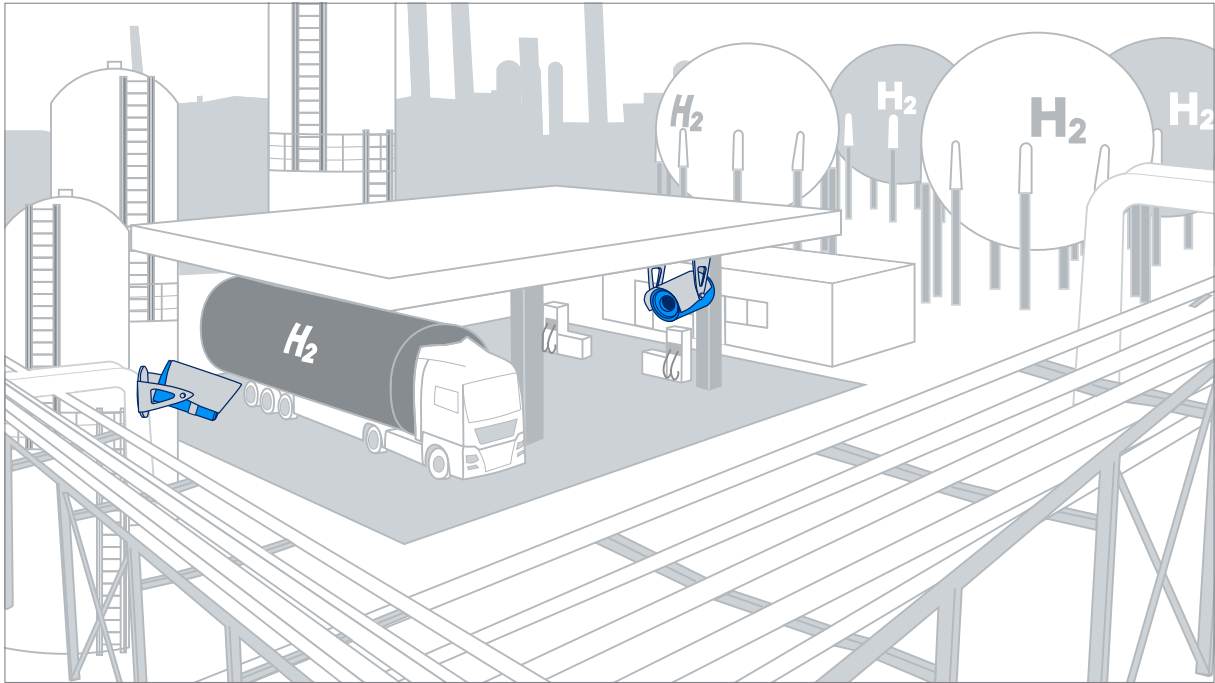
## Simple verification

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.

## Key features

- **Faste reaction time:** Less than five seconds for tested with a one-meter hydrogen fire from 40 meters distance.
- **Avoidance of false alarms:** Using three infrared sensors and sophisticated algorithms.
- **All-weather availability:** Equipped with a heated window to combat frost and fogging, ensuring yearround functionality.

## Flame 1750 IR H<sub>2</sub> - Hydrogen-based fires detection



Hydrogen is colourless and odourless, yet flammable and even explosive under certain conditions. In addition, hydrogen flames are very pale and hardly visible to the human eye during daylight. To detect flames like these, you need a fire detector that offers maximum reliability, along with very low risk of false alarms.

# System Components

D-1501-2022



## Dräger REGARD 7000

The Dräger REGARD 7000 is a modular and therefore highly expandable control 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-39957-2021



## Dräger REGARD 3000

Monitor various gases and vapours with the modular Dräger REGARD 3000 control system. Its multi-coloured status light signals the status of your gas detection system. The controller allows you to combine three different modules: Input, Relay and Gateway module. You can connect up to four analogue transmitters and eight relays in combination.

## Accessories



### Dräger Flame Simulator

The Dräger flame simulator (FS-5000) is used to simulate the presence of fire or flames to test the correct operation of the Dräger Flame 1350, 1500, 1750 and 7000.



### Dräger Flame Weather Shield

The weather shield for a flame detector is designed to protect the sensitive optics from rain, dust, snow, and direct sunlight. It ensures that the detector maintains a clear view of the monitored area without interference from harsh outdoor conditions.

## Related Products



D-19966-2025

### Dräger Flame 1350 UV/IR

The Dräger Flame 1350 combines UV and IR sensors to detect hydrocarbon-based fires. These powerful sensors and complex algorithms provide increased safety and fewer false alarms.



D-19972-2025

### Dräger Flame 1500 IR3

The Dräger Flame 1500 flame detector uses its triple IR sensor to detect hydrocarbon fires even at great distances. It offers you high reliability against false alarms.



D-49075-2012

### 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.

# 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	30 m (100 ft)

\*Fire pan 0.1 m<sup>2</sup> (1 ft<sup>2</sup>), flaring fire 0.6 m (3 ft)

## Electrical data

Relay	Alarm and fault
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 stainless steel, powder-coated
Cable gland	Dual M25 or ¾"NPT
Weight	Aluminium: 2.0 kg or stainless steel: 4.5 kg
Dimensions	100 x 145 mm (excluding bracket)
Protection class	IP66, NEMA 4X

## Environmental conditions

Temperature	-60 to +85 °C (-76 to +185 °F)
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## Approvals

ATEX	Ex II 2 G Ex db IIC T5 / T6 Gb IP66
IECEX	Ex II 2 G Ex db IIC T5 / T6 Gb IP66
NEC 505	Class 1 Zone 1 AEx db IIC T5/T6 Gb Type 6P, IP67
NEC 500	Zone 1 Class 1, Div. 1, Groups B, C, D T5/T6 Type 6P, IP67
FM (performance)	Class 3260 & 3810, EN 54-10
Functional Safety	SIL2 certified IEC 61508
Marine approval	DNV & GL, MED/MER-B, CCS
INMETRO	ABNT NBR IEC 60079-0:2020; ABNT NBR IEC 60079-1:2016;
CE Marked	EN 61000-6-3:2007 A1:2011; EN 50130-4-2011 A1:2014
Ingress Protection	IP67; NEMA Type 6P

# Technical Data

## Flame Sensitivity

	Fuel	Fire Size	Distance
High sensitivity	Hydrogen	0.9 m (36 inch) plume	40 m (131 feet)
	Methylated Sprits	30 cm x 30 cm   1'x'1	20 m (65 feet)
	Methanol	30 cm x 30 cm   1'x'1	20 m (65 feet)
	n-Heptane	30 cm x 30 cm   1'x'1	12 m (40 feet)
	Methane	0.9 m (36 inch) plume	30 m (100 feet)

## Ordering Information

### Dräger Flame 1750 H<sub>2</sub>

	Order number
Dräger Flame 1750 IR3 H2 SE 2x3/4 NPT aluminium	3742944
Dräger Flame 1750 IR3 H2 SE 2x3/4 NPT stainless steel	3742945
Dräger Flame 1750 IR3 H2 SE 2xM25 aluminium	3742946
Dräger Flame 1750 IR3 H2 SE 2xM25 stainless steel	3742947

### Accessories

	Order number
Dräger Flame Simulator (FS-5000)	4209307
Air Shield - SS grey	3724460
Air Shield - AL red	3724461
Duct Mount Kit	3724462
Adaptor Bracket	3724463
USB - HART Modem	3724464
Charger - FS 5000	3724465
Converter USB-485	3724466
Weather shield Flame - short version	3742929
Mount Kit - 2" pole	3701300
Mount Kit - 3" pole	3701301
Mount Kit - 4" pole	3701302
Sealing Kit Detector - metric	3701303
Bracket Marine - 316 stainless steel	3701298
Bracket Standard -316 stainless steel	3718732

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