

# CERTIFICATE OF CONFORMITY

## 1. FIRE PROTECTION EQUIPMENT

2. Certificate No: **FM23FPUS0065**
3. Equipment:  
(Type Reference and Name) **Flame 1750 Multi Spectrum IR Hydrogen Flame Detector**
4. Name of Listing Company: **Dräger Safety AG & Co. KGaA**
5. Address of Listing Company: **Revalstraße 1, Lübeck, Germany 23560**
6. The examination and test results are recorded in confidential report number:  
**PR464856 dated 19 July 2023**
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval Standards and other documents:  
**FM 3260:2021, FM 3600:2022, FM 3615:2022, NEMA 250:2014, ANSI/UL 60079-0:2013, ANSI/UL 60079-1:2015, ANSI/IEC 60529:2004**
8. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
9. Approval Guide Listing Category:  
**Alarm Signal Initiating Devices, Fire Detection, Flame-Actuated**

### Certificate issued by:



J.E. Marquedant  
VP, Manager - Electrical Systems

19 July 2023

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
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## 10. Description of Equipment:

**The Flame 1750 Multi Spectrum IR Hydrogen Flame Detector is Approved for use:**

Operating Voltage: 24Vdc [18 to 32Vdc]

Current draw: 0.42A [10W], with heater - 0.63A [15W]

Dry contact Form C relay outputs: 30Vdc, 2A

Operating temperature and humidity range is -60°C to +85°C (-76°F to +185°F), 93%

4-20mA Outputs: 0mA - Power/Detector Fault, 1 mA – Low Supply Voltage Fault, 1.5mA - Optical Fault, 4mA – Healthy, 18mA – Alarm, 21mA - Over-range

Compatible Approved control panel for alarm and trouble reporting.

Sensitivity settings: Medium, High

1750 Flame Simulator: not FM Approvals examined

Firmware version 1.1x

Fuels: see below table

Detection time: 4 -30 sec.

Detection Distance: see below table

Field of view [vertical] 90.0°

Field of view [horizontal] 90°

False alarm stimuli: see 1750 Safety and Technical Manual, 9300878

Fire	Fuel Size	Distance
Hydrogen Fire	0.9m (36inch) plume height	40m (131ft)
Methylated Spirits Fire	0.3m x 0.3m (1ft) pan	20m (65ft)
Methanol Fire	0.3m x 0.3m (1ft) pan	20m (65ft)
n-Heptane Fire	0.3m x 0.3m (1ft) pan	12m (40ft)

Suitable for US as explosionproof for use in Class I, Division 1, Groups B, C, and D T4 hazardous (classified) locations, indoors and outdoors Type 6P / IP67. Operating temperature range is -50°C to +85°C (-58°F to +185°F).

Suitable for US as flameproof for use in Class I, Zone 1, AEx db IIC T4 Gb hazardous (classified) locations, indoors and outdoors Type 6P / IP67. Operating temperature range is -50°C to +85°C (-58°F to +185°F).

Specific Conditions of Use

*The equipment is to be installed in places where there is a low risk of mechanical damage.*

## 11. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

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## **12. Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

## **13. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
19 July 2023	Original Issue.

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