Conventional
Flame Detector (UV / IR2)

Product Overview

Product	**Con. Flame Detector (UV / IR2)**
Part No.	**55000-064**

Product Information

The Conventional Flame Detector (UV / IR2) is designed to protect areas where open fires may be expected and detects most flames from hydrocarbon fires with 4.3 µm emissions through to invisible fires such as hydrogen.

The Conventional Flame Detector (UV / IR2) Flame Detector has selectable output options of relay contacts of 4 to 20 mA signal as standard.

- Class 1 sensitivity to EN54-10 detects 0.1 m2 fire at 25 m
- High optical interference immunity
- Selectable response speed
- Suitable for indoor and outdoor areas

Manufacturer's Specification

All data is supplied subject to change without notice. Specifications are typical at 24V, 23°C and 50% RH unless otherwise stated.

Supply Voltage	14 - 30 V dc
Test Signal Voltage	14 - 30 V dc
Supply Current	See DIL Switch settings
Quiescent Current	
RL2 Energised	8 mA
Current Loop, RL2 OFF	4 mA
RL2 OFF	3 mA
Alarm Current	
RL1 and RL2 Energised	28 mA
Current Loop, RL1 and RL2 OFF	20 mA
RL1 Energised	9 mA
Relay Maximum Ratings:	
Current	0.75 A max.
Voltage	48 V dc max.
Power (resistive loads only)	30 W max.
Range of View	
High (Class 1)	0.1 m^2 n-heptane at 25 m
Low (Class 3)	0.1 m^2 n-heptane at 12 m (see EN54-10 for sensitivity settings)
Field of View	90° minimum cone
Spectral Response	UV 185 to 260 nm
	IR 1.0 to 2.7 µm
Sensitivity	High = Class 1 Low = Class 3
Operating Temperature	-10°C to +55°C
Storage Temperature	-20°C to +65°C
Humidity (no condensing or icing)	0% to 95% RH
Vibration, Impact and Shock	EN54-10
IP Rating	IP65
Dimensions	142 mm (h) x 108 mm (w) x 79 mm (d)
Weight	1.75 kg
Housing Material	die cast zinc alloy
Housing Colour	blue
Cable Gland Entries	2 x 20 mm

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Operation

The Flame Detector is sensitive to flickering, low frequency (1-15Hz) infra-red radiation along with ultra-violet emitted by flames during combustion. It has a UV sensor and two IR sensors which respond to different wavelengths of both the ultra-violet and the infra-red spectrum. The signals from these sensors are processed by the detector and checked for characteristics of a flame. The simultaneous detection of both the UV and the IR light by the sensors will signal an alarm. False alarms from flickering sunlight, arc welding and lightning are eliminated by a combination of UV and dual IR signal processing techniques.

Response Characteristics - High Sensitivity			
Fuel	Flame Size m^2 (in^2)	Distance m (ft)	Approval
n-Heptane* (Yellow flame)	0.1 (144)	25 (82)	EN54-10
Methylated spirit* (Clear flame)	0.25 (400)	25 (82)	EN54-10
* Has been tested and approved at Class I			

For DIL Switch Settings, please refer to the Conventional Flame Detector User Guide.

Figure 1: Dimensional Drawings