

RON

Single IR Flame Detector

40/40R

SharpEye

The new 40/40R Single IR Flame Detector detects hydrocarbon-based fuel and gas fires using advanced flame analysis tools. The detector provides early warning of flaming fires working and immunity to false alarms from IR sources such as sunlight and IR projectors.

The 40/40R is the most durable and weather resistant single IR flame detector currently on the market. Its new features include a heated window, to eliminate condensation and icing ; HART capabilities, for digital communications; lower power requirements; and a compact, lighter design.

Due to increased reliability, the 40/40 Series warranty period has been extended to 5 years and is SIL2 (TUV) approved to IEC 61508.



FEATURES & BENEFITS

- Sensitivity selection
- 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
 - Relays (3) for Alarm, Fault and Auxiliary
 - 0–20mA (stepped)
 - HART Protocol for maintenance and asset management
 - RS-485, Modbus Compatible
- High Reliability –MTBF –minimum 150,000 hours
- Approved to Safety Integrity Level 2 (SIL2 –TUV)
- User Programmable via HART or RS-485

Accessories



Simulators
Up to 9m



Tilt Mount
Wall Mount bracket



Duct Mount
In high temperatures



U-Bolt/Pole Mount
2" ~ 3" Pipe mounting



Laser Pointer
Optimizing detector location



Air shield
Using under tough environmental conditions



Weather Protector
Protecting the detector from rain and snow

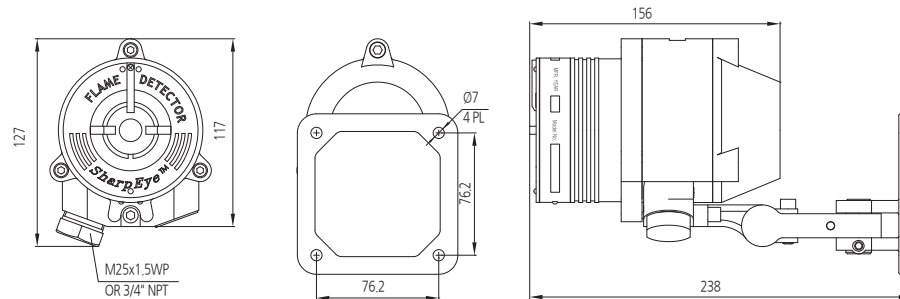


Mini Laptop Kit
Re-configure settings or perform diagnostics



USB RS485 Harness
Re-configure settings or perform diagnostics

Dimension (Unit:mm)



GENERAL SPECIFICATIONS

Spectral Response	Single band IR 4.4-4.6 μm					
Detection Range (at highest Sensitivity Setting for 1ft ² (0.1m ²) pan fire)	Fuel	ft / m	Fuel	ft / m	Fuel	ft / m
	n-Heptane	50 / 15	Kerosene	37 / 11	Methane*	16 / 5
	Gasoline	50 / 15	Ethanol 95%	25 / 7.5	LPG *	16 / 5
	Diesel Fuel	37 / 11	Methanol	25 / 7.5	Polypropylene Pellets	10 / 3
	JP5	37 / 11	IPA (Isopropyl Alcohol)	25 / 7.5	Office Paper	
	* 20" (0.5m) high, 8" (0.2m) width plume fire					
Response Time	Typically 5 seconds					
Adjustable Time Delay	Up to 30 seconds					
Sensitivity Ranges	2 ranges: 1 ft ² (0.1m ²) n-heptane pan fire from 15 ft (5m) or 50 ft (15m)					
Field of View	Horizontal 90°; Vertical 90°					
Built-in-Test (BIT)	Automatic (and Manual)					
Temperature Range	Operating:	-67°F to +167°F		(-55°C to +75°C)		
	Option:	-67°F to +185°F		(-55°C to +85°C)		
	Storage:	-67°F to +185°F		(-55°C to +85°C)		
Humidity	Up to 95% non-condensing (withstands up to 100% RH for short periods)					
Heated Optics	To eliminate condensation and icing on the window					

ELECTRICAL SPECIFICATIONS

Operating Voltage	24 VDC nominal (18-32 VDC)
Power Consumption	Standby: Max. 90mA (110mA with heated window) Alarm: Max. 130mA (160mA with heated window)
Cable Entries	2 x 3/4" - 14NPT conduits or 2 x M25 x 1.5 mm ISO
Wiring	12 - 22AWG (2.5mm ² - 0.3mm ²)
Electrical Input Protection	According to MIL-STD-1275B
Electromagnetic Compatibility	EMI/RFI protected to EN61326-3 and EN61000-6-3
Electrical Interface	The detector includes twelve (12) terminals with five (5) wiring options (factory set)

OUTPUTS

Relays	Alarm, Fault and Auxiliary SPST volt-free contacts rated 5A at 30 VDC or 250 VAC.
0-20mA (stepped)	Sink (source option) configuration Fault: 0 +1mA Warning: 16mA \pm 5% BIT Fault: 2mA \pm 10% Alarm: 20mA \pm 5% Normal: 4mA \pm 10% Resistance Loop: 100-600 Ω
HART Protocol	Optional HART communications on the 0-20mA analog current (FSK) - used for maintenance, configuration changes and asset management, available in mA source output wiring options
RS-485	RS-485 Modbus compatible communication link that can be used in computer controlled installations

MECHANICAL SPECIFICATIONS

Materials	- Stainless Steel 316L with electro polish finish
Enclosure options	- Heavy duty copper free aluminum (less than 1%), red epoxy enamel finish
Mounting	Stainless Steel 316L with electro polish finish
Dimensions	Detector 4" x 4.6" x 6.18" (101.6 x 117 x 157 mm)
Weight	Detector (St.St.) 6.1 lb (2.8 kg) Tilt mount 2.2 lb (1.0 kg) Detector, aluminum 2.8 lb (1.3 kg)
Environmental Standards	Meets MIL-STD-810C for Humidity, Salt & Fog, Vibration, Mechanical Shock, High Temp, Low Temp
Water and Dust	IP66 and IP67 per EN60529, NEMA 250 6P

APPROVALS

Hazardous Area	ATEX and IECEx Ex II 2 GD, Ex de IIC T5 (-55°C to +75°C) Ex de IIC T4 (-55°C to +85°C) Ex tD A21 IP66/X7 T 95°C Ex tD A21 IP66/X7 T 105°C
	FM/FMC/CSA Class I Div. 1, Groups B, C & D Class II/III Div. 1, Groups E, F & G
Performance	EN54-10 (LPCB) FM-3260 (FM)
Reliability	IEC61508 - SIL2 (TUV)

ACCESSORIES

Fire Simulator	20/20-312	U-Bolt/Pole Mount	789260-2 (2" pole)	Mini Laptop Kit	777820	Laser Pointer	777166
Tilt Mount	40/40-001		789260-1 (3" pole)	Weather Protector	777163	(Detector area coverage)	
Duct Mount	777670	USB RS485 Harness Kit	794079-5	Air Shield	777161		