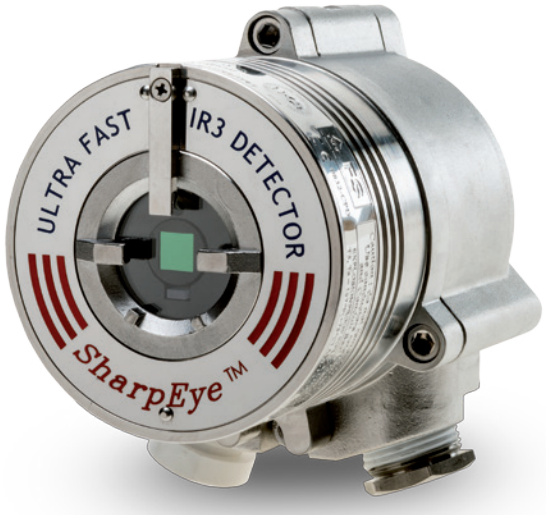
keep a SharpEye™ on your safety

40/40M | 40/40I | **40/40UFI** | 40/40L-LB | 40/40UFL | 40/40L4-L4B | 40/40U-UB | 40/40R

40/40UFI

Ultra Fast Triple IR (IR3) Flame Detector

Superior performance, reliability and immunity to false alarms



SharpEye™

The new 40/40UFI, an Ultra-Fast multi-spectrum IR3 Flame Detector, detects hydrocarbon fuel and gas fires at long distances, and is especially designed to detect an explosive 1 ft (0.3m) diameter gas cloud explosion in max. 50 msecs for 1ft diameter sphere methane-air mixture explosion at 66 ft (20m) with the highest immunity to false alarms. The 40/40UFI IR3 can also detect a 1 ft² (0.1m²) gasoline/ n-Heptane pan fire at up to 300 ft (90m).

The 40/40UFI is part of the 40/40 Series, the most durable and weather resistant range of flame detectors currently on the market. Features include a heated window, to eliminate condensation and icing; HART capability 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 per IEC 61508.

FEATURES & BENEFITS

- Multi Spectrum Design - for long distance detection and high false alarm immunity
- High Speed Response - 50 msec
- Sensitivity Selection - to ensure no zone crossover detection
- Automatic 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
  - Analogue output for fast detection
  - 0-20mA (stepped)
  - HART Protocol for maintenance and asset management
  - RS-485, Modbus Compatible
- High Reliability - MTBF - minimum 150,000 hours
- Safety Integrity Level SIL2 (TUV)
- 5-Year Warranty
- User Programmable via HART or RS-485
- Hazardous area zones:
  - Zones 1 & 2 with IIC gas group vapors present
  - Zones 21 & 22 with IIIC dust type present
- Ex approved to:
  - ATEX & IECEx
  - FM/FMC/CSA
  - TR CU (EAC)
- 3rd party Performance
  - EN54-10 (VdS)
  - FM3260 (FM)

APPLICATIONS

Offshore Oil & Gas installations
Onshore Oil & Gas installations and pipelines
Chemical plants
Petrochemicals plants
Storage Tank farms
Aircraft hangars
Power Generation facilities
Pharmaceutical Industry
Printing Industry
Warehouses
Automotive Industry
Explosives & Munitions
Waste Disposal facilities

Headquarters: 8200 Market Boulevard | Chanhassen | MN 55317 | USA
Tel: +1 (973) 239-8398 | +1 (800) 452-2107 (US only) | Fax: +1 (973) 239-7614 | Houston: +1 (832) 321-5229
E-mail: spectrex@spectrex.net | www.spectrex.net

SPECTREX

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GENERAL SPECIFICATIONS

Spectral Response	Three IR Bands

Detection Range (at highest Sensitivity Setting for 1ft² (0.1m²) pan fire)

Fuel	ft / m	Fuel	ft / m	Fuel	ft / m
n-Heptane	300 / 90	Kerosene	205 / 62	Methane*	205 / 62
Gasoline	300 / 90	Ethanol 95%	185 / 55	LPG*	205 / 62
Diesel Fuel	205 / 62	Methanol	160 / 48	Polypropylene Pellets	160 / 48
JP5	205 / 62	IPA (Isopropyl Alcohol)	185 / 55	Office Paper	115 / 34

* 30" (0.75m) high, 10" (0.25m) width plume fire

High Speed Response	50 msec for 1ft diameter sphere methane-air mixture explosion at 66ft (20m)
Response Time	Typically 2 sec at 131ft (40m) Typically 10 sec at 300ft (90m)
Adjustable Time Delay	Up to 30 seconds
Sensitivity Ranges	4 Sensitive ranges for 1 ft² (0.1m²) n-heptane pan fire from 66 ft (20m) to 300 ft (90m)
Field of View	Horizontal 90°; Vertical 90°
Built-in-Test (BIT)	Automatic
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 (0.3mm² - 2.5mm²)
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 2A at 30 VDC
Analogue Output	4.75 - 5.25 V at detection
0-20mA (stepped)	Sink (source option) configuration Fault: 0 +1mA Warning: 16mA ± 5% BIT Fault: 2mA ± 10% Alarm: 20mA ± 5% Normal: 4mA ± 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 G D Ex db eb op is IIC T4 Gb Ex tb op is IIIC T96°C Db (-55°C ≤ Ta ≤ +75°C)	Ex db eb op is IIC T4 Gb Ex tb op is IIIC T106°C Db (-55°C ≤ Ta ≤ +85°C)	
	FM/FMC/CSA	Class I Div. 1, Groups B, C & D Class II/III Div. 1, Groups E, F & G		
	TR CU (EAC)	1 Ex db eb op is IIC T4 Gb X Ex tb op is IIIC T96°C Db X (–55°C ≤ Ta ≤ +75°C)	1 Ex db eb op is IIC T4 Gb X Ex tb op is IIIC T106°C Db X (–55°C ≤ Ta ≤ +85°C)	1 Ex db eb mb op is II T4 Gb X Ex tb op is IIIC T98°C Db X (–55°C ≤ Ta ≤ +75°C)
Performance	EN54-10 (VdS) FM3260			
Reliability	IEC61508 - SIL2 (TUV)			

ACCESSORIES

Flame Simulator	FS-1100	**U-Bolt/Pole Mount**	789260-2 (2" pole) 789260-1 (3" pole)	**Air Shield**	777650	**Weather Cover**	777163 (St.St) *777263 (Plastic)
Tilt Mount	40/40-001						
Duct Mount	777670	**USB RS485 Harness Kit**	794079				
		E.O.L Encapsulated Resistor	777915-X				

*Supplied free of charge with the detector

Specifications subject to change

For more information view manual or website www.spectrex.net

SPECTREX

For pricing or further information, please contact us using the details below

Cadmus Products

Tel: +44 (0)330 088 0595

Email: info@cadmus.co.uk

Website: www.cadmus.co.uk

Please note - Product designs and specifications are subject to change without notice.
The user is responsible for determining the suitability of this product.