

# features

- Protection against hydrocarbon-based fuel and gas fires, hydroxyl and hydrogen fires, as well as metal and inorganic fires.
- Highest performance, cost effective
- 5 year warranty
- Compliant with IEC 61508 Safety Integrity requirements (SIL2)
- CPD and LPCB certified, according to EN54-10

The new SharpEye 40/40 Series Flame Detectors from Spectrex provide the most comprehensive protection against hydrocarbon-based fuel and gas fires, hydroxyl and hydrogen fires, as well as metal and inorganic fires. The detectors provide early warning of fires at long distances with high immunity to false alarms.

The new 40/40 series designs are the highest performance, cost effective flame detectors currently on the market. New features include a stainless steel housing with a heated window, to eliminate condensation and icing; HART capabilities for digital communications; lower power requirements; and a compact, lightweight but highly durable and weather resistant design.

## The 40/40 Series Flame Detectors and Accessories

# Data Sheet

The 40/40 flame detector series is highly reliable, with a newly extended 5-year warranty period and compliance with the IEC 61508 Safety Integrity requirements of SIL2.

A leader in the flame and gas detection industry for over 15 years, Spectrex products are fully certified and employed around the world in a wide range of industrial and commercial facilities.

MORLEY



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### 40/40M Multi IR Flame Detector

Detects hydrocarbon and hydrogen flames at long distances and provides the highest immunity to false alarms with its multi spectrum design. The 40/40M can detect a gasoline

pan fire at 65m, or a hydrogen flame at 30m in less than 5 seconds.



### 40/40L-LB UV/IR Flame Detector

Models 40/40L (& LB) – A dual UV and IR detector, comprising an IR sensor that operates at a wavelength of 2.5-3.0 µm and a UV solar blind sensor, the 40/40L detects hydrocarbon-

based fuel and gas fires, hydroxyl and hydrogen fires, as well as metal and inorganic fires. The UV sensor has a special logic circuit that prevents false alarms from solar radiation.



### 40/40U-UB UV Flame Detector

Detects hydrocarbon-based fuel and gas fires, invisible hydrogen flames and fires from hydrides, ammonia, silane and other organic materials with its unique UV solar blind

sensor. The 40/40UB model includes a Built-in-Test (BIT) feature.



### 40/40I Triple IR (IR3) Flame Detector

Detects hydrocarbon fuel and gas fires at long distances and provides the highest immunity to false alarms with its triple spectrum design. The IR3 can detect a 0.1m<sup>2</sup> gasoline pan fire

at 65m in less than 5 seconds.



### 40/40L4-L4B UV/IR Flame Detector

Models 40/40L4 (& L4B) - A dual UV and IR detector, comprising an IR sensor that operates at a wavelength of 4.5 µm and a solar blind UV sensor, the 40/40L detects only

hydrocarbonbased fuel and gas fires.



### 40/40R Single IR Flame Detector

Detects hydrocarbon-based fuel and gas fires, comprising an IR sensor working at 4.5 µm wavelength for maximum sensitivity and provides immunity to false alarms from IR

sources such as sunlight and IR projectors.

### Weather Protector 40/40-777163

The Weather Protector is designed to protect the detector from rain and snow and direct extreme temperatures from the sun (remember our detectors can operate in ambients up to 85°C without protection)

### Tilt Mount 40/40-003

The Tilt Mount is an adjustable mounting bracket to allow the detector to be oriented towards the intended fire detection area to maximise coverage.

### Laser Pointer 40/40-777166

The Laser Detection Area Coverage Pointer enables designers and installers to assess and optimise, on site, the actual location and area coverage (cone of vision) of our flame detectors.

### Air Shield 40/40-777161

The Air Shield enables the connection of a compressed air line to provide an 'air curtain' that helps avoid accumulation of dirt on the detector window thereby reducing maintenance need and frequency in polluted or dirty environments.

## specifications

### Electric

Operating Voltage:	24 VDC nominal (18-32 VDC)
Power Consumption:	
Standby:	max 100mA
Alarm:	max 150mA
	(add 50mA for heated window)
Field of View:	100° horizontal and 95° vertical on most models
Outputs:	- Relays (Alarm, Fault, Auxiliary) - 0-20mA (stepped) - HART protocol for maintenance and asset management - RS-485, Modbus Compatible

### Mechanic

Built-in-Test (BIT):	Auto/manual self test
Heated Optics:	To eliminate condensation and icing on the window
Cable Entries:	2 x 3/4"-14NPT or 2 x M25 x 1.5 mm ISO
Temperature Range:	
Operating:	-55°C to +75°C
Option:	-55°C to +85°C
Storage:	-55°C to +85°C
Housing:	316L St. steel(electropolished) or heavy duty copper-free aluminum
Weight:	
Detector (St.St.)	2.5 kg
Detector, aluminum	1.2 kg

## accessories

### Fire Simulator 20/20-310, 311, 312, 313

The Long Range Flame Simulators will 'proof' test our flame detectors to verify reliable operation of detector and control system loop without the need for a real flame. No need for expensive scaffolding and other access problems - operates at distances up to 9m from detector.

# references

Dimensions:	90 x 114 x 156 mm
Warranty:	5-Year
Ex Approved for Zone 1 hazardous area locations:	ATEX and IECEx FM; CSA
Performance	FM-3260 (FM) EN54-10 (LPCB)
Reliability	IEC61508 - SIL2 (TUV)

40/40M	Multi IR flame detector
40/40I	Triple IR (IR3) flame detector
40/40L-LB	UV/IR flame detector
40/40L4-L4B	UV/IR flame detector
40/40U-UB	UV flame detector
40/40R	Single IR flame detector

## Certification

LPCB, certification number 911a-(cl-1)  
CPD:

40-40I:	0832-CPD-0972
40-40L:	0832-CPD-0973
40-40L4:	0832-CPD-0974
40-40L4B:	0832-CPD-0975
40-40LB:	0832-CPD-0976
40-40M:	0832-CPD-0977
40-40R:	0832-CPD-0978
40-40U:	0832-CPD-0979
40-40UB:	0832-CPD-0980

## Accessories

20/20-310	Fire simulator
20/20-311	Fire simulator
20/20-312	Fire simulator
20/20-313	Fire simulator
777163	Weather protector
40/40-003	Tilt mount
777166	Laser pointer
777161	Air shield

## local distributor

Every care has been taken in the preparation of this data sheet but no liability can be accepted for the use of the information therein. Design features may be changed or amended without prior notice.

