GASTRON

UV Flame Detector

40/40U-UB

SharpEye

The new 40/40 UV Flame Detector detects hydrocarbon-based fuel and gas fires, invisible hydrogen flames, and fires from hydrides, ammonia , silane and other organics.

The 40/40U-UB is the most durable and weather resistant UV flame detector currently on the market.

Its new features include a heated window, to eliminate condesation 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.

Note : This type of detector should not be exposed to UV radiation sources such as welding, sparks, and electric as it will cause false alarms.

FEATURES & BENEFITS

- UV spectrum design
- Fast Response-200 msec to flash fire
- Automatic and Manual Built-In-Test (BIT)-to assure continued reliable operation
- Heated window-for operation in harsh weather conditions (snow, ice, condesation)
- 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)
- model 40/40UB only
- 5-Year Warranty
- 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
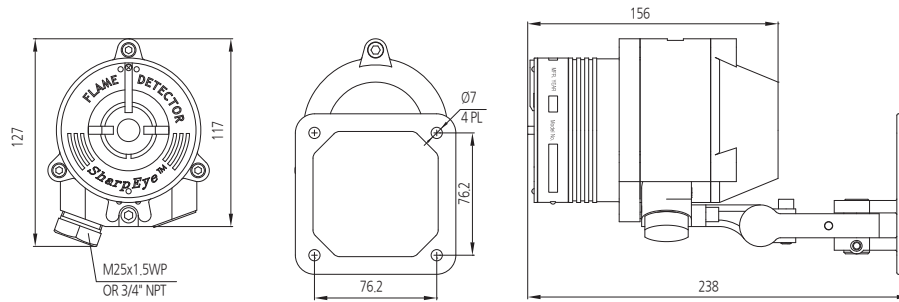Protecting the detector from rain and snow

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	UV 0.185-0.260 µm				
Detection Range (at highest Sensitivity Setting for 1ft^2 (0.1m^2) pan fire)	Fuel	ft / m	Fuel	ft / m	Fuel	ft / m

Detection Range (at highest Sensitivity Setting for 1ft² (0.1m²) pan fire)	Fuel	ft / m	Fuel	ft / m	Fuel	ft / m
	n-Heptane	50 / 15	Ethanol 95%	37 / 11	LPG *	40 / 5
	Gasoline	50 / 15	Methanol	37 / 11	Polypropylene Pellets	18 / 5
	Diesel Fuel	37 / 11	IPA (Isopropyl Alcohol)	37 / 11	Silane*	22 / 7
	JP5	37 / 11	Hydrogen*	33 / 10	Office Paper	22 / 6
	Kerosene	37 / 11	Methane*	40 / 12	* 20" (0.5m) high, 8" (0.2m) width plume fire	

Response Time	Typically 3 seconds. 200 msec to flash fire
Adjustable Time Delay	Up to 30 seconds
Sensitivity Ranges	1 ft^2 (0.1m^2) n-heptane pan fire from 50 ft (15m)
Field of View	Horizontal 100°; Vertical 95°
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)
강화된 광학	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 2A at 30 VDC
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: 100-600Ω
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 - 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 (VdS) FM3260	
Reliability	IEC61508 - SIL2 (TUV) - model 40/40UB only	

ACCESSORIES

Fire Simulator	20/20-311	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		