

40/40U-UB

UV Flame Detectors

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 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.

The model 40/40UB includes a Built-in-Test (BIT) feature, whereas the 40/40U model does not

APPLICATIONS

- Chemical plants
- · Petrochemicals plants
- Power Generation facilities
- Pharmaceutical Industry
- Printing Industry
- Warehouses
- Automotive Industry
- Aerospace
- Explosives & Munitions
- Waste Disposal facilities
- Paint and solvent processes



KEY FEATURES

- UV spectrum design
- · 3 seconds response
- · 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) Model 40/40UB only)
- 5-Year Warranty
- User Programmable via HART or RS-485
- Ex approved for Zone 1 hazardous area location
 - ATEX
 - IECEx
 - FM/FMC
 - **CSA**
- 3rd party performance tested
 - EN54-10 (VdS)
 - FM3260

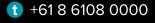
Specifications subject to change without notice

40/40U-UB

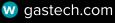
SPECIFICATIONS

Detection Range	Fuel	ft/m	Fuel		ft/m	Fuel	ft/m	
Detection Range	n-Heptane	50 / 15	Kerosene		37 / 11	Methane*	40 / 12	
(Highest Sensitivit		50 / 15	Ethanol 95%		37 / 11	LPG *	40 / 12	
Setting for 1 ft ²	Diesel Fuel	37 / 11	Methanol	<u>'</u>	37 / 11	Polypropylene Pellets	18 / 5	
(0.1m²) pan fire.	JP5	37 / 11	IPA (Isopropy	d Alcohol)	7 / 11		20 / 6	
		33 / 10		/I Alconol)		Office Paper 5m) high, 8" (0.2m) width plume fire	207 6	
	Hydrogen	33 / 10			20 (0.5	on) nign, 6 (0.2m) widin piune lire		
Response Time	Typically 5 seconds		0-20mA		Sink (source option) configuration			
Adjustable Time Delay	Up to 30 seconds			(stepped)		Fault: 0 +1mA Warning: 16mA \pm 5% BIT Fault: 2mA \pm 10% Alarm: 20mA \pm 5%		
Sensitivity Ranges	1 ft2 (0.1m2) n-heptane រុ	ft (15m)	HART Protocol		Normal: $4mA \pm 10\%$ Resistance Loop: $100\text{-}600\ \Omega$ 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			
Field of View	Horizontal 100°; Vertica							
Built-In-Test (BIT)	Automatic (and Manual)							
Temperature	Operating: -67°F to +167°F (-55°C to +75°C)			RS-485		RS-485 Modbus compatible communication link that		
Range	Option: -67°F to +185°F (-55°C to +85°C)			can be used in computer controlled installations				
	Storage: -67°F to +185°F (-55°C to +85°C)			MECHANICAL SPECIFICATIONS Materials • Stainless Steel 316L with electro polish finish				
Humidity	Up to 95% non-condensing (withstands up to 100% RH for short periods)			Waterials		 Heavy duty copper free aluminum (less than 1%), red epoxy enamel finis 		
Heated Optics	To eliminate condensat	the window	Mounting		Stainless Steel 316L with electro polish finish			
ELECTRICAL SPECIFICATIONS				Dimensions Detector 4" × 4.6" × 6.18" (101.6 × 117 × 157 n		·		
Operating Voltage	24 VDC nominal (18-32 VDC)			Weight		Detector (St.St.) 6.1 lb (2.8 kg)		
Power	Standby: Max. 90mA (110mA with heated window)					Tilt mount 2.2 lb (1.0 kg) Detector, aluminum 2.8 lb (1.3 kg)		
Consumption	Alarm: Max. 130mA (160mA with heated window)			Environn	rironmental Meets MIL-STD-810C for Humidity, Salt & Fog, Vib		· · · · · · · · · · · · · · · · · · ·	
Cable Entries	2 x 3/4" - 14NPT conduits or 2 x M25 x 1.5 mm ISO			Standard				
Wiring	12 - 22AWG (2.5mm² - 0.3mm²)			Water an	d Dust	IP66 and IP67 per EN60529, NEMA 250 6P		
Electrical Input Protection	According to MIL-STD-1275B			APPROV		ATEV LIFOR E II O OD		
Electromagnetic Compatibility	EMI/RFI protected to EN61326-3 and EN61000-6-3 The detector includes twelve (12) terminals with five (5) wiring options (factory set)			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		
Electrical								
Interface						FM/FMC/CSA Class I Div. 1, Groups B, C & D		
OUTPUTS						Class II/III Div. 1, Groups E, F & G		
Relays	Alarm, Fault and Auxiliary SPST volt-free contacts rated 2A at 30 VDC or 250 VAC			Performa	ance	EN54-10 (LPCB) FM-3260 (FM)		
				Reliabilit	у	IEC61508 - SIL2 (TUV) - model 40/40UB only		









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