UV/IR & Triple IR (IR3) Flame Detectors

(ZT-30P, ZT-20EX & ZT-500EX)

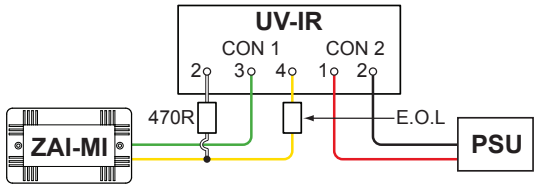
The new range of UV/IR and Triple IR Flame Detectors detect fuel and gas fires at long distances with the highest immunity to false alarms.

The ZT-30P and the ZT-20EX can detect a 0.1m^2 gasoline pan fire at 30m in less than 5 seconds. The ZT-500EX can detect the same fire at 65m in less than 5 seconds.

New features include RS484/RS232 compatabilities for digital communications; lower power requirements; and a compact, lighter design.

ZT-20EX and ZT-500EX series are approved to ATEX by DNV for explosion-proof.

Connection Diagram



Applications

Non Hazardous (ZT-30P)

- Non-Hazardous Areas
- Semiconductor Process Equipments
- Warehouses
- Waste disposal facilities
- Storage facilities
- Offices

Hazardous (ZT-20EX & ZT-500EX)

- Offshore Oil & Gas Installations
- Onshore Oil & Gas Installations and Pipelines
- Petrochemical plants
- Chemical plants
- Shipbuilding facility
- Automotive industry
- Storage tank farms
- Power generation facility
- Painting industry
- Warehouse
- Waste disposal facility
- Explosive & Munitons

Features

- UV/IR Spectrum - for medium distance detection and high false alarm immunity (ZT-20EX)
- Triple IR Spectrum - for longer distance detection and high false alarm immunity (ZT-30P & ZT-500EX only)
- Compact and lightweight design
- ZT-20EX & ZT-500EX Enclosure options:
  - Aluminium
  - Stainless (ST 316L) for offshore facilities
- User Selectable (Senitivity/Functions)
- Multiple output options
  - Relays for Alarm and Fault
  - 0-20mA (stepped)
  - RS-485/RS-232 spectrum monitoring
- Lower power requirement (35mA - standby / 75mA - alarm)
- Ex cable gland /2 metre cable assembled & provided for users' easy installation
- Certifications
  - ATEX approved by DNV for explosion-proof
  - CE marking

Model	ZT-30P	ZT-20EX	ZT-500EX
Part Number	47-156	47-154	47-153
Spectrum Response	Three IR Bands (IR3)	UV/IR (Dual Bands)	Three IR Bands (IR3)
Spectrum Response (at highest sensitivity setting for 0.1m² pan fire)	**Fuel** / **Distance** n-Heptane 65m Gasoline 65m Diesel 45m LPG* 30m Ethanol 40m IPA 40m Methane** 35m	**Fuel** / **Distance** n-Heptane 30m Gasoline 30m Diesel 20m LPG* 20m Ethanol 20m IPA 25m Methanol 20m	**Fuel** / **Distance** n-Heptane 65m Gasoline 65m Diesel 45m LPG* 30m Ethanol 40m IPA 40m Methanol 35m
	*0.5m high/0.2m width plume fire, **30" plume fire		
Response Time	Typically 5 seconds		
Adjustable Time Delay	Up to 20 seconds		
Sensitivity Range	4 sensitivity ranges for 0.1m² n-Heptane pan fire from 15m to 65m		
Field of View	Horizontal / Vertically Typical 120° & 120° Max	Horizontal 90°, Vertical 90°	
Built-in-Test	Automatic self-check to verify the lens cleanliness/ electronic circuits & etc	Manual (optionally Automatic)	
Temperature Range	Operating/Storage:-40°C to 75°C		
Humidity	Up to 95% non-condensing		
Operating Voltage	24VDC nominal (18-32VDC)	24VDC nominal (17-31VDC)	
Power Consumption	Standby: max. 50mA, Alarm: max. 70mA	Standby: max. 35mA, Alarm: max. 75mA	
Cable Entry	1 x Ø6mm	1 x M20 (ISO)	
Wiring	According to the requirements	AWG 16-26 (Str 1.5mm² to 0.13mm²)	
Electromagnetic Compatibility	Complies with EN 61000-6-4 and EN 50130-4	EMI/RFI protected to EN61000 series	
Electrical Interface	4-Wiring relay contact outputs	The detector includes twelve (12) terminals with four (4) wiring options	
Relays	Alarm(N.O.), Fault(N.C) SPST volt-free contacts rated 5A at 30VDC or 250VAC	Alarm, Fault	
0-20mA (stepped)		SPST volt-free contacts rated 5A at 30VDC or 250AC	
	N/A	Fault: 0+1mA Normal: 4mA+/-10% Alarm: 20mA+/10% Bit Fault: 2mA+/-10% Warning: 16mA+/-10% Resistance Loop: max. 800 ohms	
RS-485 (option)	RS-485 Modbus compatible communication link that can be used in computer controlled installations		
RS-232C (option)		Three IR channels spectrum monitoring with PC	
Materials	• Heavy duty copper free aluminium with white powder coating	• Heavy duty copper free aluminium (less than 1%) with bright grey anodized finish • Stainless Steel 316L with electro polish finish	
Mounting (Tilt Mount)	• Heavy duty copper free aluminium with white powder coating	• Heavy duty copper free aluminium (less than 1%) with grey epoxy enamel finish • Stainless Steel 316L with electro polish finish	
Dimensions	Detector 63(D) x 110 (L) mm	83(D) x 126(L) mm	
Weight	Detector & Mouting Bracket (Aluminium): 0.3kg	Detector (aluminium): 1.0kg Detector (ST 316L): 2.7kg Tilt mount (aluminium/ST 316L): 0.3kg/0.5kg	Detector (aluminium): 1.0kg Detector (ST 316L): 2.7kg Tilt mount (aluminium/ST 316L): 0.3kg/0.7kg
Water and Dust	IP65	IP66 and IP67 per EN60529	
EMI/RFI	EN61000	CE Marking	
Hazardous Area	N/A	ATEX Ex II 2G Exd IIC T6, -40°C to +75°C (DNV 09 ATEX 65127)	
Performance	Designed to meet FM3260 (EN54-10)		