

# UV/IR & Triple IR (IR3) Flame Detectors

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

ZT-20P



ZT-20EX



ZT-500EX

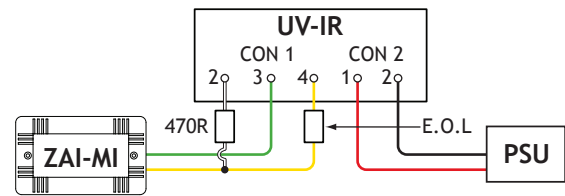
The new range of UV/IR and Triple IR Flame Detectors detect fuel and gas fires at long distances with the highest immunity to false alarms.

The ZT-20P and the ZT-20EX can detect a 0.1m<sup>2</sup> 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 compatibilities 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-20P)

- ✓ Non-Hazardous Areas
- ✓ Semiconductor Process Equipments
- ✓ Warehouse
- ✓ Waste disposal facilities

### 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 & Munitions

## Features

- ✓ UV/IR Spectrum - for medium distance detection and high false alarm immunity (ZT-20P & ZT-20EX)
- ✓ Triple IR Spectrum - for longer distance detection and high false alarm immunity (ZT-500EX only)
- ✓ Compact and lightweight design
- ✓ ZT-20EX & ZT-500EX Enclosure options:
  - Aluminium
  - Stainless (ST 316L) for offshore facilities
- ✓ User Selectable (Sensitivity/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-20P		ZT-20EX		ZT-500EX	
Part Number	47-152		47-154		47-153	
Spectrum Response	UV/IR (Dual Bands)		UV/IR (Dual Bands)		Three IR Bands	
Spectrum Response (at highest sensitivity setting for 0.1m <sup>2</sup> pan fire)	<b>Fuel</b>	<b>Distance</b>	<b>Fuel</b>	<b>Distance</b>	<b>Fuel</b>	<b>Distance</b>
	n-Heptane	30m	n-Heptane	30m	n-Heptane	65m
	Gasoline	30m	Gasoline	30m	Gasoline	65m
	Diesel	20m	Diesel	20m	Diesel	45m
	LPG*	20m	LPG*	20m	LPG*	30m
	Ethanol	20m	Ethanol	20m	Ethanol	40m
	IPA	25m	IPA	25m	IPA	40m
	Methanol	20m	Methanol	20m	Methanol	35m
	*0.5m high/0.2m width plume fire					
Response Time	Typically 5 seconds					
Adjustable Time Delay	Up to 20 seconds					
Sensitivity Range	4 sensitivity ranges for 0.1m <sup>2</sup> n-Heptane pan fire from 15m to 65m					
Field of View	Horizontal 90°, Vertical 90°					
Built-in-Test	Manual (optionally Automatic)					
Temperature Range	Operating/Storage: -40°C to 75°C					
Humidity	Up to 95% non-condensing					
Operating Voltage	24VDC nominal (17-31VDC)					
Power Consumption	Standby: max. 35mA, Alarm: max. 75mA					
Cable Entry	1 x M20 (ISO)					
Wiring	AWG 16-26 (Str 1.5mm <sup>2</sup> to 0.13mm <sup>2</sup> )					
Electromagnetic Compatibility	EMI/RFI protected to EN61000 series					
Electrical Interface	The detector includes twelve (12) terminals with four (4) wiring options					
Relays	Alarm, Fault SPST volt-free contacts rated 5A at 30VDC or 250AC					
0-20mA (stepped)	Non-isolated "Source" configuration					
	Fault:	0+1mA	Bit Fault:	2mA+/-10%		
	Normal:	4mA+/-10%	Warning:	16mA+/-10%		
	Alarm:	20mA+/-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	Polycarbonate Enclosure	<ul style="list-style-type: none"> <li>Heavy duty copper free aluminium (less than 1%) with bright grey anodized finish</li> <li>Stainless Steel 316L with electro polish finish</li> </ul>				
Mounting (Tilt Mount)	Stainless Steel	<ul style="list-style-type: none"> <li>Heavy duty copper free aluminium (less than 1%) with grey epoxy enamel finish</li> <li>Stainless Steel 316L with electro polish finish</li> </ul>				
Dimensions	80 x 82 x 86mm		83(D) x 126(L) mm			
Weight	0.3kg (1.0kg with cable gland / 1m length cable / Tilt mount)		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	IP66 per EN60529		IP66 and IP67 per EN60529			
EMI/RFI	CE Marking					
Hazardous Area			ATEX Ex II 2G Exd IIC T6, -40°C to +75°C (DNV 09 ATEX 65127)			
Performance	EN54-10 (designed to meet)					