

**MILITARY OPTICAL UV/IR FLAME DETECTOR**

The Spectrex Military optical UV/IR detector is the latest model that has been installed and performance tested in the BAE Bradley Fighting Vehicle and in RG33 MRAP.



These tests have proven its superiority in sensitivity of detection of small fires as well as response to penetration of the vehicle, while maintaining its reliability and immunity to false alarm.

RS-485 port provides outputs for maintenance and diagnostics.

The detector is microcontroller based enabling adjustment of sensitivity and other features to a specific application. Detector includes continuous self-calibration to background radiation.

This detector is ideal for crew compartments of military combat vehicles.

**MAIN FEATURES**

- \* UV/IR Dual-Sensor
- \* High Speed Response - less than 3 msec
- \* Sensitivity to Slow Growth Fires
- \* High Reliability
- \* Immunity to False Alarm
- \* Discrimination – optional
- \* Automatic and Manual Built-In Test (BIT)
- \* RS-485 Modbus Compatible
- \* MTBF Minimum 100,000 Hours

**DETECTION SPECIFICATIONS**

<b>Spectral Response</b>	UV/IR
<b>Response Time</b>	Max. 3 msec. - when detector is exposed to vehicle penetration or explosive fire.
<b>Detection Threshold</b>	At least one detection signal every 5 seconds when detector is aimed at the base of 5 inch (12.5 cm) gasoline pan fire at a distance of 24 inch (60 cm) from the center of the flame.
<b>Field of View</b>	90° Horizontal, 90° Vertical
<b>Built-in-Test (BIT)</b>	Automatic and Manual check of window cleanness, sensor and electrical circuitry.
<b>Discrimination (Option)</b>	Disables detection signal when no fuel ignition/explosion/fire occurs following penetration
<b>Temperature Range</b>	-40°F (-40°C) to 160°F (70°C)
<b>Humidity</b>	Up to 95%

**ELECTRICAL SPECIFICATIONS**

<b>Power Supply</b>	Operating Voltage: 16-28 VDC	
<b>Power consumption</b>	Max. 20mA	
<b>Electrical Connection / Pinout</b>	Connector	MS 3112E-10-6P
	Power	A
	Return	B
	BIT / Output	C
	Spare	D
	RS-485-	E
	RS-485+	F
<b>Electrical Input Protection</b>	Per MIL-STD-1275B	
<b>Electromagnetic Compatibility</b>	EMI/RFI per MIL-STD-461E	

**MECHANICAL SPECIFICATIONS**

<b>Dimensions</b>	3.7" x 2.72" x 1.7" (93.7mm x 69mm x 43mm)
<b>Weight</b>	0.6 lb (0.25 kg)
<b>Enclosure</b>	Aluminum, white epoxy enamel finish.
<b>Environmental Standards</b>	Meets MIL-STD-810E for High Temp, Low Temp, Humidity, Vibration, Shock, Waterproof, Dust, Salt & Fog

**ACCESSORIES**

<b>Fire Simulator</b>	P/N 706905
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**FALSE ALARM SUSCEPTIBILITY**

The detector shall not provide a detection signal under any of the following conditions:

<b>RADIATION DESCRIPTION</b>	<b>IMMUNITY DISTANCE (IN.)</b>
Direct or reflected sunlight	IAD*
Incandescent frosted glass light, 100 W	IAD*
Incandescent clear glass light, rough service, 100 W	IAD*
Fluorescent light with white enamel reflector, 40W	IAD*
Ambient light extremes (darkness to bright light with snow, water, rain, desert glare and fog)	IAD*
Bright color clothing, including red and safety orange	IAD*
Electronic flash (180 watt-seconds minimum output)	IAD*
Movie light, 625W quartz DWY lamp (Sylvania S.G-55)	24
Red vehicular dome light	IAD*
Blue-green vehicular dome light 24V of direct current (dc)	IAD*
Flashlight	IAD*
Electric Arc 15/32 in. Gap at 4000 VAC	1
Arc Welding 5/32 in. rod 300A	24
Radiation heater, 1500W	IAD*
Radiation heater, 1000W with fan	IAD*
Muzzle flash from M16 rifle, 3 round burst	2
Lit cigar	IAD*
Lit cigarette	IAD*

\*IAD – Immune Any Distance