



Amerex Defense

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 defensesales@amerex-defense.com



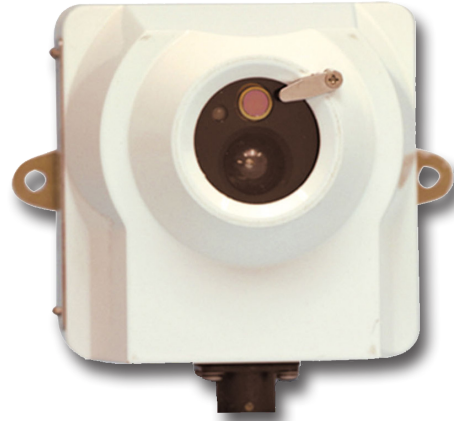
Optical UV/IR Detector

for Crew Compartment Automatic Fire/Explosion Protection Systems

The Amerex Military Optical UV/IR Detector is the latest model being installed in military tactical and combat vehicles.

The Detector is microcontroller based enabling adjustment of sensitivity and other features to a specific application. The Detector includes continuous self-calibration to background radiation. A serial communication port provides outputs for maintenance and diagnostics.

Only simultaneous detection of radiation in the UV and IR ranges of the electro-magnetic spectrum (which are characteristic of fire) and above pre-set threshold will result in a detector output signal. Other types of radiation sources, not identified as fires, will not be detected.



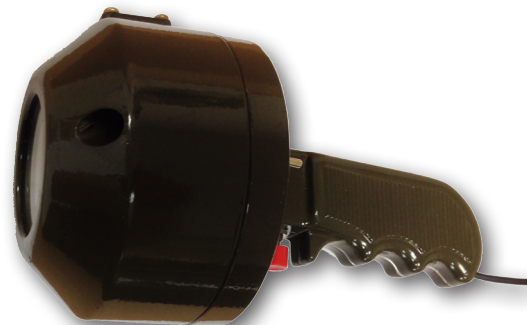
Main Features

- UV/IR Dual-Sensor
- High Speed Response - Less than 3 Milliseconds
- Sensitive to Slow Growth Fires
- Immunity to False Alarm
- Discrimination (optional)
- Automatic and Manual Built-In Test (BIT)
- RS-485 Modbus Compatible
- High Reliability
- MTBF Minimum 100,000 Hours
- Tested for Demanding Military Use

Specifications

Mechanical Specifications	
HEIGHT (IN.)	3.35 (enclosure only)
WIDTH (IN.)	4.25 (outside mounting tabs)
DEPTH (IN.)	2.34
WEIGHT (LB.)	1.2
ENCLOSURE	ALUMINUM
COATING	WHITE ENAMEL
OPERATING TEMPERATURE	-60°F(-51°C) TO 160°F(71°C)
ENVIRONMENTAL	TESTED TO MIL-STD-810G

ACCESSORIES	
FIRE SIMULATOR	19444





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Detection Specifications	
SPECTRAL RESPONSE	UV/IR
RESPONSE TIME	MAX. 3 ms (when exposed to explosion)
FIELD OF VIEW	90° CONICAL VIEW
BUILT-IN-TEST	Automatically Checks Optical Cleanliness and Electrical Circuitry
DISCRIMINATION (OPTIONAL)	Disables Detection Signal When No Fuel Ignition/Explosion/Fire Occurs Following Penetration
DETECTION THRESHOLD	MIN one Detection Signal per 5 seconds when aimed at the base of a 5 inch gasoline pan fire placed 35 inches from the center of flame.
OUTPUT	Provides Detection Signal to Detector/Controller Provides Fault Condition Signal to Detector/Controller

Electrical Specifications	
POWER SUPPLY	Operating Voltage: 16-32 VDC
POWER CONSUMPTION	MAX: 20mA
CONNECTOR	Varies by Program Requirements
ELECTRICAL INPUT PROTECTION	Tested Per MIL-STD-1275B
ELECTROMAGNETIC COMPATIBILITY	Tested Per MIL-STD-461E

False Alarm Susceptibility			
The Detector Shall Not Provide a Detection Signal Under Any of the Following Conditions:			
RADIATION DESCRIPTION	IMMUNITY DISTANCE (IN.)	RADIATION DESCRIPTION	IMMUNITY DISTANCE (IN.)
DIRECT OR REFLECTED SUNLIGHT	IAD*	Blue/Green Vehicle Dome Light	IAD*
Incandescent Frosted Glass Light, 100W	1	Flashlight	IAD*
Incandescent Clear/Rough glass, 100W	2	Electric Arc 15/32 in. Gap @ 4000 VAC	1
Fluorescent Light with White Enamel Reflector, 40W	IAD*	Acetylene Welding 00 Tip 5/8 x 6 in. Flame	8
Ambient Light Extremes (darkness to bright light with snow/water/rain/desert glare and fog)	IAD*	Arc Welding 5/32 in. Rod, 100A	24
Bright Colored Clothing (Red/Orange)	IAD*	Radiation Heater, 1500W	IAD*
Electronic Flash (180 watt-seconds min)	IAD*	Radiation Heater, 1000W w/Fan	IAD*
Movie Light, 625W Quartz DWY Lamp (Sylvania S.G-55 or Equivalent)	24	Muzzle Flash M16 3-Round Burst	2
		Lit Cigar	IAD*
		Lit Cigarette	IAD*