



Amerex Defense

PO Box 81 Trussville AL 35173-0081
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Detector/Controller

for Crew Compartment Automatic Fire/Explosion Protection Systems

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

The D/C is microcontroller based enabling flexibility in system design and adjustment of features to a specific application. RS-485 communication provides outputs for control, set up, maintenance and diagnostics.



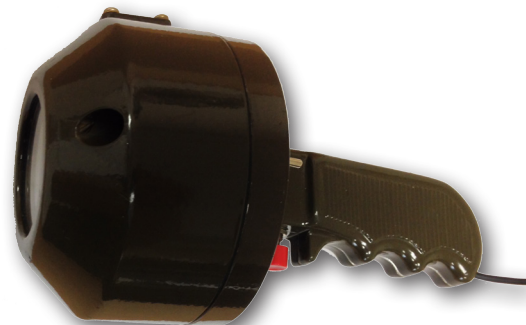
Main Features

- UV/IR Dual-Sensor
- High Speed Response - Less than 3 Milliseconds
- Sensitive to Slow Growth Fires
- Operates with up to two Secondary Detectors
- Monitors and Activates up to Two Extinguishers
- Power & Fault Signals
- Integral Manual Activation Button
- Optional Secondary Manual Actuation Button
- Blackout Mode Compatible
- 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.)	4.42 (enclosure only)
WIDTH (IN.)	4.25 (outside mounting tabs)
DEPTH (IN.)	2.37
WEIGHT (LB.)	1.36
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 System 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.

Control Specifications	
INPUT FROM SECONDARY DETECTORS	Supplies Power to Detectors/s Accepts Fault or Alarm Signals from Detector/s Provides Activation Signal to Extinguisher/s
CYLINDER STATUS MONITORING	Continuously Monitors for Circuit Continuity & Positive Pressure of up to Two Extinguishers
OUTPUT	Provides Activation Signals for up to Two Extinguishers
POWER & FAULT SIGNALS	"Power" LED Indicates Proper Power Supply "Fault" LED Flashes to Indicate Fault Condition
BUILT-IN-TEST (BIT)	Identifies and Indicates Faults in the Electrical Circuits of the Optical Detectors Provides Operational Status of the Cylinders and System Circuitry
Manual Extinguisher Activation	Enables Manual Activation of the Extinguishers.

Electrical Specifications	
POWER SUPPLY	Operating Voltage: 18-32 VDC
POWER CONSUMPTION	Normal: 50mA MAX: 80mA
ACTIVATION SIGNAL	4A (@ 24VDC) for 50 milliseconds
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
Amient 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*