

## Applications Include

- ✓ Refineries/Oil Production Facilities
- ✓ Off-Shore Platforms
- ✓ Turbine/Compressor Enclosures
- ✓ Oil & Gas Pipelines/Pumping Stations
- ✓ LNG/LPG Loading/Unloading Facilities
- ✓ Natural Gas and CNG Plants
- ✓ Ethanol, Methanol, & IPA Production / Storage
- ✓ Crude Oil & Gasoline Storage/Tank Farms
- ✓ Aircraft Hangars ✓ Power Plants
- ✓ Hydrogen Plants and Storage
- ✓ Paint & Solvent Storage
- ✓ Chemical Production, Storage & Loading Facilities

## Features

- ✓ Patented WideBand IR™ Infrared Technology
- ✓ Patented Electronic Frequency Analysis™
- ✓ Visible Sensor for optimum false alarm rejection
- ✓ Selectable Detection Sensitivities ✓ RS-485 ModBus Communication
- ✓ Field-of-View: 90° full 100% cone-of-vision
- ✓ Dual Microprocessors for reliable performance
- ✓ Real-Time Clock for accurate time dating of events
- ✓ FirePic™ - Pre-Fire Event Data Storage
- ✓ Event Log with Date & Time Stamp ✓ Widest Operating Temp Range
- ✓ Non-Isolated 4-20 mA Analog output (sink or source)
- ✓ Alarm, Fault & Fire Verification relays.
- ✓ Automatic Optical Path and Electronic Self-Test
- ✓ Patented\* Electronics Module for components protection with easy plug-in terminations and field installation
- ✓ Two 3/4" NPT OR 25mm Conduit Connections
- ✓ Low Power consumption ✓ High RFI and EMI immunity
- ✓ FM, ATEX, CE mark approvals ✓ Meets SIL 2 requirements



The new Model FS24X is the latest generation high technology Multi-Spectrum Triple IR (IR/IR/IR/Visible) Fire and Flame Detector, which is part of the new FSX family of advanced technology Electro-Optical Fire Detectors. Using Fire Sentry's patented WideBand IR™ Infrared, WideBand 4.3 micron IR™, and Visible detection technology, the FS24X is a quantum leap in flame and fire detection. Sophisticated software algorithms and dual microprocessors ensure that the FS24X has the highest fire detection performance combined with optimal false alarm rejection. The WideBand IR™ Infrared technology using high-speed solid-state Quantum sensors allows detection of all types of fires, hydrocarbon and non-hydrocarbon, in all weather conditions and in all altitudes.

## Operation

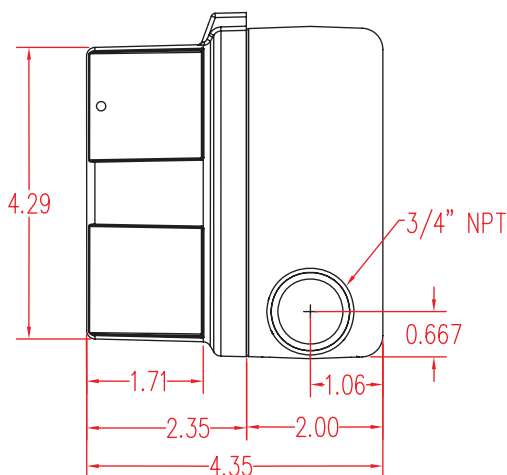
Dual microprocessors provide a high level of fail-safe operation combined with fast and reliable performance. The Master Microprocessor performs high-speed digital sampling and signal-processing calculations; while the slave microprocessor handles various sensor data, performs communications, self-diagnostics and provides interface versatility; and additional memory for storing Event Log and FirePic™ data. The FSX family of Detectors features Fire Sentry's patented\* FirePic data storage and information retrieval facility. FirePic™ records pre-fire data, which can be recovered from the Detector's non-volatile flash memory for post fire analysis and postulation of the fire cause. Additionally, unique Real-Time Graphing (RTG™) allows viewing of the data which the Detector actually sees.

A combination of outputs makes the FS24X a truly versatile Detector for today's demanding industrial requirements. The FS24X Detector has a detection range greater than 200 feet (Very High Sensitivity setting) for the detection of a one square-foot Heptane reference fire and has a cone of vision far greater in volumetric coverage than any other Multi-Spectrum IR Detector. This means fewer Detectors can be used as compared to other manufacturers' Detectors.

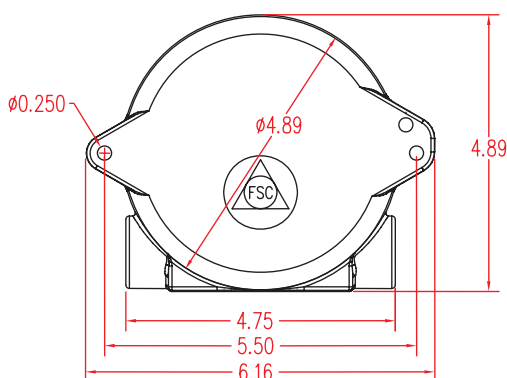
## Specification

Field of View:	90° Full 100% Cone of vision, ± 45° from on axis
Sensitivity:	Very High, High, Medium, Low – Switch Selectable
Response Time:	3-5 Seconds to 1 sq. ft. n-Heptane fire at 100 ft. 3-10 Seconds to 1 sq. ft. n-Heptane fire at 200 ft.
Spectral Sensitivity:	Visible: 400 - 700 nanometers Near Band IR: 0.7 - 1.1 microns Wide Band IR: 1.1 - 7 microns Wide Band IR: 3.0 - 5.0 microns
Operating Voltage:	24 VDC nominal (18-32 VDC) - Regulated

Power Consumption:	Operating: 56 mA @ 24 VDC nominal Alarm: 106 mA @ 24 VDC nominal Heater: 155 mA – additional Note: Heater will turn on at 0°F (-17°C)
Output Relays:	Fire Alarm: SPDT (NO / NC) – De-Energized/Energized, Latching/Non-Latching Fault: SPST (NO) – Normally Energized,- Latching/Non-Latching Auxiliary: SPDT (NO / NC) – De-Energized/Energized, Latching/Non-Latching Contacts rating: 1.0 amp @ 24 VDC
Analog Output:	0 - 20 mA stepped - Source or Sink User Selectable
Loop resistance:	50 - 400 Ohms
Communication:	One of the following – User Selectable: · RS-485, ModBus Protocol · RS-485, FireBus II · RS-485 Special (optional) · HART, Optional plug-in module
Visual Indications:	Blue LED: Power. Red LED: Alarm. Yellow LED: Fault
Temperature Range:	Operating: -40 to +185°F (-40 to +85°C) Storage: -67 to +230°F (-55 to +110°C) Optional extended temp version available -58 to 230°F (-50 to +110°C)
Humidity Range:	5 to 95% relative humidity, non-condensing
Vibration:	Meets or exceeds MilSpec 810C Method 514.2, Curve AW12
Wiring:	12 AWG (3.31mm <sup>2</sup> ) to 22 AWG (0.326mm <sup>2</sup> ) Shielded Cable Recommended
Conduit Entries:	Standard: Two ¾" NPT Optional: Two 25mm
Enclosure Materials:	Copper-free Aluminum -- Powder Coated 316 Stainless Steel -- Optional
Enclosure Type:	NEMA 4 & 4X, IP66
Certifications:	FM: Class I, Div. 1 & 2, Groups B, C, & D Class II, Div. 1 & 2, Groups E, F, & G Class III ATEX: II 2 G D Ex d IIC T4 (Ta: -60 to + 110 °C) T5 (Ta: -60 to + 90 °C) T6 (Ta: -60 to + 75 °C) CE: Complies with EN6000-6-4 & EN50130-4
Shipping Weight:	Aluminum: 3.6 lbs (1.6 kg) Stainless Steel: 7 lbs (3.2 kg)
Mounting:	Swivel Bracket Assembly - Optional
Warranty:	Three years from date of shipping Extended Warranty available



Model FS24-X - Side View



Model FS24-X - Back View

All dimensions in inches. This specification subject to change without prior notice