Fire Sentry FS System 10™ and FS10-R

Honeywell

Fire Detection/Process Control for Automatic Electrostatic Paint Spray Booths

Fire Sentry FS System 10 and Fire Sentry FS10-R Unitized Detector

Features

- Multi-Spectral digital electro-optical infrared fire detector
- Meets requirements of NFPA 33
- Unique two-stage ALERT and FIRE ALARM response
- Immune to false alarms caused by arcs or corona discharges
- Built-in automatic “through the lens” self-test
- Not sensitive to background radiant energy sources such as paint heaters
- Not affected by absorbing smoke or paint solvent mist in liquid pant spray booths
- Sees through paint, powder or oil residue on detector’s lens
- Digital communications with RS-485 interface
- FirePic™: retrieval of recorded pre-fire data
- SnapShot™: dynamic graphical display of what the detector sees

Applications (indoor use only)

- Liquid Paint Spray Lines
- Aerosol Filling
- Powder Coating Booths
- Curing Ovens

Our fire detection systems have been protecting electrostatic paint spray booths worldwide – with millions of booth operational hours and not a single fire loss.

Fire Sentry FS System 10™

A high-speed microprocessor based fire detection and process control system specially designed for liquid and powder coating applications, the Fire Sentry FS System 10™ quickly detects the presence of a flame, reacts by initiating a shutdown of the electrostatic finishing process in a matter of milliseconds; and effectively interrupts the fire before residues and wet paint films can ignite.

The Fire Sentry FS System 10 is the only system that provides a two-stage response: an ALERT for spray gun “fireball” type fires and if the fire continues, a FIRE ALARM is declared in 4-5 seconds.

The Fire Sentry FS System 10 is vastly superior to conventional detectors due to the electro-optical quantum infrared sensors array and the ability to accurately detect fires without false alarms. The FS System 10 is available in both wall-mount controller and card controller configurations. (For additional information on card controller, consult the factory.)

The detector is mounted in an explosion-proof housing. The wall-mounted controller is a self-contained system mounted in a NEMA 12 enclosure with LCD display and LED status lights. Three 10-amp mechanical relays have been incorporated for shutting down the paint flow, electrostatics and conveyor. Event history and fire tech data are reported by the detector in real time and data, then stored in the controller’s non-volatile memory. FirePic™ and SnapShot™ data can be downloaded from the RS-232 port of the controller from your PC. The controller may operate with one or two detectors.

Fire Sentry FS10-R Unitized

The Fire Sentry FS10-R Unitized is a multi-spectral infrared electro-optical flame detector designed specifically for liquid paint or powder spray booth applications. Based on the Fire Sentry FS System 10, the FS10-R Unitized flame detector meets the need for a stand-alone capability and complies with the NFPA 33 Standard. The WideBand IR™, NearBand IR, and Visible sensors combined with the advanced signal procession provide optimum performance. High spend fire response with optional factory sensitivity settings and alarm outputs provide the best, proven solution to fire detection for the Finishing Industry.

Fire Sentry FS System 10 and Fire Sentry FS10-R Unitized Detector

Operation

The Fire Sentry FS10-R Unitized detector is designed to operate with any approved fire alarm panel. Interface with fire alarm panel is accomplished using the detector's ALARM, ALERT and FAULT relays.

When power is applied, a self-test is automatically performed and the FAULT relay is energized to show that the detector has no faults. The front LED blinks every ten seconds to indicate normal operation.

In normal operation, the continuous spectral data stream of information from the sensor array is analyzed by the microprocessor. With two distinct relay outputs, the Fire Sentry FS10-R Unitized provides an ALERT output for spray gun "fireball" type fires, and if the fire continues a FIRE ALARM is declared in 4-5 seconds.

The detector stores all the pre-fire spectral data from the sensor array in non-volatile memory for retrieval and evaluation. The Fire Sentry FS10-R stores the last six FirePic™ events, each 8 seconds long; and 200 event histories with time and date stamp. The FirePic data can then be used to postulate the cause of the fire.

Honeywell Analytics Lines of Business

Commercial

Gas detection from standalone units to fully engineered, multi-point systems, all offering cost-effective regulatory compliance

» Applications: parking structures, chillers, mechanical rooms, office towers, commercial buildings, shopping centers, swimming pools, golf courses, schools and universities, laboratories

Industrial

Renowned Sieger and Manning gas detection systems with advanced electrochemical, infrared and open path sensing technologies

» Applications: oil and gas, cold storage, water/wastewater treatment, chemicals, engine rooms, plastics and fibers, agriculture, printing and light industrial

Portables

Single or multi-gas Lumidor and other premium detectors with compact, lightweight designs ranging from simple alarm only units to advanced, fully configurable and serviceable instruments

» Applications: underground utility and electricity ducts, boiler rooms, post-fire sites, sewers, industrial plants, industrial hygiene, first responder teams, remote fleets

High Tech/Government

A complete portfolio of gas and chemical detection instrumentation including infrared spectroscopy (MST) with no cross interference, to Chemcassette paper-based solutions (MDA Scientific) offering detection down to parts per billion

» Applications: semiconductor manufacturing and nanotechnology, aerospace propulsion and safety, specialty chemicals industry, research laboratories, emergency response

Technical Services

24/7 global network includes post-sales service and Systems Integration teams

» Emergency call out, service contracts, on/off-site repair, training and commissioning

» Complete range of spares, consumables and accessories

Find out more
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Fire Sentry Corporation is now part of Honeywell Analytics. As we begin to fully integrate our companies, you might notice some small changes. This integration is about bringing together two of the best in life safety. We are focused on putting our customers first and making the right decisions to guarantee Honeywell Analytics continues to remain the experts in fire and gas safety.

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Fire Sentry FS10-R SPECIFICATIONS

Multi-Spectral Electro-Optical "Unitized"Flame Detector

General Specifications	
Sensitivity	45 ft. and 30 ft. to a 1 sq. ft. gasoline fire*
Response Time	Alert: 0.3 second (response to "fireball" type fires) Fire Early Warning: 1 second (early response to a fire alarm) Fire Alarm: Less than 5 seconds (if fire continues)
Field of View	90° (± 45° horizontal and vertical)
Spectral Sensitivity	Visible: 400 – 700 nanometers Near Band IR: 0.7 – 1.1 microns Wide Band IR: 0.7 – 3.5 microns
Input Power	24 VDC nominal (18-32 VDC) - Regulated
Power Consumption	Normal: 85 mA (typical); Alarm: 120 mA (typical)
Output Relays	**Alert/Early Warning:** SPST, N.O.* **Fire Alarm:** SPST, N.O. **Fault:** SPST, N.O. with no power Contact ratings: 1 amp @ 24 VDC
Normal Operation	Fault relay is Energized, Non-Latching All other relays are De-energized Fire and Alert relays are available Latching or Non-Latching
Operating Temperature	Operating: -40º to +185ºF (-40º to +85ºC)
Humidity Range	10% to 90% relative humidity, non-condensing
Weight	Aluminum: 3.8 lbs (1.7 kg)
Enclosure	Copper-Free Powder Coated Aluminum or optional 316 Stainless Steel; NEMA 3, 4 and 4X
Conduit Entries	Two ¾" NPT
Certifications	Explosion-Proof; Class I, Div. 1 & 2, Groups B, C, & D Class II, Div. 1 & 2, Groups E, F, & G Class III FM, CE
Dimensions	4.81 in. diameter; 4.65 in. deep
Mounting	Swivel Bracket Assembly - Optional
Warranty	Two years from date of shipping

* Detectors set at the 45-foot sensitivity setting do not have the Alert/Fire Early Warning output available.

Find out more
www.honeywellanalytics.com
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