



**Electro-Optical
Fire and Flame Detector**

Fire Sentry FS7 Detectors



Features:

- Multi-Spectral digital electro-optical radiant energy infrared fire detector
- Unique two-stage fire detection response
- Immune to false alarm sources
- NOT affected by absorbing smoke, gasses or chemical vapors
- NOT sensitive to background radiant energy from electric heaters and ovens
- Detects hydrocarbon and non-hydrocarbon fires
- Rugged leak-proof, heat-sealed, acid-resistant, injection-molded polypropylene housing
- Wide 120° field of view
- Digital communication with RS-485 interface
- FirePic™; time and date-stamped digital fire signatures
- Built-in detector automatic self test
- Unitised model design for stand-alone operation

Applications include:

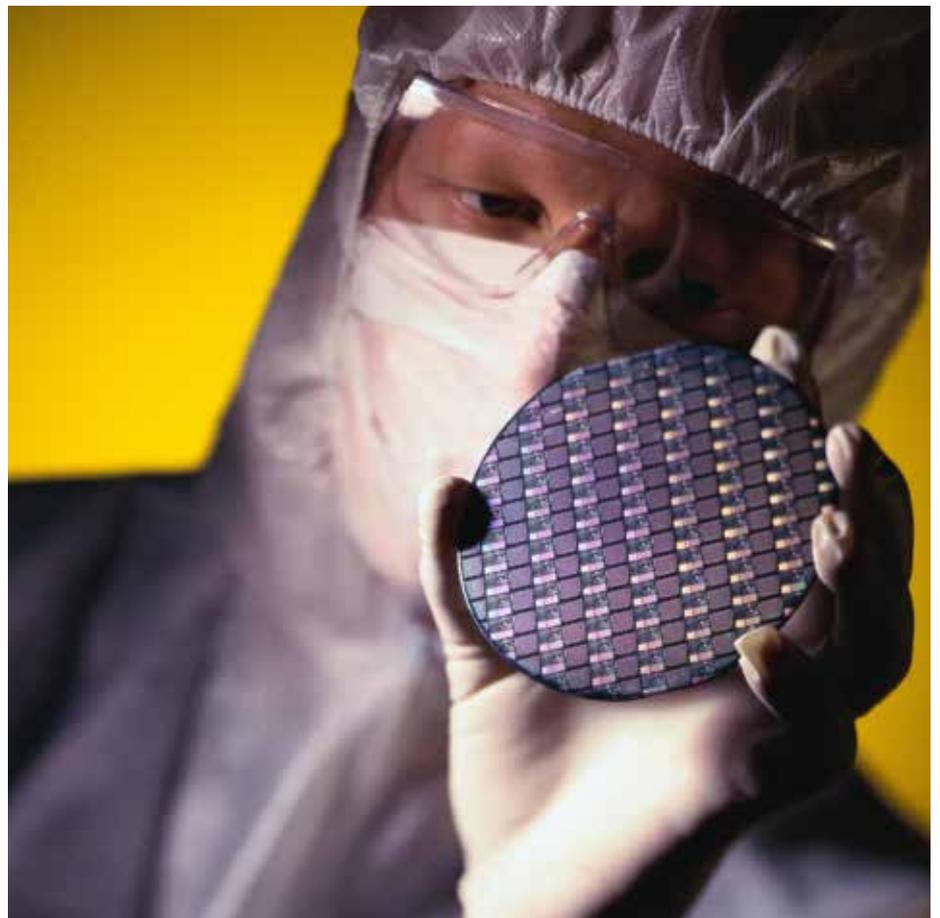
- Open areas of clean room
- Wet bench working surface
- Wet bench subsurface (Plenum)
- Pumps and equipment located behind the wet bench area
- Under-floor areas
- IPA stations (unitised model only)

The Fire Sentry FS7-2173 electro-optical radiant energy fire detector and the Fire Sentry FS7-2173-2RP (unitised model) with multi-spectral WideBand IR™, Near Band IR and Visible Band fire detection are designed specifically for semiconductor clean room fire protection applications. The FS-2173-2RP is standalone and FS-2173 interfaces to a control module.

The Fire Sentry FS7 fire detector provides an intelligent two-stage response to semiconductor wet bench fires:

Stage 1: Alert. This is the first-stage response to a small fire with a heat energy output of 3 kW (the equivalent of a 100 mm diameter polypropylene pool fire). This allows time for the fire to self-extinguish.

Stage 2: Alarm. If the fire does not self-extinguish and grows to the Factory Mutual Specified Heat Energy Threshold of 13 kW (the equivalent of a 200 mm diameter polypropylene pool fire), the second-stage response is activated.



Fire Sentry FS7 Detectors



The Fire Sentry FS7-2173 is used with Fire Sentry FS7-130-SX Controller or Control Panel FSWB. The Controller and Control Panel supplies power to detectors, monitor the status of all detectors and communicate with the detectors via the digital RS-485 communication channel. Fire Sentry FS7-2173 is supplied with a standard 6 m (20 ft) cable connector. Detectors are connected to the controller or control panel using the self-locking connectors and Fire Sentry junction boxes. This allows for fast and easy connection eliminating wiring problems. Each detector can store up to six

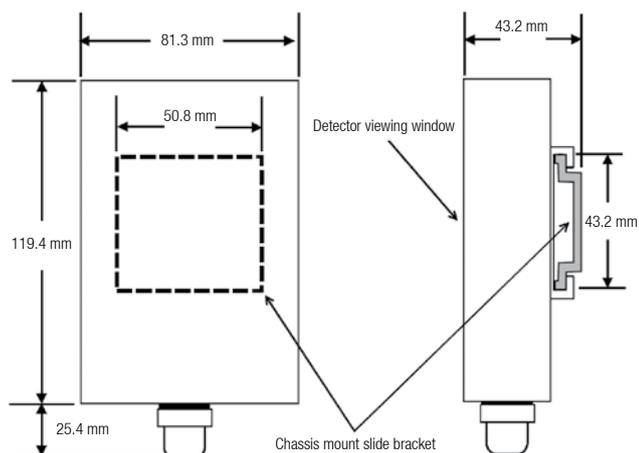
time and date stamped FirePics™ (pre-event multi-spectral sensor array data) in non-volatile memory. The Controller and Control Panel can also store event history tables in the non-volatile memory, which contains the time and date stamped alert, alarm and fault histories. FirePics™ and event histories can be retrieved from the controller or control panel.

The Fire Sentry FS7-2173-2RP with discrete relay outputs is designed to operate as a stand-alone detector and interface with any approved fire alarm panel.

The Fire Sentry FS7-2173-2RP unitised model's microprocessor, with digital signal processing algorithms, continuously monitors the circuitry, the sensor's built-in self-test and verifies proper operation. The detector requires an external 24 VDC power source and is supplied with a standard 6 m (20 ft) pigtail cable. It can store up to six time and date stamped FirePics™ and 200 events in non-volatile memory. FirePics™ and event histories can be retrieved using a Fire Sentry FS7 Interface Kit and the Fire Sentry Windows-based PC software.

General Specifications

Field of View	120° horizontal and vertical
Response Time	Alert: 100 mm (4") dia. Polypropylene pool fire (3kW) within 5 seconds Alarm: 200 mm (8") dia. Polypropylene pool fire (13kW) within 5 seconds
Spectral Sensitivity	Visible: 400 – 900 nanometers Near Band IR: 0.7 – 1.1 microns Wide Band IR: 0.7 – 3.5 microns
Operating Voltage	Controller 24 VDC nominal (18-28 VDC) - Regulated. Detector 10-12Vdc from FSC controller
Power Consumption	Operating: 55 mA @ 24 VDC nominal (Controller) +30mA @12Vdc per detector Alarm: 80 mA @ 24 VDC nominal
Output Relays	Alert: SPST, N.O., De-Energised Fire Alarm: SPDT (NO / NC) – De-Energised/Energised, Latching/Non-Latching Fault: SPST (NO) – Normally Energised, Latching/Non-Latching Contacts rating: 1 amp @ 24 VDC
Communication	RS-485, FireBus II
Visual Indication	Red LED
Temperature Range	Operating: 0°C to 70°C (32°F to +158°F)
Humidity Range	10 to 90% relative humidity, non-condensing
Enclosure Materials	Dust tight, watertight, heat sealed, injection-molded polypropylene
Enclosure Type	IP67
Certifications	FM 3260, FM 3600, FM 3611 CSFM Listed (California State Fire Marshall)
Shipping Weight	1.4 kg (3 lbs.)
Mounting	Chassis mount slide bracket
Warranty	Two years from date of shipping



Our Product Range



Fixed Gas Monitoring

Honeywell Analytics offers a wide range of fixed gas detection solutions for a diverse array of industries and applications including: Commercial properties, industrial applications, semiconductor manufacturers, energy plants and petrochemical sites.

- » Detection of flammable, Oxygen and toxic gases (including exotics)
- » Innovative use of four core sensing technologies – paper tape, electrochemical cell, catalytic bead and infrared
- » Capability to detect down to Parts Per Billion (ppb) or Percent by Volume (%v/v)
- » Cost effective regulatory compliance solutions

Portable Gas Monitoring

When it comes to personal protection from gas hazards, Honeywell Analytics has a wide range of reliable solutions ideally suited for use in confined or enclosed spaces.

These include:

- » Detection of flammable, Oxygen and toxic gases
- » Single gas personal monitors – worn by the individual
- » Multi-gas portable gas monitors – used for confined space entry and regulatory compliance
- » Multi-gas transportable monitors – used for temporary protection of area during site construction and maintenance activities

Technical Services

At Honeywell Analytics, we believe in the value of great service and customer care. Our key commitment is providing complete and total customer satisfaction. Here are just a few of the services we can offer:

- » Full technical support
- » Expert team on hand to answer questions and queries
- » Fully equipped workshops to ensure quick turnaround on repairs
- » Comprehensive service engineer network
- » Training on product use and maintenance
- » Mobile calibration service
- » Customised programmes of preventative/corrective maintenance
- » Extended warranties on products

Find out more

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