ASD-LS

Description

The Gamewell-FCI, Model ASD-LS, is a low profile laser smoke sensor that adds another new dimension to analog addressable fire detection. It incorporates laser smoke detection technology that provides unsurpassed sensitivity and response to maximize detection. This feature makes the sensor ultra-sensitive to smoke, as much as 100 times more sensitive than conventional photo-electric smoke detection technology.

An innovative laser diode and precision optics design combine with an array of integral software tools to allow the sensor to quickly identify the fire. The sensor can swiftly sense smoldering fires, but yet can sense the smallest particles of combustion, providing a faster response to flaming fires.

The early warning capability of the ASD-LS is comparable to that of Aspiration Technology, while unlike Aspirating Systems, the ASD-LS can pin-point the location of the fire.

The sensor is continually monitored to measure any change in its sensitivity due to the environment (dirt, temperature, transient smoke, humidity, etc.). Patented algorithms distinguish between particles of dust and smoke. The focused beam of the laser light source minimizes reflection from accumulated dust in the optical chamber, effectively minimizing problems caused by dust build-up. The software performs its own independent analysis of the sensor signal. This analysis includes dust spike rejection, drift compensation, smoothing, multi-sensor, pre-alarm decision and alarm decision. In the event of spikes in the signal, the sensor will check the output of adjacent sensors for any appreciable signal to determine if the spike is caused by a fast flaming fire.

The sensor is a plug-in construction and is directly interchangeable in the same base with the Gamewell-FCI, ASD/ATD/Acclimate Series low-profile sensors. A wide variety of bases, with sounder, relay, etc. is available. The Remote LED annunciator capability is also available as an optional accessory.

The ASD-LS sensor is Listed for use inside ducts up to a velocity of 4,000 FPM.

An optional isolator base, Model B224BI, is also available. Installation of two of these isolator bases allows Style 7 operation for sensors located electrically between the bases.

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Analog Addressable
Laser Smoke Sensor



ASD-LS

Features

- Compatible with Gamewell-FCI Analog Addressable Control Panels.
- Operates in the Velociti® or CLIP mode.
- High Sensitivity for both smoldering and fast flaming fires.
- Includes patented algorithms that ignore transient smoke and dust particles.
- Provides low profile construction and an easy plug-in of the head to base.
- Offers the following built-in features:
  - Signal processing
  - Tamper-resistant
  - Test switch
- Supports a remote test feature (originating from the panel).
- 360° view angle of dual alarm LEDs.
- Optional bases for auxiliary functions.
- Maximum air velocity 4,000 FPM.

SIGNALING

UL LISTED S1913 FM APPROVED 3023594 7272-1703:0114

ISO 9001 CERTIFIED

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Installation

Place the sensor into the sensor base. Turn the sensor clockwise until the sensor locks into place.

To use the tamper-proof feature, break the smaller tab on the base as shown in the installation instructions. Install the sensor. To remove the sensor from the base when using the tamper-proof feature, insert the blade of a small screwdriver into the hole on the side of the base and push the plastic lever away from the detector head. This will allow the sensor to be rotated counterclockwise for removal.
NOTE: When you use the tamper-proof feature, remove the decorative ring before removing the head.

For information on spacing, the location of the sensors and other guidelines, refer to NFPA72, Chapter 5-3 “Smoke Sensing Fire Detectors.”

Testing

Sensors may be tested locally in the following ways:

A. Place a test magnet against the sensor housing per the instructions. The sensor should go into alarm within 30 seconds.
B. Aerosol Generator - The Gemini Model 501 aerosol generator may be used to perform a Functional Test. This test should be performed immediately following the Magnet Test. The Magnet test initiates an approximately ten minute period when the detector's signal processing software routines are not active. Failure to first perform the Magnet Test will introduce a time delay before the detector alarms. Follow instructions in the Generator Instruction Manual.

Maintenance

Cleaning programs should be adapted to the individual environment in conformance with the National Fire Alarm Code, NFPA, 72. We recommend, at the least, an annual cleaning of the unit. The sensor screen and cover assembly can be removed, revealing the sensing chamber. A vacuum cleaner can be used to remove the dust from the screen, cover and sensing chamber. For the complete procedure, refer to the Installation and Maintenance Instructions furnished with each sensor.

Specifications

Sensitivity:	.02 - 2.0%/ft.
Operating Voltage:	15-32 VDC
Standby Current:	.00033 amp @ 24 VDC
Alarm Current (max.):	.0065 amp @ 24 VDC
Operating/Installation Temperature:	32° to 100° F (0° to 38° C)
Operating Humidity:	10% to 93% relative humidity (non-condensing)
Dimensions:	1.7” (4.3 cm) height 4.1” (10.4 cm) installed in the B501 base 6.1” (15.5 cm) installed in the B210LP base
Weight:	5 oz. (142 gm.)

Ordering Information

Part Number	Description
ASD-LS	Low Profile Analog Laser Sensor
B501	Plug-in sensor base without flange
Dimensions:	4.1” (10.4 cm) diameter
B210LP	Flanged mounting base
Dimensions:	6.1” (15.5 cm) diameter
B210LPBP	Flanged mounting base bulk pack
Dimensions:	6.1” (15.5 cm) diameter
B224RB	Plug-in sensor base with auxiliary relay, SPDT, rated 2 amps. @ 30 VDC (resistive) 2 coil latching relay 1 Form C Contact UL/CSA Rating: 0.9 A @ 125 VAC inductive 0.9 A @ 110 VDC inductive 3 A @ 30 VDC resistive
Dimensions:	6.1” (15.5 cm) diameter
B224BI	Plug-in sensor isolator base for Style 7 operation
Dimensions:	6.1” (15.5 cm) diameter
B200S	Intelligent sensor sounder base
Dimensions:	6.875” (17.5 cm) diameter
B200SR	Standard sounder base, UL 864 9th Edition compliant, ULC Listed
Dimensions:	6.875” (17.5 cm) diameter
RA-100Z	Remote LED Annunciator
XR2B	Extractor Test