



AIR
Intelligence™

Effective: April 2010

Bigger and Better—Exceptional aspirated smoke detection system designed to protect from medium to large applications.

AIR-Intelligence ASD-640 has unmatched sensitivity potential, providing the very earliest warning of incipient fire with minimum nuisance alarms for medium to large applications.

Optimal Performance and Reliability

The ASD-640 embodies many unique features to maximize performance and increase reliability compared to other aspirated smoke detection systems. It utilizes ClassiFire, a patented Perceptive Artificial Intelligence system which ensures that it operates at optimum sensitivity for the protected environment. As an example, the detector adjusts to become highly sensitive in a computer room or reduces sensitivity for a flour mill.

ClassiFire automatically configures the detector during initial setup and in operation, automatically adjusting the sensitivity to optimum levels for changes in the protected environment. The Laser Dust Discrimination (LDD) and Elimination System makes it suitable for a wide range of environments, including those extremely dusty or dirty.

The ASD-640 provides four alarm levels and has sensitivity ranges extending from 'hypersensitive' to 'low' sensitivity (0.00046 to 7.62% obscuration/ft. or 0.0015 – 25% obscuration/m). It allows complete concealment of sampling pipes and connection cables with rear-entry as standard option. Enclosure options include a molded metal enclosure and a lightweight plastic enclosure. Recommended maximum sampling pipe length is 650 feet (198 m) with 100 sample ports.

The ASD-640 has 'Fault' and four 'Alarm' relays, plus three programmable remote control inputs for one interface with fire alarm panels and BMS systems. Addressable Protocol Interface Cards (APIC) are available for various manufacturers' fire panels.

Options Available:

- Rugged metal or lightweight plastic enclosure.
- Stand-alone detector or integral Command Module for central monitoring and display.
- LCD display or no-display versions.
- SenseNET remote monitoring compatible - up to 127 detectors per loop.
- Remote Display Units available.



Key Features:

- Ideal for medium to large applications.
- High sensitivity provided by laser-based forward light scatter for reliable early warning.
- Unique ClassiFire™ Perceptive Artificial Intelligence system dynamically adjusts operating parameters.
- Patented Dual Technology LDD 3D3™ Laser Dust Discrimination and Elimination System precludes unwanted alarms due to dust.
- Built-in RS-485 communications for networking and remote communications.
- Four (4) sampling pipes; up to 650 feet maximum total length and 100 sampling ports.

PC Remote Software

All AIR-Intelligence detectors are supplied with PC remote software, permitting easy system configuration, viewing of event log, diagnostic checking of system and the ability to view ClassiFire Artificial Intelligence in real-time.

Approvals

Approved/listed by cULus and FM. Other major North American certification agency approvals in process.

Key Application Factors:

- Mission critical – very early detection is required.
- High air flow is present.
- Environment is hostile.
- Concealment is required.
- Areas subject to smoke stratification.
- Maintenance access is impractical.



Specifications

Model Number	ASD-640
Coverage Area	20,000 sq. ft. (1,858 sq. m)
Detection Principle	Laser forward-light scattering mass detection and particle evaluation
Dust Discrimination Principle	3D3 Laser Dust Discrimination (LDD)
Sensitivity Range	0.00046% to 7.62% obscuration/ft. 0.0015% to 25% obscuration/m
Particle Sensitivity Range	0.003 μ to 10 μ
Sampling Pipe Inlets	Four (4) on top, four (4) at rear
Exhaust Pipe Outlets	One (1) on top, one (1) at rear
Total Sampling Pipe	650 feet maximum
Sampling Pipe Diameter	3/4" nominal bore (27 mm O/D)
Number of Sampling Holes	25 per pipe (100 total)
Programming	Front panel, Command Module or PC via RS-232/RS-485
Supported Languages	English, French, German, Spanish and Swedish
Alarm Levels	4 (Aux, Pre-alarm, Fire 1 and Fire 2)
Network Data Bus	RS-485
Maximum Data Bus Length	4,000 ft. between detectors
Supply Voltage	21.6V - 26.4 VDC
Current Consumption	450 mA @ 24 VDC at fan speed 8
Operating Temperature Range	ANSI/UL 268: 14° to 100°F (-10° to 38°C) CEA 4022: 14° to 140°F (-10° to 60°C)
Weight	11.5 lbs.
Size	16.8"W x 14.6"H x 3.7"D
Operating Humidity Range	0 - 90% (non-condensing)
Enclosure Protection	IP-50

Applications

- Aircraft Hangars
- Airport Terminals
- Anti-Smoking Enforcement
- Atria
- Cable Tunnels
- Ceiling Voids & Raised Floors
- Cleanrooms
- Coal Conveyers
- Computer Cabinets
- Computer Rooms
- Corrections Facilities
- Electronic Data Processing (EDP) Centers
- Engine Rooms
- Escalators
- Flour Mills
- Food Preparation Areas
- Freezer Warehouses
- Heritage Buildings
- High-End Residential
- Hospitals
- Hotel Lobbies
- Metro Tunnels
- Museums
- Paper Mills
- Record Storage Facilities
- Recycling Centers
- Semiconductor Fabrication
- Telecommunications Facilities
- Textile Areas
- Tobacco Plants
- Warehouses and Distribution Centers
- Wood Recycling

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