

Specialized Detection Devices

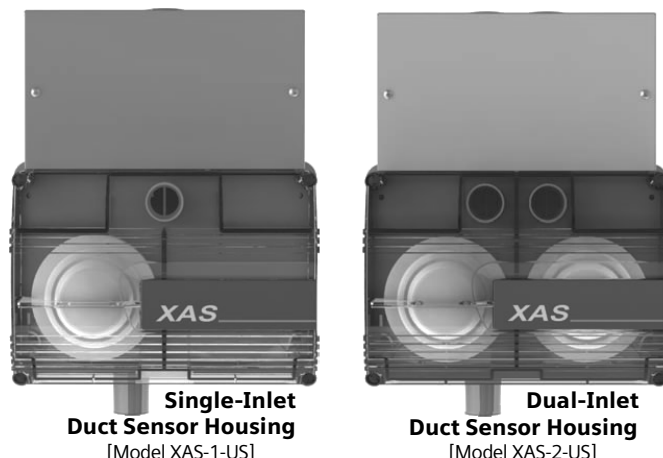
Addressable Air-Aspiration Special Application Smoke Detectors

[Used with compatible Siemens Intelligent, Addressable Detectors]

Models XAS-1-US, XAS-2-US

ARCHITECT AND ENGINEER SPECIFICATIONS

- High-performance aspirator
- Microprocessor-controlled operation
- Integral display and programmer
- Single or dual-channel fire detection
- Compatible with various Siemens intelligent, addressable detectors
- Multiple configuration options
- Sample pipe length: up to 164 ft (50 m)
- Adjustable aspirator speed with airflow monitoring
- Field-serviceable air-filter



- **UL268, 268A Listed, ULC-S529 Listed; CSFM (#7259-1728:0124) Approved**

Product Overview

Each air-sampling special application smoke detector provides a specialized, flexible detection solution to meet unique and challenging application requirements found at typical commercial and industrial sites. Single-inlet and dual-inlet are the two (2) types of duct housings used for this innovative duct-sensor application.

XAS series is Underwriters' Laboratories (UL / ULC) Listed for use with the Siemens spot detectors, as well as with Siemens Model DB-11E mounting base. Each air-aspiration device is highly conducive for inaccessible areas, as well as sections of a building where each detection device can be mounted outside the protected area.

Some examples of exterior mountings suited for these specialized detection devices include:

- correctional facilities
- transformer vaults
- cable tunnels
- elevator hoist areas
- heating, ventilation, and air-conditioning (HVAC) ducts

Operation

Used with Siemens – Fire Safety fire alarm control panels (FACPs) that are compatible with Model HFP-11 addressable detectors, each of these duct housings actively draws air from the protected area via sampling holes in a pipe network. Sampled air is initially filtered and analyzed by Siemens intelligent, addressable detectors incorporated in the single-inlet or dual-inlet duct housing.

A high-performance aspirator, which is used in correlation with programmable flow-monitoring circuitry, allows these devices to function quickly and effectively. Air-flow level is displayed on a 10-element bar graph that can be adjusted for high-flow, low-flow thresholds. Flow failure is reported as a device *fault* event, via relays sent to the FACP.

Each duct device is available with one (1) inlet pipe (Model XAS-1-US) or two (2) inlet pipes (Model XAS-2-US), and can be used with one (1) or two (2) detectors per FACP.

Operations — (continued)

Each device may be configured for a number of detection strategies including:

- ✓ single or dual-addressable-area detection
- ✓ redundant detection
- ✓ multi-criteria detection
- ✓ coincident or double-knock (two (2) detectors with one (1) alarm} detection)

Siemens intelligent, addressable detectors offer benefits in simplicity of configuration and cost effectiveness.

Configuration Options

Several configuration options are available for Models XAS-1-US and XAS-2-US:

- XAS-1-US devices: one (1) Siemens intelligent detector
- XAS-2-US devices: two (2) compatible, addressable detectors

Model XAS-1-US, which is used with one (1) Model HFP-11 detector, is capable of providing one (1) detection area. However, Model XAS-2, which holds two (2) Model HFP-11 detectors, is able to provide more than two (2) types of detection strategies.

The table below describes the recommended configuration options to fit the selected detection strategy when two (2) Siemens intelligent, addressable detectors are installed into either Model XAS-series duct-sensor housing:

	Model XAS-1-US	Model XAS-2-US
Dual Addressable Areas	—	✓
Redundancy	✓ (OR)	✓ (OR)
Multi Criteria	✓ (OR / AND)	✓ (OR / AND)
Coincident / Double-Knock†	✓ (AND)	✓ (AND)

† denotes detection strategy is subject to local codes, standards

Note: (OR / AND) represents the suggested [Boolean logic](#) for combining two detectors to achieve detection strategy

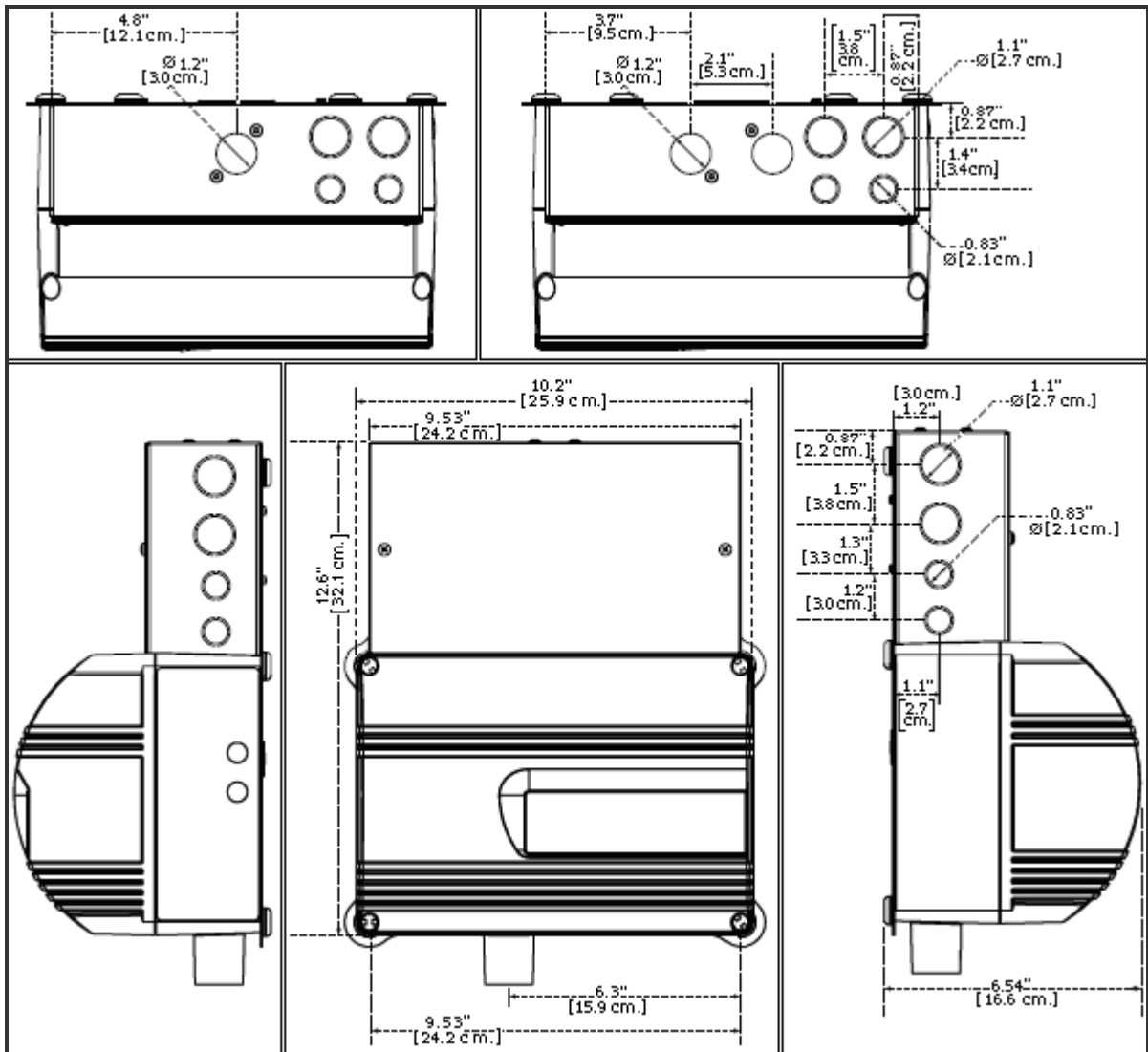
Technical Data

Current Draw:	300mA, max.		
Fan Control:	10 programmable speeds		
Fan Pressure:	0.0363 psi [250Pa]		
Field-Wiring Connections:	▪ Design	Screw terminals	
	▪ Admissible cross-section cables	10 – 18 AWG [American Wire Gauge, solid]	12 – 20 AWG [Stranded]
Filtration:	Serviceable filter External filter optional		
Flow Monitoring and Reporting:	High / Low, adjustable speeds		
Inlet Pipe Sizes:	▪ Inner Diameter	0.9" (2.2 cm.)	
	▪ Outer Diameter	1.1" (2.7 cm.)	
IP Rating:	IP 65		
Operating Temperature Range:	14° – 140° F (-10° – 60° C)		
Relative Humidity:	10 to 95% ; non-condensing		
Pipe Length:	164 feet (50m); per inlet		
	Notes: Pipe length may vary subject to specifications by local codes. Please refer to the regional XAS product guide for further detail.		
Relay Outputs:	One (1) fault (with Model XAS-1-US)		
	Two (2) faults (with Model XAS-2-US)		
Supported Detector Types:	- One (1) or up to two (2) compatible Siemens intelligent detectors		
Single / Dual-Inlet Duct-Sensor	10.2" –x– 12.6" –x– 6.5"		
Dimensions: { W -x- H -x- D }	(25.9 cm. –x– 32.1 cm. –x– 16.6 cm.)		
Supply Voltage:	24 VDC, nominal		
	Note: Spot (point) detectors are powered from the Signaling Line Circuit (SLC) or Initiating Device Circuit (IDC).		

Compatible Siemens Intelligent Devices for Model Series `XAS`

Model[s]	Part Number	UL File#	UL Volume#	ULC File#	ULC Volume#	Product
FDO421	S54320-F4-A1	S24106	3	S24106	3	Desigo® Photoelectric Smoke Detector
OP921	S54320-F4-A2	S24106	3	S24106	3	Cerberus® PRO Photoelectric Smoke Detector
FDOOT441	S54320-F7-A1	S2346	18	S2346	18	Desigo® Multi-Criteria Fire Detector [with ASAt technology]
OOH941	S54320-F7-A2	S2346	18	S2346	18	Cerberus® PRO Multi-Criteria Fire Detector [with ASAt technology]
FDOOTC441	S54320-F8-A1	S2346	18	S2346	18	Desigo® Multi-Criteria Fire / CO Detector [with ASAt technology]
OOHC941	S54320-F8-A2	S2346	18	S2346	18	Cerberus® PRO Multi-Criteria Fire / CO Detector [with ASAt technology]
HFP-11	500-033290	S2378	27	S2378	26	Addressable FirePrint™ Detector Polarity insensitive via SureWire™ technology

Mounting Diagrams



Details for Ordering Detectors

Model	Part Number	Description
XAS-1-US	S54331-Z2-A1	▪ Single-zone air-sampling unit ▪ ©UL Listed for use with Siemens intelligent, addressable spot detectors, as well as with a compatible Siemens mounting base ▪ Requires external 24VDC power
XAS-2-US	S54331-Z3-A1	▪ Dual-zone air-sampling unit ▪ ©UL Listed for use with Siemens Model HFP-11 spot detector and Siemens mounting base ▪ Requires external 24VDC power

Note: Refer to Siemens Installation Manual, 315-094193, for further details on the Siemens Model 'DB'-series of detector bases.

Details for Ordering — (continued) Flex Tubing

Model	Part Number	Description
02-LF42249	S54331-Z6-A1	Flexible single-core tubing, 50 ft. (15.24m)
02-LF42250	S54331-Z7-A1	Flexible single-core tubing, 25 ft. (7.62m)

Details for Ordering — (continued)

Duct Kit

Model	Part Number	Description
LF-42241	S54331-Z14-A1	Single-zone duct sampling kit: (for use with Model XAS-1-US) <i>— includes the following:</i> - One (1) tube-mounting plate - Compression fittings - Adaptors - Elbows - Reducers
LF-42243	S54331-Z15-A1	Dual-zone duct sampling kit: (for use with Model XAS-2-US) <i>— includes the following:</i> - Three (3) tube-mounting plates - Compression fittings - Adaptors - Elbows - Reducers

Water-Trap Kit

Model	Part Number	Description
LF-42282	S54331-Z16-A1	Single-zone water-trap kit: (for use with Model XAS-1-US) <i>— includes the following for installations subject to high humidity and / or condensation:</i> ¾" (1.9 cm.) CPVC pipe sections - Compression fittings - Ball valve (qty. 1)
LF-42283	S54331-Z17-A1	Dual-zone water-trap kit: (for use with Model XAS-2-US) <i>— includes the following for installations subject to high humidity and / or condensation:</i> ¾" (1.9 cm.) CPVC pipe sections - Compression fittings - Ball valve (qty. 1)

Note: CPVC is the acronym for chlorinated polyvinyl chloride.

Details for Ordering — (continued)

Sample Tube / Exhaust Tube

Single-Zone Kits: One (1) sample tube; one (1) exhaust tube

Model	Part Number	Description
LF-42285	S54331-Z8-A1	18" (45.8 cm.) Two-hole sample tube with exhaust-tube kit
LF-42286	S54331-Z9-A1	36" (91.4 cm.) Three-hole sample tube w/ exhaust-tube kit
LF-42287	S54331-Z10-A1	60" (152.4 cm.) Four-hole sample tube with exhaust-tube kit

Sample Tubes / Exhaust Tube

Dual-Zone Kits: Two (2) sample tubes; one (1) exhaust tube

Model	Part Number	Description
LF-42288	S54331-Z11-A1	18" (45.8 cm.) Two-hole sample tubes (qty. 2); exhaust-tube kit (qty. 1)
LF-42289	S54331-Z12-A1	36" (91.4 cm.) Three-hole sample tubes (qty. 2); exhaust-tube kit (qty. 1)
LF-42290	S54331-Z13-A1	60" (152.4 cm.) Four-hole sample tubes (qty. 2); exhaust-tube kit (qty. 1)

Miscellaneous

Model	Part Number	Description
02-FL53	S54331-Z18-A1	XAS Inlet air filter [Qty. 10 of Model 80-0020-0 air filters per package]
06-0000	S54331-Z19-A1	Blanking baffle [Qty. 10 baffles per package]
06-SE10	S54331-Z20-A1	Siemens Model HFP-11 baffle [Qty. 10 baffles per package]
VPS-100-US-120	500-699810	120V power supply

Note: Primary power occurs from either a Siemens FACP or from a ©UL 1481 Listed power supply source (with compliant battery backup that is compatible with NFPA 72).

Notice: This marketing data sheet is not intended to be used for system design or installation purposes.
For the most up-to-date information, refer to each product's installation instructions.