



You in Control

HS-100 SERIES

PLENUM SMOKE DETECTORS

For Special Applications

PRODUCT DESCRIPTION

HS-100 Series plenum smoke detectors provide early detection of smoke and products of combustion present in air moving through HVAC plenum return systems in commercial rooftop package unit applications. These devices are designed to prevent the recirculation of smoke in areas by the air handling system's fans and blowers. Complete systems may be shut down in the event of smoke detection.

The HS-100 is designed specifically for applications where our standard external mount duct detectors cannot be utilized. Examples in addition to commercial rooftop package unit applications include air shafts, between-ceiling plenum spaces, dampers and applications requiring extremely low or no air velocity (≤ 100 ft/min).

The HS-100 Series smoke detector is fitted with a mounting base that will accept an ionization smoke detector head model 55000-225APO or photoelectric smoke detector head model 55000-328APO. The duct unit supports one set of form "C" alarm contacts, one form "A" alarm contact and one form "B" trouble contact. The trouble contact supervises the presence of the input power and the removal of the smoke detector head.

This detector is not intended for open area protection nor should it be used for early warning detection or replace a regular fire detection system.

FEATURES

- ❖ No- and Low-Flow Technology: Ionization model listed for velocities between 0-2,000 ft./min. and Photoelectric model listed for velocities between 0-3,000 ft./min
- ❖ Both models listed for high-temperature applications
- ❖ Operating voltages: 230VAC, 115VAC, 24VAC, 24VDC
- ❖ Interconnect up to 30 units for common functions
- ❖ Compatible for interconnection and operation with Air Products' SL-2000 and SM-501 Series Duct Smoke Detectors, MSR Series Remote Accessories and MS Series Remote Accessories
- ❖ Accessible, discrete terminal blocks for easier wiring
- ❖ Flashing LED on detector head indicates normal operation
- ❖ Magnet test capability (magnet included)
- ❖ More wiring space than competitive models
- ❖ Unit includes red alarm visual indicator
- ❖ CSFM Listing and MEA Acceptance
- ❖ Compact, lightweight size means easy handling, lower shipping costs
- ❖ One set of 10A form "C" alarm contacts
- ❖ One set of 2A form "A" alarm contacts
- ❖ One set of 10A form "C" trouble contacts
- ❖ Large terminal connection screws
- ❖ Standard interchangeable "plug-in" UL268 photoelectric or ionization heads
- ❖ Advanced detector head design yields internal dust filtering
- ❖ Compatible with building automation and fire alarm systems
- ❖ Ionization and Photoelectric versions available
- ❖ Complete wiring details permanently attached to unit
- ❖ Standard 4" square back box mounting allows surface or "pendant" configurations
- ❖ Low profile design
- ❖ Tamper-resistant feature



CSFM LISTED

MEA ACCEPTED

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PRODUCT SPECIFICATIONS

MODEL NUMBER:	HS-100-N	Ionization: 230VAC, 115VAC, 24VAC, 24VDC
	HS-100-P	Photoelectric: 230VAC, 115VAC, 24VAC, 24VDC
DETECTOR MODEL NUMBER:	HS-100-N	55000-225APO
	HS-100-P	55000-328APO
ACCESSORIES:	MS- and MSR-Series remote accessories, TG-1000 aerosol test gas, and T-PB power supplies (All available from Air Products and Controls Inc.)	
POWER REQUIREMENTS: (without accessories)	230VAC	18 mA
Standby:	115VAC	31 mA
	24VAC	54.4 mA
	24VDC	15 mA
Alarm:	230VAC	20.0 mA
	115VAC	34.0 mA
	24VAC	139 mA
	24VDC	48.7 mA
RELAY CONTACT RATING:	Alarm Contacts: 1 set form "C" rated at 10 Amps @ 115VAC resistive 1 form "A" rated at 2 Amps	
	Trouble Contact: Resistive load: 1 form "B" rated at 10 Amps @ 115VAC resistive	
AIR VELOCITY:	HS-100-N	0 to 2,000 ft./min.
	HS-100-P	0 to 3,000 ft./min.
AMBIENT TEMPERATURE:	HS-100-N	32°F to 158°F (0°C to 70°C)
	HS-100-P	32°F to 140°F (0°C to 60°C)
HUMIDITY:	0% to 85% RH Non-Condensing / Non-Freezing	
WIRING:	Solid or stranded: #12 to #22 AWG terminals	
APPROVALS:	UL & CUL Listed (UL268A, UROX, UROX7) File # S2829 CSFM 3240-1004:118 MEA Accepted (73-92-E; Vol. 37)	
MATERIAL:	White plastic base/housing and detector (Makrolon 94V-0)	
DIMENSIONS:	6" Dia. X 4.0" H Overall / 2.6" from back box front	
MAX. NET WT.:	1.0 lb.	
RADIOACTIVE ELEMENT:	For HS-100-N (Ionization) Americium 241; 0.9 Micro-Curie Do not expose to corrosive atmospheres	
MOUNTING:	Standard 4" square back box, not included	

ENGINEERS & ARCHITECTS SPECIFICATIONS

- Air duct smoke detectors shall be Air Products and Controls Inc. HS-100 Series. For ionization detectors the model number is **HS-100-N**.
- For photoelectric detectors the model number is **HS-100-P**. The detectors shall be listed by Underwriters Laboratories per UL 268A.
- The detectors shall operate at air velocities from 0 feet per minute to 2,000 feet per minute (ionization) or 0 feet per minute to 3,000 feet per minute (photoelectric) and at temperatures of no greater than 140°F (60°C).
- Detector head shall not require additional filters or screens which must be maintained, and shall include both a standby and alarm visual indication.
- The unit shall contain a detector base which will accept photoelectric or ionization detector heads.
- Terminal connections shall be of the screw type, a minimum of #6 screw (#12 to #22 AWG compatible). Terminals shall be provided for remote pilot, remote alarm indications, strobe/horn, and remote test/reset switch. All wiring must comply with local codes and regulations.
- A method of testing the alarm function with a magnet must be provided.
- A method of smoke testing the detector must be provided.
- All unit, remote accessory, and common function connection designations must be permanently affixed to the unit.
- Capability for interconnection of up to 30 units shall be provided for common functions.

NOTICE: The information contained in this document is intended only as a summary and is subject to change without notice. The products described have specific instructional/installation documentation, which covers various technical, approval, code, limitation and liability information. Copies of this documentation along with any general product warning and limitation documents, which also contain important information, are provided with the product and are also available from Air Products and Controls Inc. The information contained in all of these documents should be considered before specifying or using the products. Any example applications shown are subject to the most current enforced local/national codes, standards, approvals, certifications, and/or the authority having jurisdiction. All of these resources, as well as the specific manufacturer of any shown or mentioned related equipment, should be consulted prior to any implementation. For further information or assistance concerning the products, contact Air Products and Controls Inc. Air Products and Controls Inc. reserves the right to change any and all documentation without notice.