AIR PRODUCTS AND CONTROLS

AP

You in Control

SL-2000 SERIES
DUCT SMOKE DETECTORS
Hi-Temp, Low-Flow & No-Tools

PRODUCT APPLICATION

The SL-2000 Series Smoke Duct Detector is the latest innovation for early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial, and Residential applications. The unit is designed to prevent the recirculation or spread of smoke by air handling systems, fans, and blowers. Complete systems may be shut down in the event of smoke detection. The SL-2000 is designed and built to meet all local code requirements, as well as the NFPA and ICC standards regarding HVAC supply and return duct smoke detectors. Output terminals are provided for a wide range of remote accessories such as horns, strobes, remote status indicators, and test/reset key switches or push buttons.

PRODUCT DESCRIPTION

The SL-2000 includes many features that represent true innovations from current generation duct smoke detectors. Our traditional installer/servicer-friendly approach has been closely followed and expanded throughout the SL-2000. This philosophy provides a new level of efficiency in after-purchase value to both the installer/servicer and end-user. Our attention to detail has yielded a host of "No-Tools Required" features, as well as a multi-application performance level as yet unmatched in the industry. Innovative product combined with unsurpassed customer service equals the right combination for all of your projects. The key features below detail many of the customer-driven innovations incorporated in the SL-2000 Series.

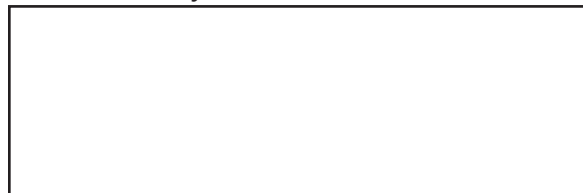c(UL)us **LISTED**   **CSFM LISTED**   **MEA** ACCEPTED

FEATURES

- ❖ Low-Flow Technology: Both Ionization and Photoelectric models listed for velocities between 100-4000 ft./min
- ❖ Both models listed for high-temperature applications
- ❖ Operating voltages: 230VAC, 115VAC, 24VAC, 24VDC
- ❖ Interconnect up to 30 units for common functions
- ❖ Patent pending "No-Tools Required" front *or* rear loading and removing sampling/exhaust tubes
- ❖ Patent pending "Test Port Valve" allows for aerosol smoke testing without cover removal
- ❖ Clear cover fitted with four captive "No-Tools Required" thumbscrews
- ❖ Instantaneous cover removal trouble indication
- ❖ Staggered terminal blocks for easier wiring
- ❖ Flashing LED on detector head indicates normal operation
- ❖ Magnet test capability (magnet included)
- ❖ More wiring space than competitive models
- ❖ Footprint allows easy retrofit in many applications without additional drilling
- ❖ Over 15 remote accessories available
- ❖ Duct wall gaskets on back of enclosure are pre-installed

- ❖ Compatible with the WP-2000 weatherproof enclosure
- ❖ Reset switch is also an alarm test switch - competitive models require a magnet or cover removal to test at unit
- ❖ Unit includes green pilot and red alarm visual indicators
- ❖ External mounting tabs do not require cover removal to install
- ❖ Colored cover gasket indicates proper cover seal
- ❖ UL, CUL, CSFM, and MEA Listed
- ❖ Compact, lightweight size means easy handling, lower shipping costs
- ❖ Two sets 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
- ❖ No additional screens or filters to clean
- ❖ Compatible with building automation and fire alarm systems
- ❖ Ionization and Photoelectric versions available
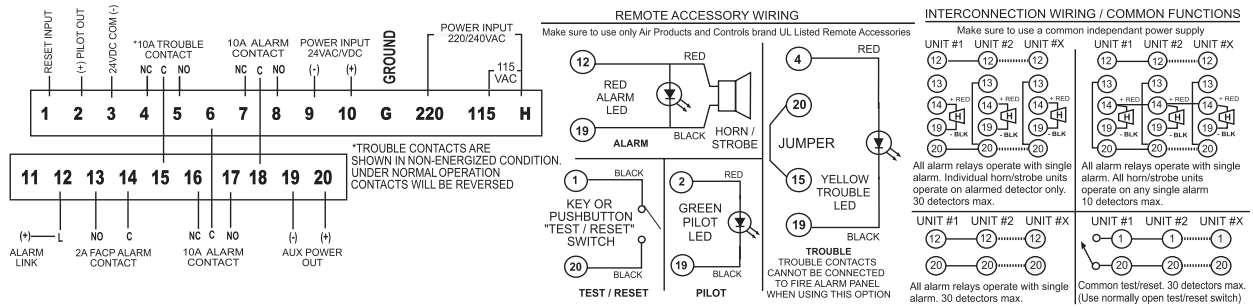- ❖ Complete wiring details permanently attached to unit

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WIRING

Terminal blocks (top row): RESET INPUT (1) | (+) PILOT OUT (2) | 24VDC COM (-) (3) | *10A TROUBLE CONTACT NC C NO (4 5 6) | 10A ALARM CONTACT NC C NO (7 8 9)...

POWER INPUT 24VAC/VDC (-) (+) | GROUND | POWER INPUT 220/240VAC | 115 VAC

1 2 3 4 5 6 7 8 9 10 G 220 115 H

11 12 13 14 15 16 17 18 19 20

(+) L — ALARM LINK
NO C — 2A FACP ALARM CONTACT
NC C NO — 10A ALARM CONTACT
(-) (+) — AUX POWER OUT

*TROUBLE CONTACTS ARE SHOWN IN NON-ENERGIZED CONDITION. UNDER NORMAL OPERATION CONTACTS WILL BE REVERSED

REMOTE ACCESSORY WIRING
Make sure to use only Air Products and Controls brand UL Listed Remote Accessories

RED ALARM LED — ALARM — HORN / STROBE
KEY OR PUSHBUTTON "TEST / RESET" SWITCH — TEST / RESET
GREEN PILOT LED — PILOT
JUMPER
YELLOW TROUBLE LED — TROUBLE
TROUBLE CONTACTS CANNOT BE CONNECTED TO FIRE ALARM PANEL WHEN USING THIS OPTION

INTERCONNECTION WIRING / COMMON FUNCTIONS
Make sure to use a common independant power supply

All alarm relays operate with single alarm. Individual horn/strobe units operate on alarmed detector only. 30 detectors max.

All alarm relays operate with single alarm. All horn/strobe units operate on any single alarm 10 detectors max.

All alarm relays operate with single alarm. 30 detectors max.

Common test/reset. 30 detectors max. (Use normally open test/reset switch)

PRODUCT SPECIFICATIONS

MODEL NUMBER:	SL-2000-N	Ionization: 230VAC, 115VAC, 24VAC, 24VDC
	SL-2000-P	Photoelectric: 230VAC, 115VAC, 24VAC, 24VDC
DETECTOR MODEL NUMBER:	SL-2000-N	55000-225APO
	SL-2000-P	55000-328APO
SAMPLING TUBES:	STN-1.0	Sampling tube for 12" or less duct width
	STN-2.5	Sampling tube for 6" to 2.5' duct width
	STN-5.0	Sampling tube for 2.5' to 5.0' duct width
	STN-10.0	Sampling tube for 5.0' to 10.0' duct width
ACCESSORIES:		MS- and MSR-Series remote accessories, WP-2000 weatherproof enclosure, TG-2000 aerosol test gas, and T-PB power supplies (All available from Air Products and Controls Inc.)
POWER REQUIREMENTS: (without accessories) Standby:	230VAC	8 mA
	115VAC	14 mA
	24VAC	55 mA
	24VDC	14 mA
Alarm:	230VAC	18 mA
	115VAC	32 mA
	24VAC	190 mA
	24VDC	68 mA
RELAY CONTACT RATING: Alarm Contacts:		Resistive load: 2 sets form "C" rated at 10 Amps @ 115VAC Resistive load: 1 set form "A" rated at 2 Amps
Trouble Contacts:		Resistive load: 1 set form "C" rated at 10 Amps @ 115VAC
AIR VELOCITY:		100 to 4,000 ft./min.
AMBIENT TEMPERATURE:	SL-2000-N	32ºF to 158ºF (0ºC to 70ºC)
	SL-2000-P	32ºF to 140ºF (0ºC to 60ºC)
HUMIDITY:		85 ±5 % RH (@32 ±2°C; 86 ±3.6°F) Non-Condensing / Non-Freezing
WIRING:		Solid or stranded: #12 to #22 AWG terminals
APPROVALS:		UL & CUL Listed (UL268A, UROX, UROX7) File # S2829 CSFM Listed (3240-1004:105) MEA Accepted (73-92-E; VOL. 27)
MATERIAL:		Grey plastic backbox, clear plastic cover (Makrolon 94V-0)
DIMENSIONS:		13 ½" L x 4 ½" W x 2 ¼" H
MAX. NET WT.:		2 ½ lbs.
RADIOACTIVE ELEMENT:		For SL-2000-N (Ionization) Americium 241; 0.9 Micro-Curie Do not expose to corrosive atmospheres
HARDWARE:		7" exhaust tube, sampling tube end cap, mounting template, test magnet, and mounting hardware included

ENGINEERS & ARCHITECTS SPECIFICATIONS

- Air duct smoke detectors shall be Air Products and Controls Inc. SL-2000 Series. For ionization detectors the model number is SL-2000-N.
- For photoelectric detectors the model number is SL-2000-P. The detectors shall be listed by Underwriters Laboratories per UL 268A.
- The detectors shall operate at air velocities from 100 feet per minute to 4,000 feet per minute and at temperatures of no greater than 140°F (60°C).
- Visual indication of alarm and power must be provided on the detector front.
- A manual reset switch shall be located on front of the device.
- Detector head shall not require additional filters or screens which must be maintained, and shall include both a standby and alarm visual indication.
- The housing 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 without removing the cover must be provided.
- All unit, remote accessory, and common function connection designations must be permanently affixed to the unit.
- Cover and sampling/exhaust tube installation or removal must not require the use of tools.
- Capability for interconnection of up to 30 units shall be provided for common functions.
- Sample and exhaust tubes shall be capable of removal/installation from the front and/or rear of the detector for inspection/maintenance.