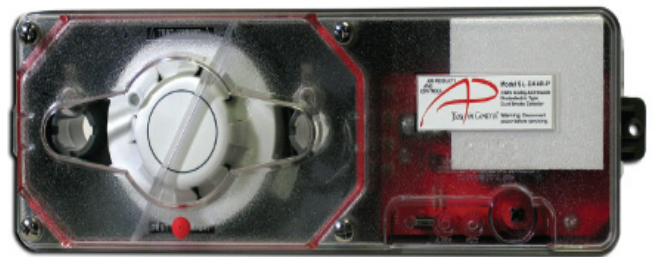# SL-DA4R Series

Description

The SL-DA4R Series Smoke Duct Detector is the latest analog addressable 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 via the unit's on-board alarm contact in the event of smoke detection. The SL-DA4R 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 key switches or push buttons.

The SL-DA4R 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-DA4R. 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. The key features below detail many of the customer-driven innovations incorporated in the SL-DA4R Series. Innovative product combined with unsurpassed customer service equals the right combination for all of your projects.

Engineers & Architects Specifications

- Air duct smoke detectors shall be Air Products and Controls Inc. SL-DA4R Series.
- For photoelectric detectors the model number is SL-DA4R-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 must be provided on the detector front.
- A manual alarm relay/test switch located on the front of the device shall be provided.
- Detector head shall not require additional filters or screens which must be maintained, and control board shall include both a standby and alarm visual indications.

Analog Addressable Duct Smoke Detectors (Hi-Temp, Low-FLow & No-Tools)

SL-DAA Series

Features

- Low-Flow Technology: Both Ionization and Photoelectric models Listed for velocities between 100-4000 ft./min
- Both Ionization and Photoelectric models listed for high temperature applications
- Operating voltages: 24VAC or 24VDC
- Units supplied with slide-in XPERT Card for easy device addressing
- 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" thumb-screws
- Instantaneous cover removal trouble indication
- In-line terminal block for easier wiring
- Steady red LED on detector head indicates alarm operation
- 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
- Built-in alarm relay test switch

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Engineers & Architects Specifications (Continued)

- The housing shall contain a detector base which will accept photoelectric or ionization detector heads as well as a means of detector addressing.
- 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 switch. All wiring must comply with local codes and regulations.
- A method of smoke testing the detector without removing the cover must be provided
- All unit and remote accessory connection designations must be permanently affixed to the unit.
- Cover and sampling/exhaust tube installation or removal must not require the use of tools.
- Sample and exhaust tubes shall be capable of removal/installation from the front and/or rear of the detector for inspection/maintenance.
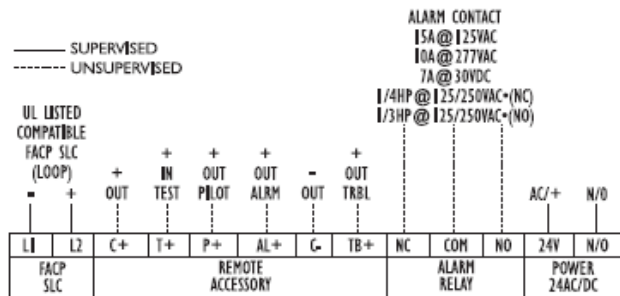
Features (Continued)

- 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
- Compact, lightweight size means easy handling, lower shipping costs
- One set of 15A form "C" alarm contacts
- Large terminal connection screws
- XP95A 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 fire alarm systems utilizing Apollo XP95 and/or Discovery protocol
- Ionization and Photoelectric versions available
- Complete wiring details permanently attached to unit

Wiring

Figure 1 Terminal Connections
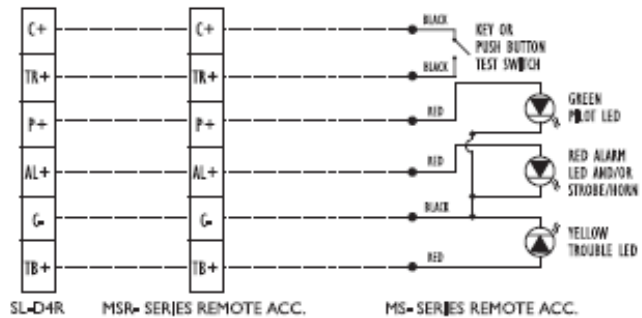
Remote Accessory Wiring

Figure 2 Remote Accessory Wiring

Specifications

Detector Compatibility: FACP using Apollo XP95 and/or Discovery protocols

Control Board Power Requirements:

	Standby:	Alarm:
24 VAC		105 mA
24 VDC		26 mA

Relay Contact Rating: Alarm Contacts:
 Resistive Load: 1 set form "C" rated at 15 Amps @125VAC
 10 Amps @ 277VAC
 7 Amps @ 30VDC
 Inductive Load: 1/4 HP @ 125/250VAC (NC)
 1/2 HP @ 125/250VAC (NO)

Air Velocity: 100 to 4,000 ft./min.

Ambient Temperature:
 SL-DAA-N 32ºF to 150ºF (0ºC to 66ºC)
 SL-DAA-P 32ºF to 140ºF (0ºC to 60ºC)

Humidity: 10 - 95% RH Non-Condensing/Non-Freezing

Wiring: Solid or stranded: #12 to #22 AWG terminals

Radioactive Element: For SL-DA4R-N (Ionization) Americium 241; 0.9 Micro-Curie. Do not expose to corrosive atmospheres

Material: Grey plastic backbox, clear plastic cover (Makrolon 94V-0)

Dimensions: 13 1/2" L x 4 1/2" W x 2 1/4" H

Max. Net Weight 2.25 lbs.

Ordering Information

Part Number	Description
SL-DA4R-P	Photoelectric: 24VAC or 24VDC

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