


Air Duct Housings-AD2 Series

ENGINEER AND ARCHITECT SPECIFICATIONS

- For Series 11 Detectors
- Relay Models Available
- Design for Air Velocity Range of 100 to 4000 fpm
- Alarm LED Visible From Front
- Clear Housing Cover for Quick Identification of Detector Type Removable With Only Four Captive Screws
-  UL Listed



Introduction

The Siemens Building Technologies, Fire Safety Division air duct detector housings are designed to be used with the 11-Series detectors. Designed for installation directly to heating, ventilating and air conditioning duct systems, they comply with National Fire Protection Association Standard No. 90A. When equipped with photoelectric detectors, these units will signal the presence of hazardous quantities of products of combustion or smoke being carried through the duct system. Air duct detectors are not intended to be substituted for open area detection.

Air duct housings can be equipped with optional relays. These relays are utilized to operate any supplementary equipment when smoke or particles of combustion are detected.

Note: Most conventional time control equipment guarantee only one detector per zone when the detector operated relay function is critical. The connection of a remote lamp and a remote relay per detector is allowed with PXL or System 3™ only, other conventional systems may use either a remote lamp or a relay.

With the MXL series of control panels, up to 60 detectors per circuit having relays may be used. The connection of a remote lamp or a remote relay is allowed for each detector but not both.

With the FireFinder XLS series of control panels, up to 252 detectors per circuit having relays may be used. The Connection of an intelligent remote lamp and a remote Relay (ILED), is also allowed.

Air duct housings (see Ordering Information) are Underwriters Laboratories, Inc. listed.

Description

The Fire Safety air duct housing is uniquely designed to use the photoelectric detector.

Sensitivity of PE-11 detectors can be checked by viewing the LED or an RSAW-11 or RSAC-11 multicolor remote lamp. A green flash indicates the detector has passed its self test. Amber indicates a trouble condition, and red indicates an alarm state.

HFP-11, HFPO-11 and FP-11 sensitivity may be viewed from the multi-color LED on the detector or preferably may be printed by command on an optional printer from the MXL control panel.

The detector unit employs a cross-sectional sampling principle of operation. Inlet sampling tubes are available in four lengths (see table on reverse side). Outlet sampling tubes are one common length. A continuous cross-sectional sample of air moving through the duct stratification or skin effect phenomena occurring in the duct that could prevent combustion product or smoke (especially in large ducts) from reaching a spot type detector.

In addition, the unique design of the sampling chamber insures uniform sensitivity in air velocities, ranging from a low of 100 feet per minute to as high as 4000 feet per minute. The housing comes with two 1/2" conduit

knockouts and one 1/2" conduit opening for a number of 3 wiring entry ports.

The inlet sampling tube length is determined by the width of the air duct being protected. The inlet tube nearest to but greater than the duct width should be used (see table). The inlet tube can then be trimmed at the job site to the exact width of the duct. The outlet sampling tube for all ducts, irrespective of width, has a fixed length of approximately 5.5 inches and is supplied with the duct housing.

When the use of a remote relay is required, order model AD2-PR for conventional systems; AD2-XHR for addressable systems. When required the WP-2000 weatherproof enclosure for Duct Housing is available. For full details, refer to installation instructions part number 315-049708.

Sampling Tube Selection Table

Duct Width	Sampling Tube Model No.
For duct widths 6" to 1'	ST-10
For duct widths over 1' to 3'	ST-25
For duct widths over 3' to 5' (requires support)	ST-50
For duct widths over 5' to 10' (requires support)	ST-100

Maintenance of the detector is easily accomplished by the removal of the Series 11 duct housing sampling chamber cover. The detector, which plugs into the housing, is easily removed for cleaning by a trained technician.

All that is necessary for installation of the air duct detector is the cutting of three small holes for the sampling tube installation (template included) and the drilling of four holes for mounting the air duct housing. The unit is then easily mounted in place and connection made to the existing wires or terminals if optional accessories are utilized.

ST-50 and ST-100 require support. ST-100 is shipped in two five foot pieces with a coupling for field assembly.

Technical Data

Temperature Range	32°F (0°C) -100°F (38°C)
Altitude Range	No Altitude Limitations
Relative Humidity	10-85% (non-condensing/non-freezing)
Air Duct Velocity Range	100 - 4000 Ft/Min.
Sampling Tube Pressure Range of Differences	Greater than 0.01 amps less than 1.2 inches of water column

Note to Architect: When building codes regulate the location of detectors within ventilating systems, make sure that the number and locations of detectors is in accordance with the code regulations.

Order Information

Model	Description	Part Number
AD2-P	Air Duct Housing for use with FP-11, HFP-11, HFPO-11, PE-11	500-649706
AD2-PR	Air Duct Housing for use with PE-11 with relay	500-649707
AD2-XHR	Air Duct Housing for use with FP-11, HFP-11, HFPO-11, with relay	500-649708
ST-10	Sampling Tube for Ducts 6" to 1'	500-649710
ST-25	Sampling Tube for Ducts over 1' to 3'	500-649711
ST-50	Sampling Tube for Ducts over 3' to 5'	500-649712
ST-100	Sampling Tube for Ducts over 5' to 10'	500-649713

Product Includes

- One Short Return (outlet) Tube
- One Stopper
- Two #12 + 3/4" Sheet Metal Screws
- Mounting Template

Note: Detector and sampling tube to be purchased separately

Note: Minimum hardware required is one Air Duct Housing Assembly, one Sampling Tube and one Detector.

NOTICE: The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such voids all warranties either expressed or implied in regard to loss, damage, liabilities and/or service problems