
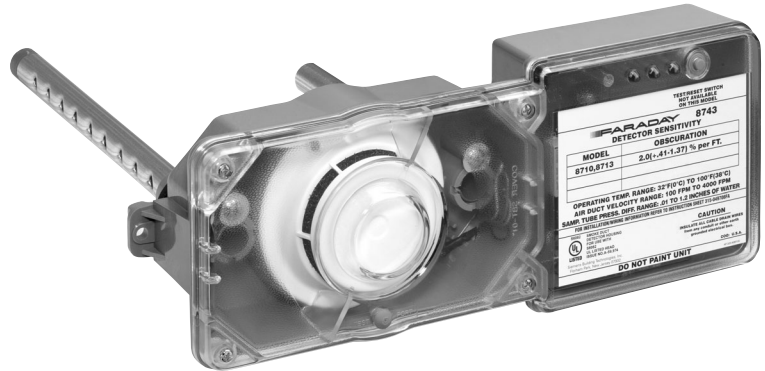


8741, 8742 and 8743 Air Duct Housings

Features

- 8710, 8713 AND 8854B Detectors
- Relay Model Available
- Alarm LED Visible from Front
- Designed for Air Velocity Range 100 to 4000 fpm
- Clear Housing Cover Quick Identification of Detector Type
- Cover removable with only four captive screws
-  UL Listed, CSFM Approved



Introduction

FARADAY air duct detector housings are designed to be used with 8700 Series and 8854B 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.

8742 and 8743 air duct housings are equipped with relays. These relays are utilized to operate any supplementary equipment when smoke or particles of combustion are detected.

With MPC-6000 or 7000 control panels, up to 252 detectors per circuit having relays may be used.

Detection

These air duct housings are uniquely designed to use the photoelectric detector.

Detector 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 control panel. The multi-color LED on the detector flashes green to indicate the detector has passed it's self test and is within its proper sensitivity

range. Yellow indicates either a "Trouble" condition or an "Out of Sensitivity" condition. Red indicates alarm.

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 is taken. This averages the effects of laminar flow, 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 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 inches and is supplied with the air duct housing.

These housings are UL listed and CSFM Approved (3240-0065:191) NYMEA and FM are pending.

Duct Width	Sampling Tube Model No.	Technical Data	
6" to 1.0'	ST-10	Temperature Range	32°F (0°C)-100°F (38°C)
1.0' to 3.0'	ST-25	Altitude Range	No Altitude Limitations
3.0' to 5.0'	ST-50	Relative Humidity	10-85% (non-condensing/non-freezing)
5.0' to 10.0'	ST-100	Air Duct Velocity Range	100-4000 Ft/Min.
Greater than 9'9" (292.5cm)	Consult Faraday Technical Support	Sampling Tube Pressure	Greater than 9.01 amps
ST-50 and ST-100 tubes require support.		Range of Differences	less than 1.2 inches of water column

Product Includes

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

Note: Detector and sampling tube to be Purchased separately.

Sampling Tube Selection Table

Maintenance of the detector is easily accomplished by the removal of the 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 the 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.

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.

Ordering Information

Model	Description	Part No.
8741	Air duct housing 8854, 8710 or 8713	500-649706FA
8742	Conventional air duct housing w/relay for 8854 detector	500-649707FA
8743	Air Duct Housing w/relay for 8700 and 8713 detector	500-649708FA
8713	Intelligent FireSmart™ Detector	500-033290FA
8710	Photo Detector	500-034800FA
8854B	Conventional Photoelectric Smoke Detector	500-094150FA
ST-10	Sample Tube, for ducts 6" to 1.0'	500-649710
ST-25	Sample Tube for ducts 1.0' to 3.0'	500-649711
ST-50	Sample Tube for ducts 3.0' to 5.0'	500-649712
ST-100	Sample Tube for ducts 5.0' to 10.0' Sampling tubes greater than 10' Consult Faraday	500-649713



Siemens Building Technologies, Inc.
 8 Fernwood Road • Florham Park, NJ 07932
 Tel: (973) 593-2600 • Fax: (973) 593-6670
 Web: www.faradayfirealarms.com

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