

Features

Weatherproof duct housing enclosure for use with the following TrueAlarm addressable duct sensor housings (ordered separately):

- A4098-9755, Standard Duct Sensor Housing
- A4098-9756, Duct Sensor Housing with Relay Output

Addressable duct sensor housing details:

- Photoelectric sensor and exhaust tube are supplied
- Sampling tube is ordered separately per duct size
- Continuous communications actively monitors status of electronic circuits
- Refer to Autocall data sheet AC4098-0030 for additional duct sensor housing details

Weatherproof duct housing enclosure features:

- Circulation of conditioned air from the air duct helps maintain the sensor housing at its rated temperature range
- Nonmetallic material does not require painting
- Captive cover screws
- Intake and exhaust tubes for weatherproof duct housing enclosure are supplied
- Internal mounting plate is removable to provide a convenient drilling template
- Includes required gaskets
- UL listed to Standard 268A

Description

Smoke detection system designs that require smoke detection monitoring of an HVAC duct that is exposed to environmental extremes must provide protection against the anticipated temperatures and total weather conditions. The A4098-9845 Weatherproof Duct Housing Enclosure provides for the circulation of conditioned air around the internally mounted addressable duct sensor housing to maintain the sensor housing at its rated temperature range and provide protection from ambient environmental extremes.

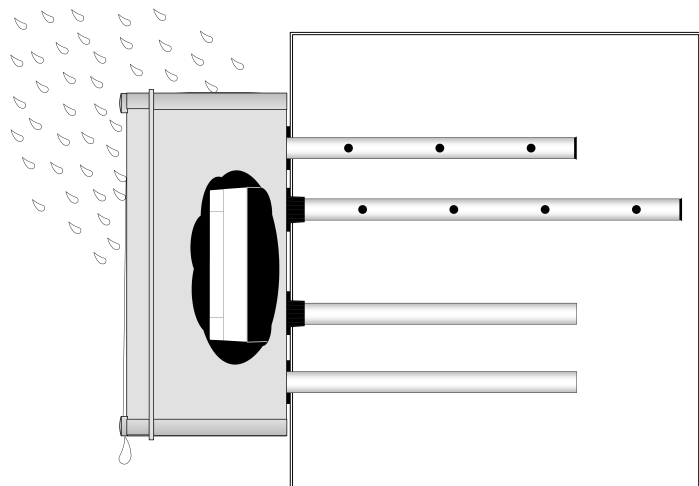


Fig 1: Side View of Weatherproof Duct Housing Enclosure A4098-9845 with Duct Tube Detail and Cutaway Showing Sensor Housing (refer to Installation Reference for details)

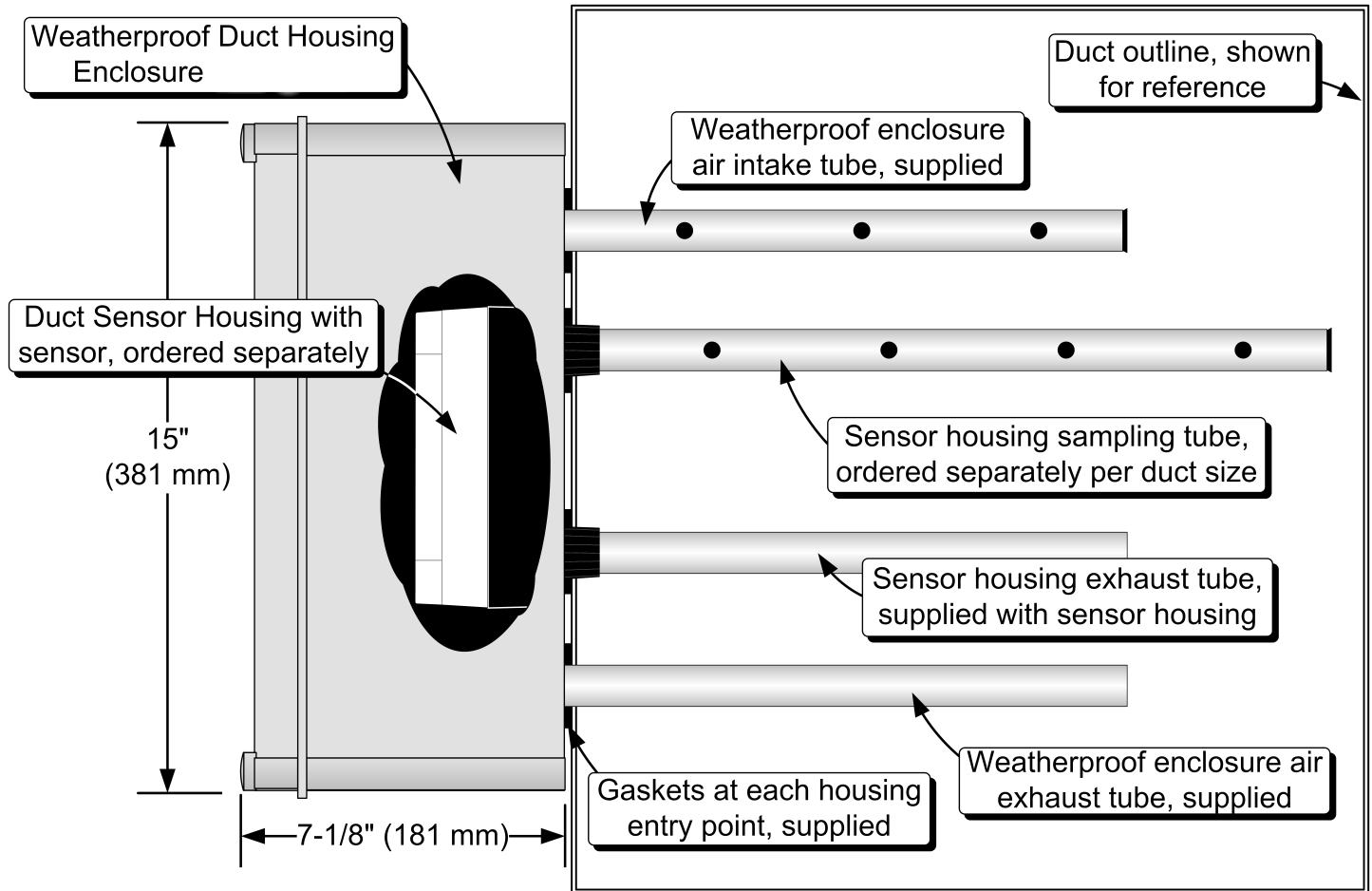
Specifications

A4098-9845 Weatherproof Duct Housing Enclosure			
Air Velocity Range (linear ft/min)	300 to 4000 ft/min (91 to 1220 m/min)	Refer to Application Reference, Ambient Temperature vs. Recommended Airflow Graph on page 4 for additional information	
UL Listed External Temperature Range	-40° to 158° F (-40° to 70° C)		
UL Listed External Humidity Conditions	Up to 100% RH		
NEMA Enclosure Category	4X		
Construction	Solid body and door, light gray, PBT/PC blended plastic, UL94-5VA flammability rating, UV stabilized		
Dimensions	22-1/8" W x 15" H x 7-1/8" D (562 mm x 381 mm x 181 mm)		

Addressable Duct Sensor Housing A4098-9755/A4098-9756	
UL Listed Temperature Range	32° to 100° F (0° to 38° C)
Operating Temperature Range	32° to 122° F (0° to 50° C)
Storage Temperature Range	0° to 140° F (-18° to 60° C)
Humidity Range	10% to 90% RH, non-condensing

Installation Reference, Side View

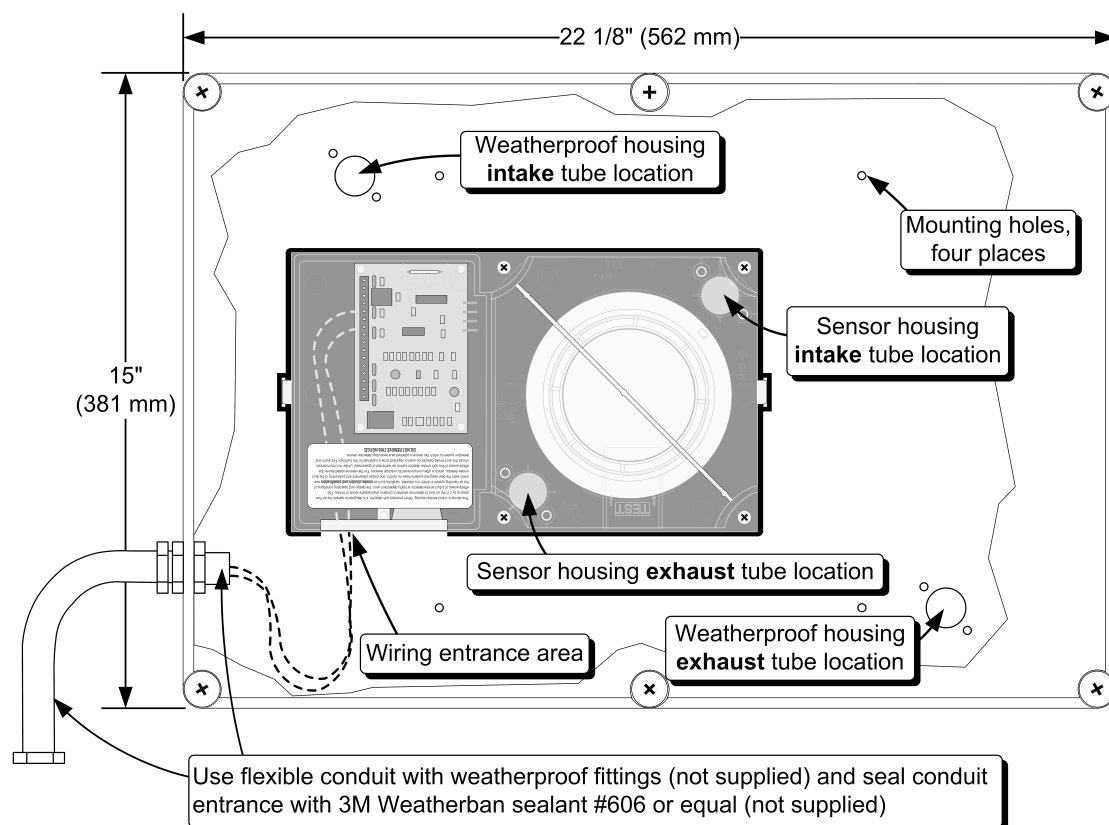
Note: Refer to Installation Instructions 574-922AC for additional information.



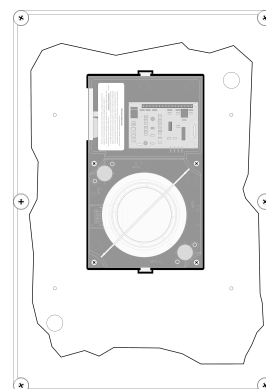
Installation Reference, Front View Showing Preferred and Alternate Orientations

Note: Refer to Installation Instructions 574-922AC for additional information.

Preferred Orientation



Acceptable Vertical Orientation



Application Reference, Ambient Temperature vs. Recommended Airflow Graph

The graph shown below presents the results of controlled laboratory testing performed on a typical A4098-9845 Weatherproof Enclosure protecting an internally mounted duct sensor housing. The external ambient air temperature of the A4098-9845 Weatherproof Enclosure was varied throughout its UL listed operating temperature range. Temperatures were recorded within the protected duct sensor housing with varying duct air velocities of air maintained between 68° and 74° F (20° to 23° C).

This graph illustrates how an increase in the test airflow velocity allows the airflow through the weatherproof enclosure to maintain the duct sensor housing at its rated range as the ambient temperature of the weatherproof enclosure is varied throughout temperatures anticipated for exterior air duct locations.

PLEASE NOTE that for typical external air duct applications, heating air would be hotter than 74° F and cooling air would be lower than 68° F, extending the acceptable airflow range accordingly.

