

Duct Averaging Sensors 100K Ω NTC

Product Description

The 100K Ohm NTC Duct Averaging Temperature Sensor assemblies sense the average air temperature in ductwork where mixing baffles are not provided or where stratification occurs. Each sensor assembly mounts on sheet metal ducts.


Contents

- Averaging temperature sensing assembly
- Electrical box for wiring connections
- Wire nuts

Product Number

Product Number	Insertion Length in Inches (cm)	Probe Type
540-244-18	18 (45)	Rigid
540-245-36	36 (91)	Flexible
540-246-72	72 (182)	Flexible

Warning/Caution Notations

CAUTION:		Equipment damage or loss of data may occur if you do not follow a procedure as specified.
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Required Tools

- Wire cutters
- Small flat-blade screwdriver
- Medium flat-blade screwdriver
- Four No. 10 x 1-inch sheet metal screws
- Electric drill with 1/2-inch and 7/8-inch drill bits
- No. 27 drill bit for screw holes

Expected Installation Time

30 minutes

Prerequisite

The signal wiring must be pulled to the installation site and enclosed in 3/8-inch or 1/2-inch (13 mm) flexible conduit.



CAUTION:

The duct sensing element is used to detect temperature stratification in the duct. For proper operation, be sure to mount the sensing element at an angle.

NOTE:

1. Provide adequate clearance for the sensor tubing so that it will not interfere with the operation of the terminal equipment (that is damper blades, baffles, etc.).
2. If the sensor is to be mounted as a discharge air sensor, the sensor tubing must be located after the heating coil and close to the back of the unit.
3. If the sensor is to be mounted as a mixed air sensor, the sensor tubing must be located in the mixed air plenum (before the heating coil and close to the terminal unit).

Installation

1. Identify where the Averaging Temperature Sensor is to be located.
2. Drill a 7/8-inch (22 mm) center hole where the sensor tubing is to be installed.
3. Insert the sensor tubing through the hole in the duct wall.

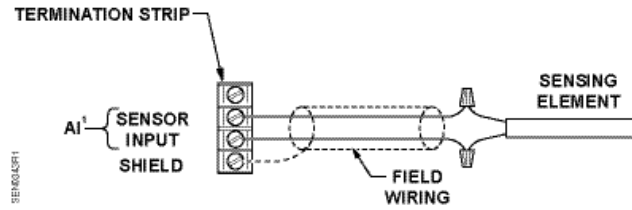


CAUTION:

When uncoiling the sensing element, do NOT severely bend or kink the element. The diameter of any bend should be no less than six inches (152 mm).

4. Hold the utility box firmly against the duct wall and, using the four holes in the base of the utility box as a guide, drill four No. 27 holes for the mounting screws in the duct wall.
5. Secure the utility box to the duct with four sheet metal screws.
6. Attach the conduit to the utility box; pull wires and terminate (see Figure 1). Replace cover.

The installation is now complete.



1. Configure the analog input (AI) point for appropriate input.

Figure 1. Typical Wiring Connection.

- NOTE:**
1. Some Siemens Building Technologies, Inc. controllers may require a shield termination.
 2. For individual panel wiring details, refer to the appropriate hardware manual.

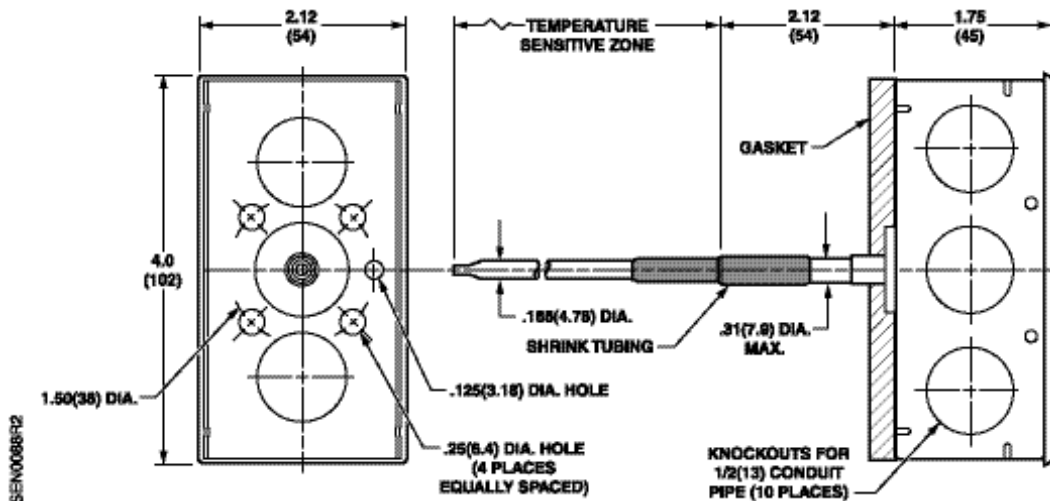


Figure 2. Mounting Hole Locations and Dimensions of Sensor Junction Box.

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