SIEMENS

Installation Instructions
Document No. 540-603
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TEC Duct Point Temperature Sensor 10K ohm Thermistor

Product Description

The Duct Point Temperature Sensor, 10K ohm Thermistor provides an input for temperature control to a controller.

Product Numbers

540-739 (18-inch probe)

538-871 (4-inch probe)

AQM2000 Flange Gasket Kit (Order separately if an adjustable depth is required)

Required Tools

- Drill with 13/32-inch (10.3 mm) bit and No. 27 bit
- Power screwdriver with standard screw chuck or medium flat-blade screwdriver
- Three No.10 sheet metal screws

Additional tools if not using pre-terminated cables:

- Room Sensor Connector Tool, P/N 540-140
- Room Sensor Connector Kit (100/pkg) P/N 540-141

Expected Installation Time

45 minutes

Prerequisites

- Review these instructions before beginning.
- Route the appropriate field wiring, within the maximum wiring length for the individual field panel or equipment controller, through the conduit.
- Ensure that all wiring complies with National Electric Code (NEC) and local regulations.

Caution Notations

CAUTION:	⚠	Equipment damage, or loss of data may occur if you do not follow procedure as specified.

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Instructions

CAUTION:

Always wear an electro-static discharge wrist strap and discharge accumulated static before touching controller components.

1. Drill a 13/32-inch diameter hole into the duct at the desired location of the sensor. See Figure 1.

   NOTE: If you are not using an AQM2000 Kit, proceed to Step 7.

2. Using the duct mounting flange as a template, drill three holes with a No. 27 drill bit for the sheet metal screws.

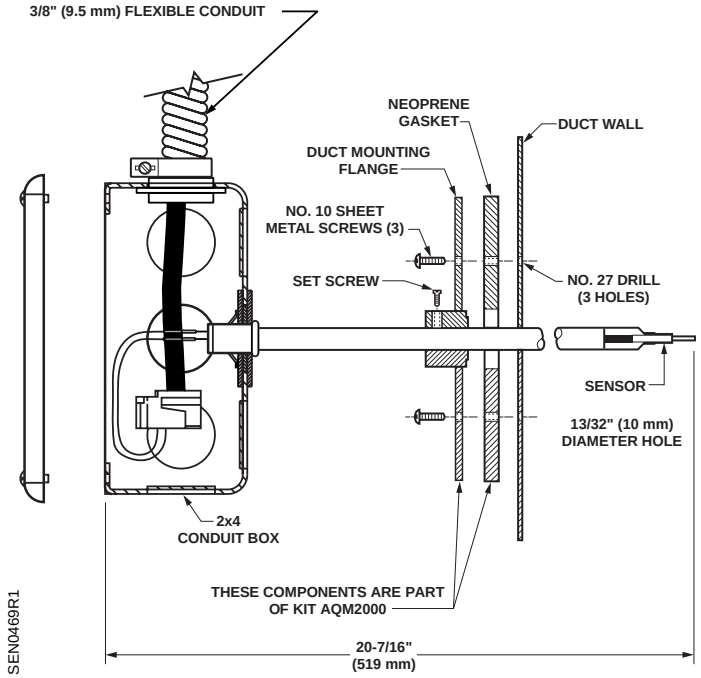

Figure 1. Duct Point Sensor Installation.

3. Place the neoprene gasket against the duct, and align the three small holes in the duct with the holes in the gasket and duct mounting flange.
4. Using three No. 10 sheet metal screws, fasten the gasket and duct mounting flange to the duct.

Instructions, Continued

5. Loosen the set screw in the hub of the duct mounting flange and insert the sensor through the flange into the duct.

   NOTE: The sensor tip should protrude into the duct about 1/4 or 3/4 of the duct diameter. These are the points of average airflow and average air temperature. The air velocity is high enough that the sensor response time is not a problem.

6. Tighten the set screw.
7. Insert the sensor into the duct through the 13/32-inch diameter hole and secure it to the duct with sheet metal screws.

   NOTE: Skip Step 7 if you are using Kit AQM2000.

8. Remove the cover from the 2 × 4-inch utility box.
9. Attach the flexible conduit and field wiring to the conduit box. Make sure the conduit and field wiring have enough length to allow the installation and removal of the sensor.
10. If you are using pre-terminated cable, skip to Step 12.
11. Using the room sensor connector tool, attach an RJ-11 connector to both ends of the cable. Align the six wires in the same order on the connectors at both ends of the cable. See Figure 2.
12. Insert the RJ-11 plug of the field wiring into the RJ-11 housing on the duct sensor's lead wires.
13. Connect the field wiring to the TEC controller by inserting the RJ-11 plug into the controller's RTS port.
14. Replace the 2 × 4-inch utility box cover.

The installation is now complete.

Pin	Wire Color/Stripe
1	Green/white
2	Orange/white
3	Blue/white
4	White/blue
5	White/orange
6	White/green

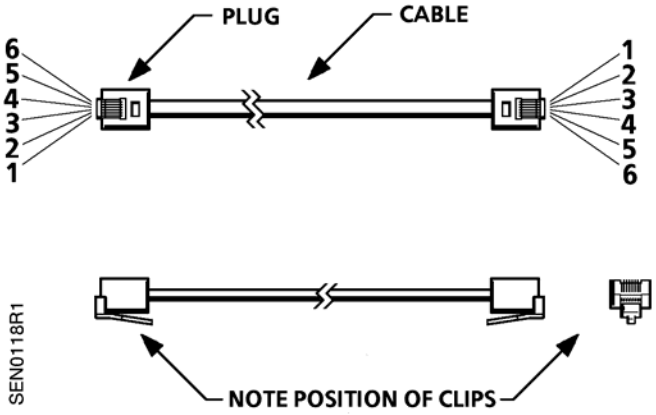

Figure 2. Terminating the Sensor Cable.