SIEMENS

Installation Instructions
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Surface Mount Temperature Sensor 1000 ohm RTD

Product Description

The 1000 ohm Platinum (375 α) RTD Surface Mount Temperature Sensor with platinum element mounts directly on a pipe inlet and senses the temperature of water in the pipe.

Product Number

544-089

Contents

Description	Quantity
1K ohm Platinum (375 α) RTD Sensor	1
Mounting Kit:	
• Junction box	1
• Strap	1
• Wire nuts	4
• No. 20 stretch tape	1 roll

Required Tools

- Wire cutters
- Knife
- Duct tape
- Wire brush, sandpaper or other abrasive tool
- Medium flat-blade screwdriver

Expected Installation Time

13 minutes

Prerequisite

If the pipe is not insulated, a 12- to 18-inch (30 to 46 cm) piece of insulation will be needed to ensure an accurate temperature reading. The insulation should be at least 1-inch (25 mm) thick.

Installation

NOTE: To ensure accuracy, the sensor must be mounted under insulation, away from drafts. Do not cut any wire from the sensor.

1. If the pipe is insulated, remove a portion of the insulation by making two cuts around the circumference of the pipe (between 6 and 12 inches [15 and 30 cm] apart). Make a third cut perpendicular to the first two cuts so that the insulation can be removed in one piece. See Figure 1. **Save this piece**.

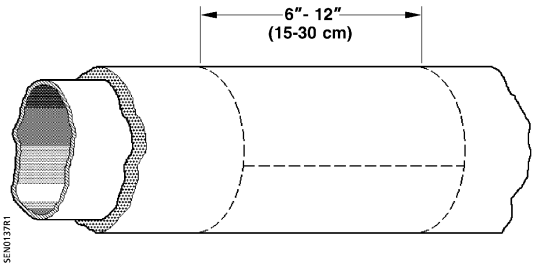

Figure 1. Cutting the Insulation.

2. Using an abrasive tool, clean the surface of the pipe where the sensor is to be mounted to ensure good contact with the pipe. See Figure 2.
3. Bend the sensor wires back along the pipe next to the sensor for strain relief. See Figure 2.
4. Secure the sensor to the pipe with 1-1/2 to three wraps of the stretch tape provided. Stretch the tape about 25% as you wrap it around the pipe. See Figure 2.
5. Wrap the excess sensor wires around the pipe and secure with the stretch tape or duct tape. See Figure 2.

Discontinued, Page 1 of 2

Installation, Continued

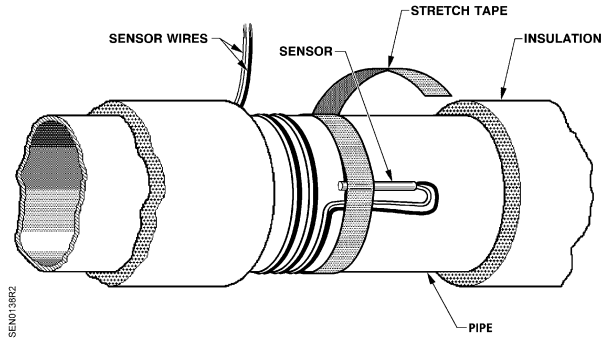

Figure 2. Pipe Temperature Sensor.

8. Replace the insulation removed in Step 1, and secure it to the pipe with duct tape.

   NOTE: If the pipe is not insulated, wrap a piece of insulation (as noted in *Prerequisites*) around the sensor and the pipe. The insulation should be secured to the pipe using duct tape to ensure accuracy.

9. Position the junction box on top of the pipe insulation and feed the sensor wires into it from the bottom of the box. The box should be positioned so that the sensor wires come straight up into the junction box from the seam in the reinstalled insulation.
10. Thread the strap through the junction box and attach the junction box to the pipe. See Figure 3.
11. Connect the electrical conduit, with the field wiring, to the junction box.
12. Using two of the wire nuts provided, connect the sensor wires to the field wires. See Figure 3.
13. Put all the excess wire into the junction box and install the cover on the box.
14. Connect the field wires to the applicable controller. See Figure 4.

The installation is now complete.

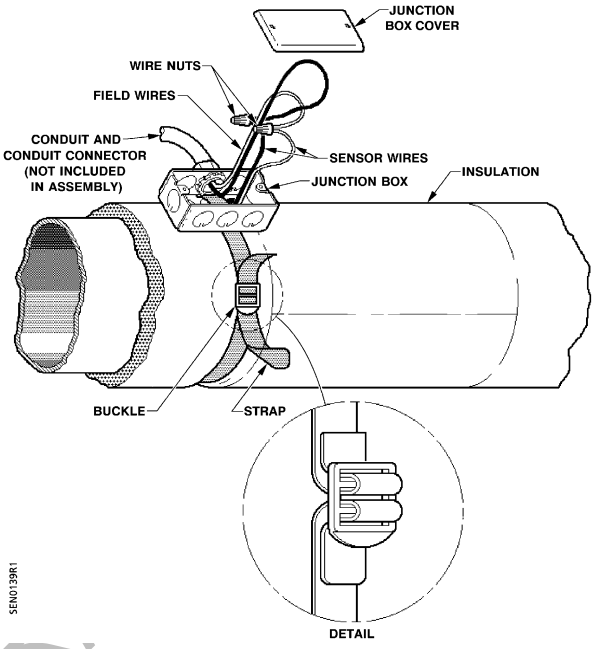

Figure 3. Attaching the Junction Box and Connecting the Sensor Wires.

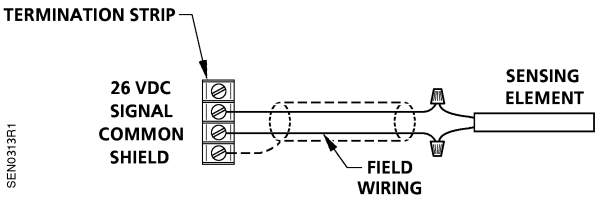

Figure 4. Typical 1000 ohm RTD Connection.

NOTE: 1. Some controllers may require a shield termination.

2. For individual panel wiring details, see the appropriate hardware manual.

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