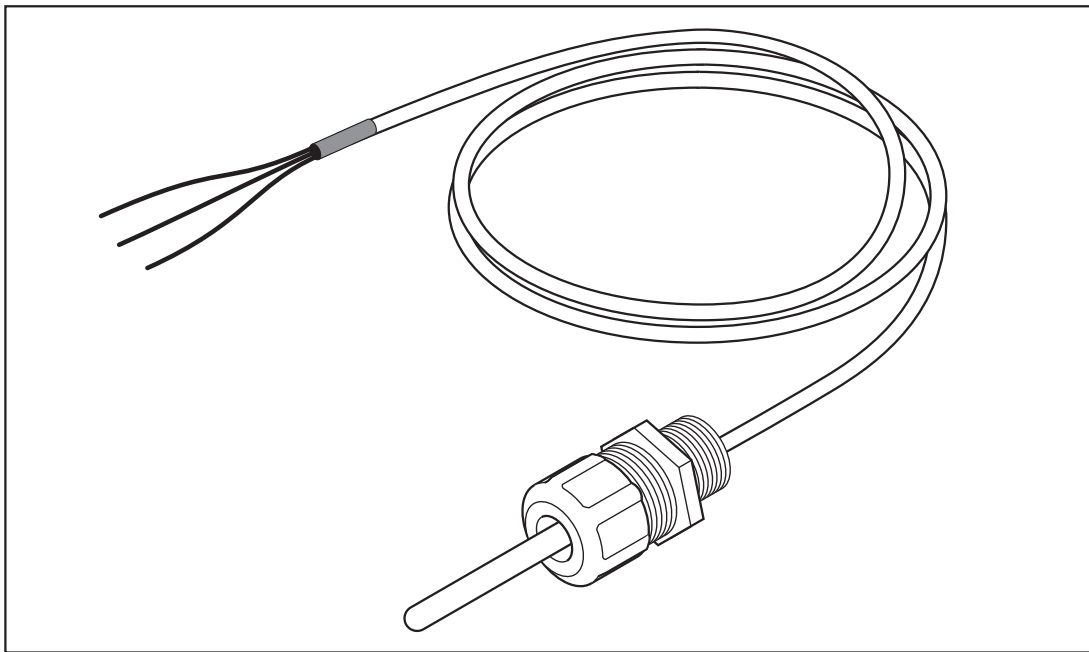
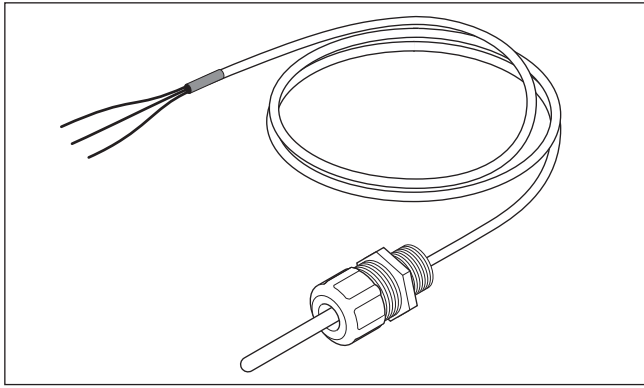


## RTD-200

RTD Temperature Sensor for Ambient Sensing  
Installation Instructions





## APPROVALS

Approvals associated with control device, however not to be used in Div. 1 areas.

## DESCRIPTION

The Raychem RTD-200 is a three-wire platinum RTD (resistance-temperature-detector) typically used with electronic control systems that require accurate ambient temperature sensing. The RTD-200 comes with a 1/2" NPT fitting that installs to the appropriate conduit box. This allows mounting of the RTD in a typical ambient location. This also allows for splicing of RTD extension wire back to the controller.

### Tools required

- None

### Additional materials required

- None

## KIT CONTENTS

| Item | Qty | Description                                    |
|------|-----|------------------------------------------------|
| A    | 1   | RTD temperature sensor with 1/2-in NPT fitting |

## SPECIFICATIONS

### Sensor

|            |                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------|
| Housing    | 316 stainless steel                                                                                |
| Dimensions | 3 in (7.6 mm) length 1/4 in (6 mm) diameter                                                        |
| Accuracy   | $\pm 0.3^{\circ}\text{F}$ ( $0.2^{\circ}\text{C}$ )                                                |
| Range      | $-100^{\circ}\text{F}$ to $300^{\circ}\text{F}$ ( $-73^{\circ}\text{C}$ to $149^{\circ}\text{C}$ ) |
| Resistance | 100 ohms $\pm$ .25 ohm at $0^{\circ}\text{C}$<br>$X=0.00385$ ohms/ohm/ $^{\circ}\text{C}$          |

### Extension Wires

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | 22 AWG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Wire size (each of 3)        | <p><b>Note:</b> The length of RTD extension wires is determined by the wire gauge used. To reduce the likelihood that electrical noise will affect temperature measurement, keep RTD extension wires as short as possible. Use shielded instrument cable such as Raychem MONI-RTD-WIRE (22 AWG, PVC insulation, <math>-30^{\circ}\text{F}</math> to <math>140^{\circ}\text{F}</math>, <math>-20^{\circ}\text{C}</math> to <math>60^{\circ}\text{C}</math>) or Belden 83553 (22 AWG, FEP insulation, <math>-95^{\circ}\text{F}</math> to <math>395^{\circ}\text{F}</math>, <math>-70^{\circ}\text{C}</math> to <math>200^{\circ}\text{C}</math>).</p> |
| Wire dielectric strength     | 600 volts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Length                       | 6 ft (1.8 m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Outer jacket                 | Fluoropolymer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Maximum exposure temperature | $300^{\circ}\text{F}$ ( $149^{\circ}\text{C}$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Sensor fitting               | 1/2-in NPT with sealing washer and nut                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

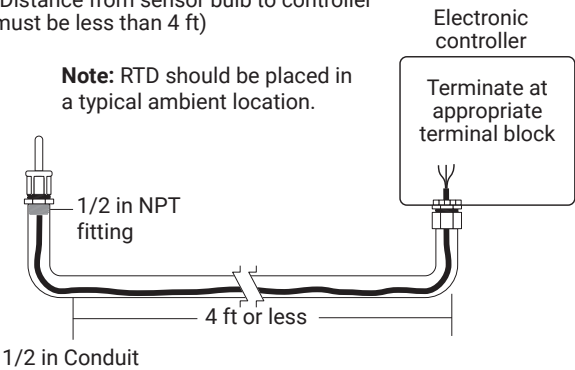
## WARNING:

This component is an electrical device. It must be installed correctly to ensure proper operation and to prevent shock or fire. Read these important warnings and carefully follow all the installation instructions. Component approvals and performance are based on the use of specified parts only. Do not use substitute parts or vinyl electrical tape to make connections.

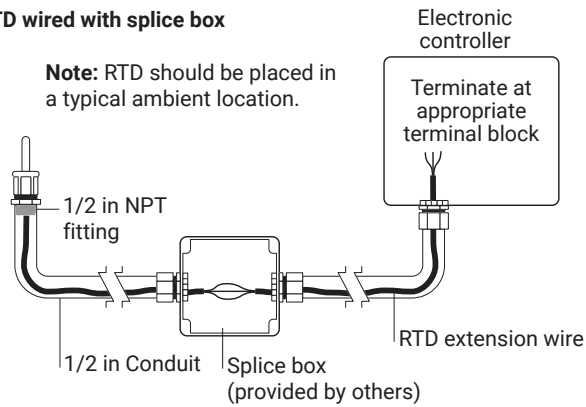
INSTALLATION

The RTD-200 can be terminated directly at the controller using the supplied 1/2 in NPT fitting. In this configuration, no additional extension wire is required.

**RTD wired directly to controller**  
(Distance from sensor bulb to controller must be less than 4 ft)



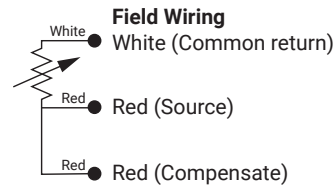
**RTD wired with splice box**



RTD-200 WIRING

Electrical Schematic of RTD

Connect the wires as shown.



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