

Resistance Temperature Sensing

Resistance Temperature Detectors (RTDs) Ensure Precise and Repeatable Temperature Measurement

Watlow® manufactures a variety of Resistance Temperature Detectors (RTD) sensors that are specially designed to ensure precise and repeatable temperature measurement. Watlow sensors are built to meet the most demanding industrial applications while providing a lower total cost of ownership for our customers.

Performance Capabilities

- Precise and stable within the wide temperature range of -328 to 1200°F (-200 to 650°C)

Features and Benefits

Strain-free construction

- Provides dependable, accurate readings
- Allows elements from different lots to be substituted with no recalibration needed

High signal-to-noise output

- Increase accuracy of data transmission
- Permits greater distances between sensor and measuring equipment

Temperature coefficient (alpha) carefully controlled while insulation resistance values exceed DIN-IEC-751 standards

- Ensures sensor sensitivity
- Minimizes self heating
- Allows precise measurement
- Repeatable

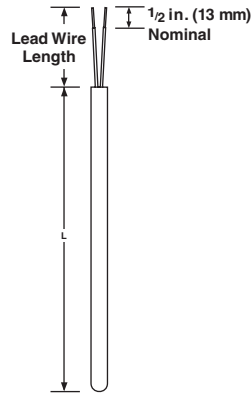


Typical Applications

- Stoves, grills, fryers and other food equipment
- Textile production
- Plastics processing
- Petrochemical processing
- Air, gas and liquid temperature measurement
- Exhaust gas temperature measurement
- Semiconductor processing
- Bearing and gear boxes

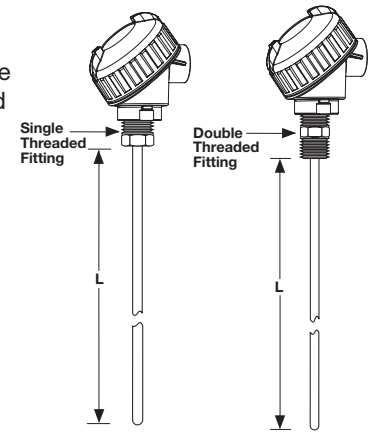
Standard Industrial Insulated Leads – Style RB

Style RB RTDs have standard, insulated leads with an internal heat transfer plate for a quick time response and high accuracy. These RTDs are also epoxy sealed to resist moisture and pull out. There is a standard 260°C (500°F) potting. Style RB RTDs are constructed of 316 stainless steel for a durable, rigid sheath with temperatures from -50 to 260°C (-58 to 500°F). These RTDs are manufactured in diameters from 0.125 to 0.250 inches.



Connection Head – Style RR

Style RR connection heads provide superior dust and moisture resistance and come in single and double threaded fittings. These weatherproof plastic heads resist weak acids, organic solvents, alkalis, sunlight and dust. Complete assembly is available.



Plug or Jack Termination – Style RC

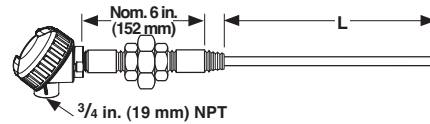
Style RC RTDs are manufactured with durable connectors with copper pins for plug or jack termination applications. These provide simple connection to extension leads and have a 200°C (400°F) temperature rating. In addition, the RTD has a crimp, compression adapter that assures superior connector attachment with high accuracy and dependable readings. Style RC RTDs are constructed of 316 stainless steel for a durable, rigid sheath with temperatures from -50 to 260°C (-58 to 500°F).



Thermowells – Style RT

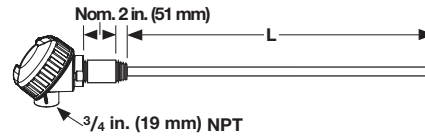
Style RT thermowells and pipe wells protect the sensor and are made of high quality construction. They are constructed with mineral insulation and are available in diameters ranging from 0.125 to 0.250 inches. Style RT is available with spring-loading ensuring positive contact every time. There are a variety of connection head options to meet your specific application requirements. Complete assembly is available.

Type 1



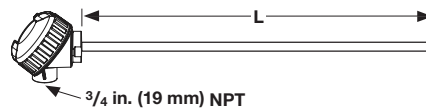
6 inch N-U-N Typical (2 each 1/2 X 3 inch steel pipe nipples and 1 each malleable union)

Type 3



1/2 x 3 inch long steel pipe nipple typical

Type 4



Metal Transitions – Style RF

Style RF RTDs is constructed of flexible, mineral insulation that provides a bendable and highly durable sensor. It is manufactured with stainless steel transitions that are crimped to the sheath and filled with 260°C (500°F) epoxy (brazing is optional). These sensors have a coiled spring for strain relief, which protects lead wire against sharp bends in the transition area. The RF RTD has a -200 to 650°C (-328 to 1200°F) temperature rating with dependable readings and high accuracy. These sensors come in diameters ranging from 0.125 to 0.250 inches.



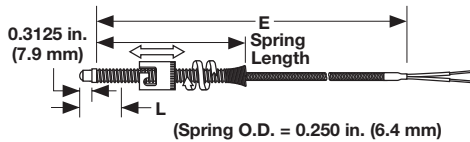
Ordering information

Ordering information varies. Please contact Watlow for details.

Speciality Construction Styles

Adjustable Spring Style

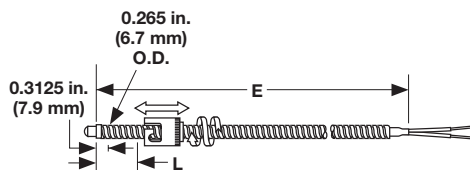
Part Number 10 = 6 in.
Part Number 11 = 12 in.



Adjustable spring style thermocouples bend to any angle to fit a wide range of hole depths, eliminating the need to stock numerous styles.

Adjustable Armor Style

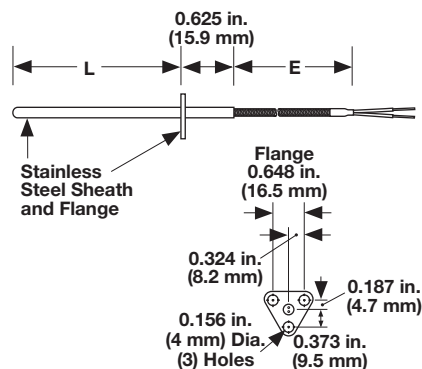
Part Number 12



Adjustable armor thermocouples bend to any angle to fit a wide range of hole depths, eliminating the need to stock numerous styles. A stainless steel hose offers additional lead protection in demanding applications

Cartridge with Flange

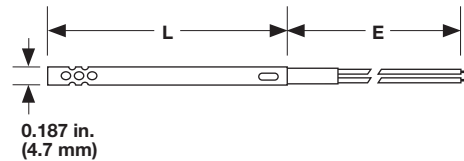
Part Number 25



The flanged thermocouple allows rapid assembly and low profile when going through bulkheads.

Open Air

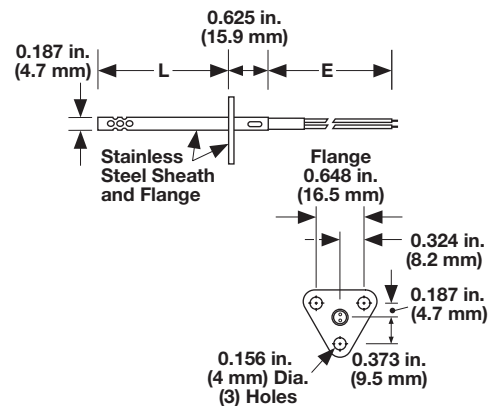
Part Number 50



Aspirated tube design allows air to flow directly over thermistor for fast time response.

Open Air with Flange

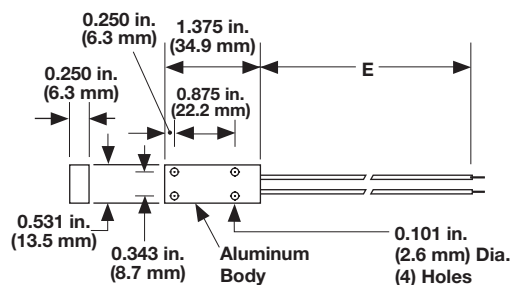
Part Number 55



Aspirated tube design allows air to flow directly over thermistor for fast time response with a flange for mounting sensor

Surface Mount

Part Number 80



Low profile aluminum block for fast accurate surface measurement

Watlow® is a registered trademark of Watlow Electric Manufacturing Company.

To be automatically connected to the nearest North American Technical Sales Office:
1-800-WATLOW2 • www.watlow.com • inquiry@watlow.com

International Technical Sales Offices: Australia, +61 3 9335 6449 • China, +86 21 3532 8532 • France, +33 1 41 32 79 70
Germany, +49 (0) 72 53 / 94 00-0 • India, +91 40 6661 2700 • Italy, +39 024588841 • Japan, +81 3 3518 6630 • Korea, +82 2 2628 5770
Malaysia, +60 3 8076 8745 • Mexico, +52 442 217 6235 • Singapore, +65 6773 9488 • Spain, +34 91 675 12 92
Taiwan, +886 7 288 5168 • United Kingdom, +44 (0) 115 964 0777