

RTDs and Thermistors

Resistance Temperature Sensing

RTDs

Watlow's platinum resistance elements are specially designed to ensure precise and repeatable temperature versus resistance characteristics. The sensors are made with controlled purity platinum, have high purity ceramic components and constructed in a unique strain-free manner.

Performance Capabilities

- Ceramic elements are extremely precise and stable within the wide temperature range of -200 to 650°C (-328 to 1200°F).

Features and Benefits

Patented, strain-free construction

- Provides dependable, accurate readings
- Allows elements from different lots to be substituted without recalibration

High signal-to-noise output

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

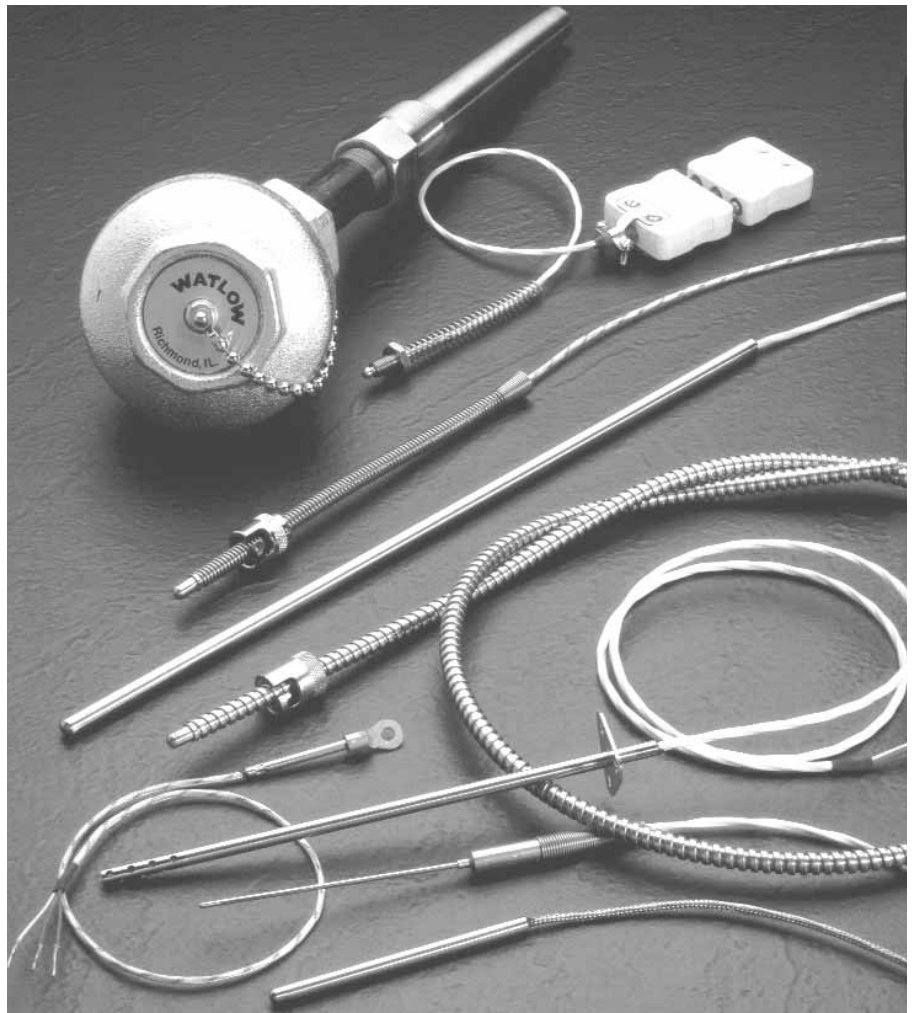
Temperature coefficient (alpha) carefully controlled while insulation resistance values exceed DIN-IEC-751 standards

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

Highly controlled manufacturing process

- Ensures wide temperature range
- Stabilizes physical and chemical attributes

Metric diameters and fittings are available, please consult factory



Applications

- Air conditioning and refrigeration servicing
- Furnace servicing
- Stoves and grills
- Textile production
- Plastics processing
- Petrochemical processing
- Micro electronics
- Air, gas and liquid temperature measurement
- Exhaust gas temperature measurement

RTDs and Thermistors

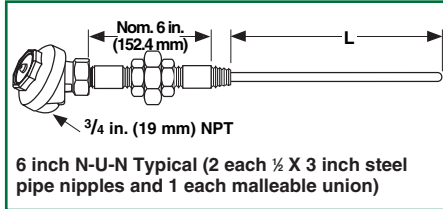


For a complete RTD assembly, add thermowell part number. See thermowell section, pages 144 to 146.

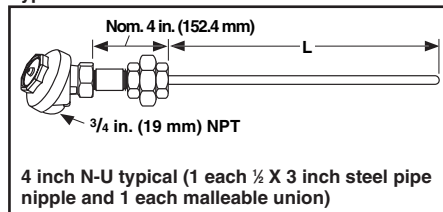
RTD Style RT

For Use with Thermowells

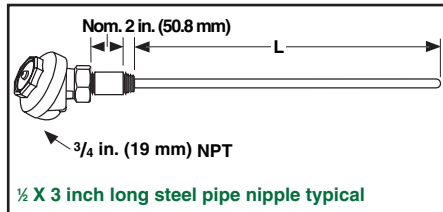
Type 1



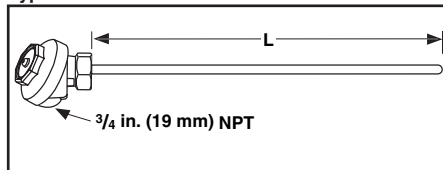
Type 2



Type 3



Type 4



Features and Benefits

High quality thermowells and pipe wells

- Protect sensor

Mineral insulated construction

- Available in 0.125 to 0.250 inch O.D.

Available with spring-loading

- Ensures positive contact

Complete assembly available

- Head mounted 4-20mA transmitter, two- or three-wire input and non-isolated

Variety of connection head options

- Meet your application requirements

Custom Ordering Information—Items in **Bolded Green Type** are preferred with shorter lead times.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	R	T				0									0
3. Sheath O.D. (inch)	_____														
G = 0.125	J = 0.250														
H = 0.188															
4. Connection Head	_____														
C = Polypropylene															
D = Cast iron															
E = Cast aluminum															
H = Explosion proof															
U ^① = E head with 5750 transmitter															
V ^① = C head with 5750 transmitter															
W ^① = H head with 5750 transmitter															
5. Cold End Configuration^②	_____														
Type 1	Type 2	Type 3	Type 4												
6. Enter "0"	_____														
7. Sheath Construction	_____														
	-50 to 260°C			-200 to 650°C											
	(-58 to 500°F)			(-328 to 1200°F)											
	316 SS			316 SS											
Standard Industrial	A			—											
Mineral Insulated	—			K											
8-9. Sheath Length "L" (see drawings at left)	_____														
When ordering a complete assembly with thermowell, specify "AR" as required. Otherwise, specify the "L" dimension in whole inches.															
10. Sheath Length "L" (fractional inch)	_____														
0 = No fraction, whole inches															
1 = 1/8	3 = 3/8	5 = 5/8	7 = 7/8												
2 = 1/4	4 = 1/2	6 = 3/4													
11. Element	_____														
	2-wire	3-wire	4-wire												
100Ω Single	A	B	C												
12. Temperature Coefficient	_____														
DIN 0.00385															
A = Class A															
B = Class B															
14. Spring-Loading	_____														
Y = Yes	N = No														
15. Special Requirements	_____														
0 = None															
X = Special requirements, consult factory															

① Units with transmitter, buyer to specify range and degree C or F, as well as temperature span.

② Other sizes, lengths and materials available. Consult factory.



For further details on Watlow connection heads see the hardware section of this catalog, pages 156 to 157.