

## 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**



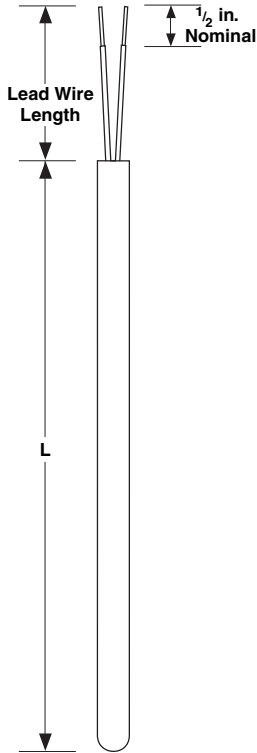
#### Applications

- 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

## RTD Style RB

### Standard Industrial Insulated Leads



#### Features and Benefits

##### High accuracy

- Dependable readings

##### Customized diameters

- From 0.125 to 0.250 inch

##### Epoxy sealed

- Resist moisture and pull out
- Standard 260°C (500°F) potting

##### Durable rigid sheath

- 316 stainless steel -50 to 260°C (-58 to 500°F)

##### Internal heat transfer paste

- Quick time response

① Certain option combinations must be furnished with a transition between the sheath and lead wire, consult factory if transition is unacceptable.

② May require transition.

③ Requires two- or three-wire, single element only.

④ Single wires for 12 feet and under. Duplex wires for over 12 feet.

\* One inch sheath length available in 0.125 inch diameter only with 28 AWG single leads.

## Rapid Ship Sensors

Rapid Ship sensors come with 100Ω DIN 0.00385 curve, 316 stainless steel, 0.188 inch diameter, TFE three-wire, four foot leads, temperature rating -50 to 260°C (-58 to 500°F), standard split end lead termination and no mounting fittings. See page 166 to order additional connector hardware.

Class Accuracy	Sheath Length in. (mm)	Part Number 4 foot (102 mm) Leads
A	2 (51)	RBHB0TA020BA040
	4 (102)	RBHB0TA040BA040
	6 (152)	RBHB0TA060BA040
	9 (229)	RBHB0TA090BA040
	12 (305)	RBHB0TA120BA040

**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 B A

3. Sheath O.D. (inch) \_\_\_\_\_  
 G = 0.125  
**H = 0.188**  
**J = 0.250**

4. Lead Wire Construction<sup>①</sup> \_\_\_\_\_  
 Standard Overbraid Flex Armor  
 Fiberglass Stranded **A** J<sup>②</sup> R<sup>②</sup>  
 PFA or TFE Stranded **B** L<sup>②</sup> T<sup>②</sup>

5. Fittings \_\_\_\_\_  
 If required, enter order code from pages 39 to 40.  
**If none, enter "0".**

6. Lead Wire Termination \_\_\_\_\_  
 A<sup>③</sup> = Standard male plug 200°C (400°F)  
 B<sup>③</sup> = Standard female plug  
 C<sup>③</sup> = Standard plug with mating connector  
 J<sup>③</sup> = Male miniature plug  
 K<sup>③</sup> = Female miniature jack  
 L<sup>③</sup> = Male/female mini set  
**T = Standard leads**  
 U = Leads with spade lugs

7. Sheath Construction \_\_\_\_\_  
**A = 316 SS**

8-9. Sheath Length "L" (inch) \_\_\_\_\_  
**02, 04 and 06**  
 Whole inches: 01\* to 99  
 Metric lengths and lengths over 99 inches consult factory.

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 \_\_\_\_\_  
 100Ω Single 2-wire 3-wire 4-wire  
 A **B** C

12. Temperature Coefficient \_\_\_\_\_  
 DIN 0.00385  
**A = Class A**  
**B = Class B**

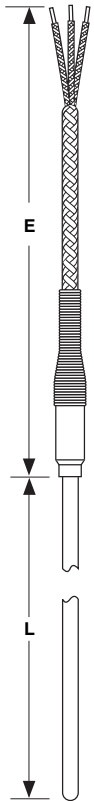
13-14. Lead Wire Length (foot)<sup>④</sup> \_\_\_\_\_  
**02 and 04**  
 Whole feet: 01 to 99

15. Special Requirements \_\_\_\_\_  
**0 = None**  
 X = Special requirements, consult factory



# RTDs and Thermistors

## RTD Style RF Metal Transitions



### Features and Benefits

#### Stainless steel transitions

- Crimped to sheath and filled with 260°C (500°F) epoxy
- Optional brazing available

#### Coiled spring strain relief

- Protects lead wire against sharp bends in the transition area

#### Flexible mineral insulated construction

- Provides a bendable and highly durable sensor

#### Temperature rating

- -200 to 650°C (-328 to 1200°F)

#### High accuracy

- Dependable readings

#### Diameters available

- 0.125 to 0.250 inch O.D.

② Requires two- or three-wire only, single element only

### Rapid Ship Sensors

Rapid Ship sensors come with 100Ω DIN 0.00385 curve, 316 stainless steel, 0.188 inch diameter, 24 AWG stranded Teflon® three-wire, four foot leads, temperature rating -200 to 650°C (-328 to 1200°F), standard split end lead termination and no mounting fittings. See page 166 to order additional connector hardware.

Class Accuracy	Sheath Length in. (mm)	Part Number 4 foot (102 mm) Leads
A	3 (76)	RFHB0TK030BA040
	6 (152)	RFHB0TK060BA040
	9 (229)	RFHB0TK090BA040
	12 (305)	RFHB0TK120BA040

**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 F**

**1-2. Style** \_\_\_\_\_  
 F = Metal transition with strain relief

**3. Sheath O.D. (inch)** \_\_\_\_\_  
 G = 0.125  
**H = 0.188**  
**J = 0.250**

**4. Lead Wire Construction** \_\_\_\_\_  
 Standard Overbraid Flex Armor  
 Fiberglass Stranded **A** J R  
 PFA or TFE Stranded **B** L T

**5. Fittings** \_\_\_\_\_  
 If required, enter order code from pages 39 to 40.  
**If none, enter "0".**

**6. Lead Wire Termination** \_\_\_\_\_  
 A<sup>②</sup> = Standard male plug  
 B<sup>②</sup> = Standard female plug  
 C<sup>②</sup> = Standard plug with mating connector  
 J<sup>②</sup> = Male miniature plug  
 K<sup>②</sup> = Female miniature jack  
 L<sup>②</sup> = Male/female mini set  
**T = Standard leads**  
 U = Leads with spade lugs

**7. Sheath Construction** \_\_\_\_\_  
 316 SS  
 Mineral Insulated **K**

**8-9. Sheath Length "L" (inch)** \_\_\_\_\_  
**03, 06 and 12**  
 Whole inches: 03 to 99  
 Metric lengths and lengths over 99 inches consult factory.

**10. Sheath Length (fractional inch)** \_\_\_\_\_  
**0 = No fraction, whole inches**  
 1 = ¼ 3 = ⅜ 5 = ½ 7 = ¾  
 2 = ¼ 4 = ½ 6 = ¾

**11. Element** \_\_\_\_\_  
 2-wire 3-wire  
 100Ω Single A **B**

**12. Temperature Coefficient** \_\_\_\_\_  
 DIN 0.00385  
**A = Class A**  
**B = Class B**

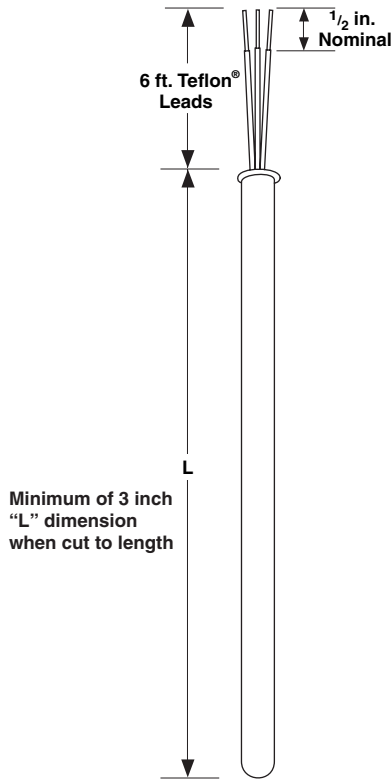
**13-14. Lead Wire Length "E" (foot)** \_\_\_\_\_  
**02 and 04**  
 Whole feet: 01 to 99

**15. Special Requirements** \_\_\_\_\_  
**0 = None**  
 X = Special requirements, consult factory

# RTDs and Thermistors

## RTD Style RK

### Emergency Use Cut-to-Length RTD



### Rapid Ship Sensors

Rapid Ship sensors come with 100Ω DIN, 0.00385 curve, 316 stainless steel, 0.188 and 0.250 inch diameter, 24 AWG stranded Teflon® three-wire, temperature rating -50 to 260°C (-58 to 500°F), standard split end leads and no mounting fittings.

Class Accuracy	Diameter	"L" Dimension in. (mm)	Part Number (Contains Bag of Five Sensors)
A	0.188	12 (305)	RKH12A-05
	0.188	24 (610)	RKH24A-05
	0.250	12 (305)	RKJ12A-05
	0.250	24 (610)	RKJ24A-05

Adjustable C-Frame Tube Cutter	RK-Cutter
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**NEW:** Cut-to-length emergency RTD kit is a bag of five adjustable RTD sensors. Keep a bag of these items on your shelf for immediate, emergency replacement of RTDs to 24 inches in length.

### Features and Benefits

#### Cut-to-length features

- Avoids need to stock several RTD lengths

#### Probes can be shortened

- To three inches minimum using a tubing cutter

#### High accuracy

- Dependable reading, three-wire, Class A DIN 0.00385 curve

#### Internally sealed

- Prevent moisture penetration

#### 316 SS sheath

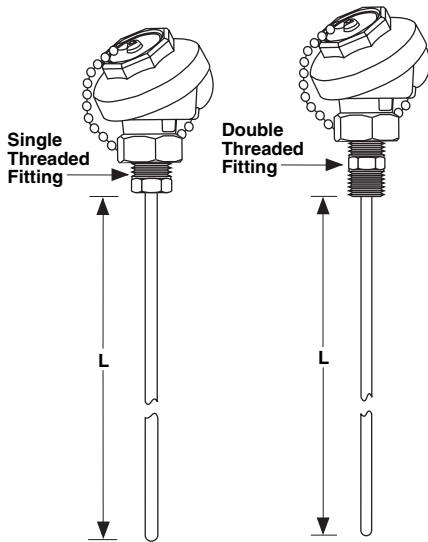
- -50 to 260°C (-58 to 500°F)

Teflon® is a registered trademark of E.I. du Pont de Nemours & Company.

# RTDs and Thermistors

## RTD Style RR

### Connection Head/ Optional Transmitter



### Features and Benefits

#### Connection heads

- Provide superior dust and moisture resistance

#### Weatherproof plastic heads

- Resist weak acids, organic solvents, alkalies, sunlight and dust

#### Standard bottom mounting

- Side mounting available upon request

#### Complete assembly available

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

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



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

### Rapid Ship Sensors

Rapid Ship sensors come with 100Ω DIN 0.00385 curve, 316 stainless steel, 0.250 inch diameter, cast aluminum industrial head, double threaded stainless steel fitting for head mount with 0.5 inch NPT process mount, three-wire configuration and a temperature rating of -50 to 260°C (-58 to 500°F).

Class Accuracy	Sheath Length in. (mm)	Part Number
A	3 (76)	RRJEFOA030BA000
	6 (152)	RRJEFOA060BA000
	18 (457)	RRJEFOA180BA000

**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	
	<b>R</b>	<b>R</b>				<b>0</b>							<b>0</b>	<b>0</b>		
<b>3. Sheath O.D. (inch)</b>	G = 0.125 <b>J = 0.250</b>		H = 0.188													
<b>4. Connection Head</b>	C = Polypropylene		<b>D = Cast iron</b>		<b>E = Cast aluminum</b>		H = Explosion proof									
	U <sup>①</sup> = E head with 5750 transmitter		V <sup>①</sup> = C head with 5750 transmitter		W <sup>①</sup> = H head with 5750 transmitter											
<b>5. Head Mounting Fittings</b>	<b>O = Single threaded, 303 SS</b>		<b>F = Double threaded, 303 SS ½" NPT</b>		*H = Spring loaded, double threaded, 316 SS ½" NPT											
<b>6. Enter "0"</b>																
<b>7. Sheath Construction</b>	-50 to 260°C (-58 to 500°F) 316 SS					-200 to 650°C (-328 to 1200°F) 316 SS										
Standard Industrial (0.125-0.250 inch O.D.)	<b>A</b>		—													
Mineral Insulated (0.125-0.250 inch O.D.)	—		K													
<b>8-9. Sheath Length "L" (inches)</b>	<b>03, 06 and 18</b>															
Whole inches: 02 to 99	Metric lengths and lengths over 99 inches consult factory.															
<b>10. Sheath Length "L" (fractional inch)</b>	<b>0 = No fraction, whole inches</b>															
	1 = ¼	2 = ½	3 = ¾	4 = 1	5 = 1 ¼	6 = 1 ½	7 = 1 ¾									
<b>11. Element</b>	2-wire    3-wire    4-wire															
100Ω Single	A		<b>B</b>		C											
<b>12. Temperature Coefficient</b>	DIN 0.00385															
	<b>A = Class A</b>															
	<b>B = Class B</b>															
<b>13-14. Enter "00"</b>																
<b>15. Special Requirements</b>	<b>0 = None</b>															
	X = Special requirements, consult factory															

\* 0.250 inch diameter only.

# RTDs and Thermistors

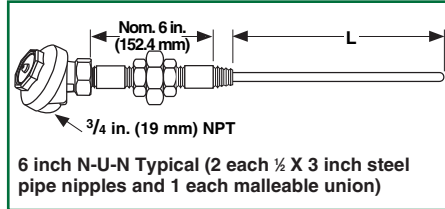


For a complete RTD assembly, add thermowell part number. See thermowell section, pages 144 to 146.

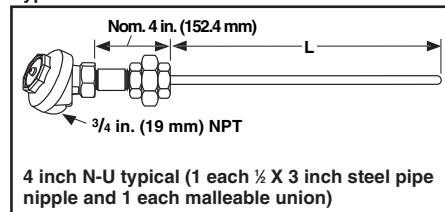
## RTD Style RT

### For Use with Thermowells

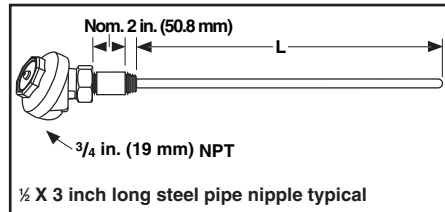
Type 1



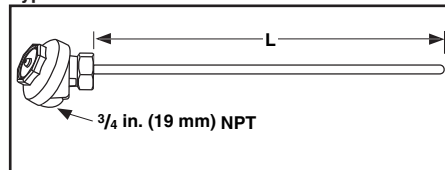
Type 2



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

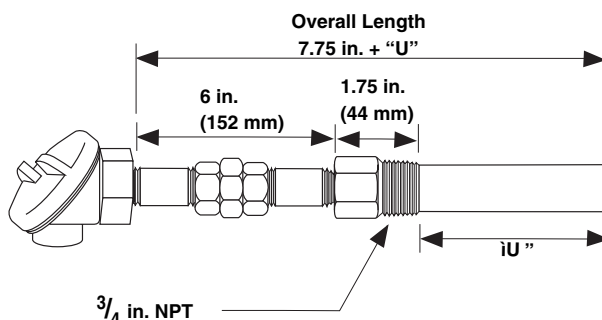


For further details on Watlow connection heads see the hardware section of this catalog, pages 156 to 157.

# RTDs and Thermistors

## Style RT with Thermowell

### Straight Well

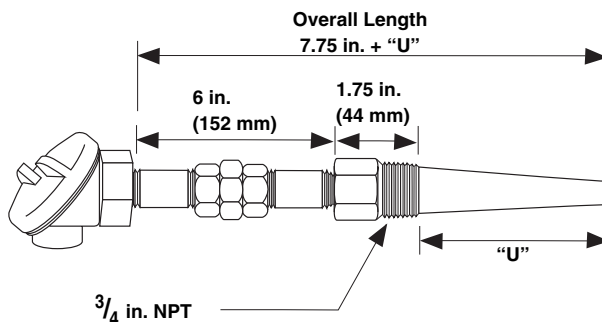


### Rapid Ship Sensors

Rapid Ship sensors come with 316 SS straight well, nipple-union-nipple, 0.250 inch diameter spring loaded element, 100Ω DIN 0.00385 curve, Class A and three-wire RTD. Temperature rating -50 to 260°C (-58 to 500°F).

Calibration	"U"		Overall Length		Part Number
	in.	(mm)	in.	(mm)	
A	2.5	(64)	10.25	261	RTJE1SF024BA0Y0
	4.5	(114)	12.25	312	RTJE1SF044BA0Y0
	7.5	(191)	15.25	388	RTJE1SF074BA0Y0
	10.5	(267)	18.25	465	RTJE1SF104BA0Y0

### Tapered Well



### Rapid Ship Sensors

Rapid Ship sensors come with 316 SS tapered well, nipple-union-nipple, 0.250 inch diameter spring loaded element, 100Ω DIN 0.00385 curve, Class A and three-wire RTD. Temperature rating -50 to 260°C (-58 to 500°F).

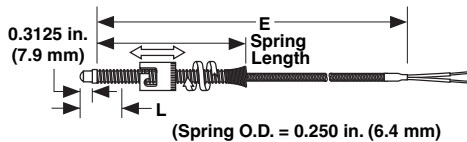
Calibration	"U"		Overall Length		Part Number
	in.	(mm)	in.	(mm)	
A	2.5	(64)	10.25	261	RTJE1TF024BA0Y0
	4.5	(114)	12.25	312	RTJE1TF044BA0Y0
	7.5	(191)	15.25	388	RTJE1TF074BA0Y0
	10.5	(267)	18.25	465	RTJE1TF104BA0Y0

# RTDs and Thermistors

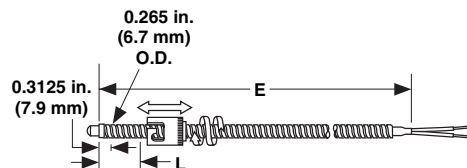
## Speciality RTDs and Thermistors

### Construction Styles

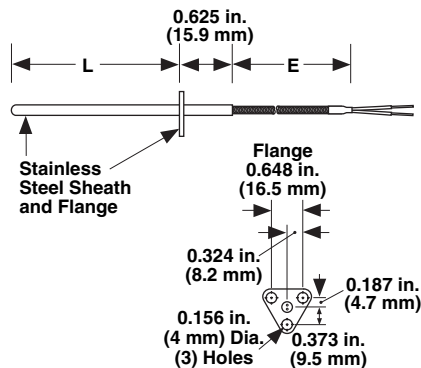
**10 = 6 in. Adjustable Spring Style**  
**11 = 12 in. Adjustable Spring Style**



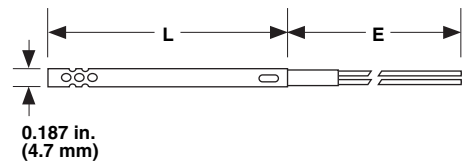
**12 = Adjustable Armor Style**



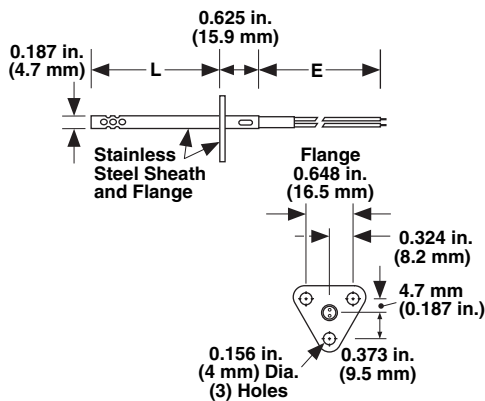
**25 = Cartridge with Flange**



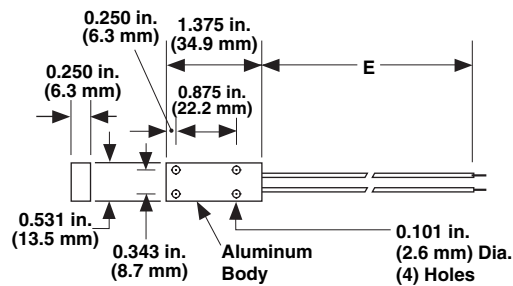
**50 = Open Air**



**55 = Open Air with Flange**



**80 = Surface Mount**



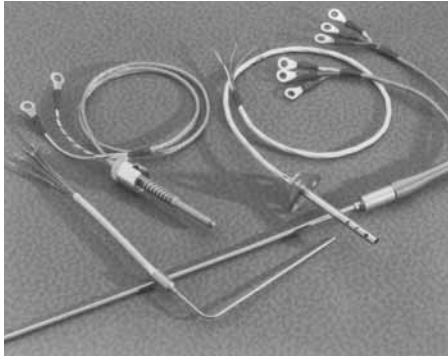
RTDs and Thermistors



See next page for Rapid Ship sensors and ordering instructions.

# RTDs and Thermistors

## Speciality RTDs and Thermistors



### Specifications: RTD

- Two- or three-wire
- Resistance: 100Ω at 0°C
- Alpha curve: 0.00385Ω/Ω/°C
- Tolerance at 0°C: ±0.12% (±0.25°C)
- Range: -50 to 260°C (-58 to 500°F)

### Specifications: Thermistor

- Metal oxide, sintered and encapsulated
- Negative temperature coefficient
- Non-linear temperature/resistance curve
- Resistance at 25°C (77°F) and ranges:

Epoxy Bead Tolerance ±1%Ω +0.3°C (37°F)		
#11	1000Ω	-60 to 150°C (-76 to 302°F)
#12	3000Ω	-60 to 150°C (-76 to 302°F)

Glass Bead Tolerance ±15%Ω +0.3°C (37°F)		
#16	100,000Ω	-60 to 260°C (-76 to 500°F)

\*Other thermistors available on request. Consult factory. See Style TB thermistor on page 109.

### Rapid Ship Sensors

Rapid Ship sensors come with 100Ω DIN 0.00385 curve RTD sensor, 24 AWG stranded three-wire leads, temperature rating -50 to 260°C (-58 to 500°F), standard split end lead termination and no mounting fittings.

	Part Number	
	4 Foot (102 mm) Leads	6 Foot (152 mm) Leads
Construction 10 with Fiberglass and SS overbraid leads	S10DDN4C048A	S10DDN4C072A
Construction 80 with Teflon® leads	S80ADT2A048A	S80ADT2A072A

**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

**S**

**2-3. Construction** —————

**10 = 6 inch adjustable spring style**  
 11 = 12 inch adjustable spring style  
 12 = Adjustable armor style  
 25 = Cartridge with flange  
 50 = Open air  
 55 = Open air with flange  
**80 = Surface mount**

**4. Diameter (inch)** —————

**D = 0.188**  
 A = Not applicable: surface mount

**\* 5. Element Type** —————

C = RTD 2-wire No. 3850      N = Thermistor No. 12  
**D = RTD 3-wire No. 3850**      P = Thermistor No. 16  
 M = Thermistor No. 11

**6-7. Lead Type** —————

L4 = Fiberglass and SS armor  
 M4 = Fiberglass  
 N4 = Fiberglass and SS overbraid  
**T2 = PFA or TFE**

**8. Sheath Length "L" (inches)** —————

A = Not applicable  
 C = 1.5 (required for VAT construction: No. 10, 11, 12)  
**D = 2.0**      L = 5.5      T = 9.0  
 E = 2.5      **M = 6.0**      U = 9.5  
 F = 3.0      N = 6.5      W = 10.0  
 G = 3.5      P = 7.0      Y = 11.0  
**H = 4.0**      Q = 7.5      Z = 12.0  
 J = 4.5      R = 8.0  
 K = 5.0      S = 8.5

**9-11. Lead Wire Length "E" (foot)** —————

012 = 1      084 = 7  
**024 = 2**      096 = 8  
 036 = 3      108 = 9  
**048 = 4**      120 = 10  
 060 = 5      180 = 15  
 072 = 6

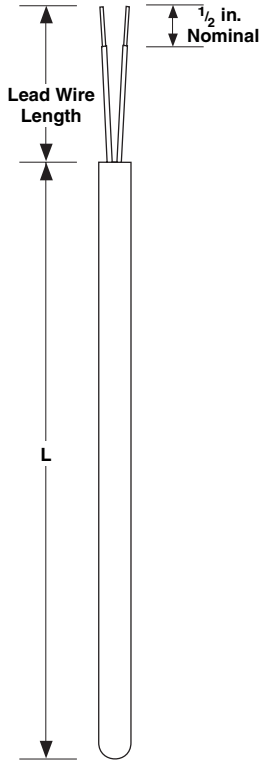
**12. Terminations** —————

**A = 1.5 inch stripped split leads, no terminals**  
 B = No. 8 spade terminals  
 H = 0.25 inch female quick connect terminals

# RTDs and Thermistors

## Speciality RTDs and Thermistors

### Style TB Standard Industrial Thermistor with Insulated Leads



#### Features and Benefits

##### Rigid 316 stainless steel sheath

- Ideal for industrial applications

##### Cold end epoxy seal

- Rated to 260°C (500°F)

##### Internal heat transfer paste

- Quick time response

**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
	<b>T</b>	<b>B</b>		<b>B</b>								<b>O</b>			
<b>3. Sheath O.D. (inch)</b>	_____														
<b>H = 0.188</b>															
J = 0.250															
<b>4. Lead Wire Construction</b>	_____														
Standard															
<b>PFA or TFE Stranded</b>	<b>B</b>														
<b>5. Fittings</b>	_____														
If required, enter order code from pages 39 to 40.															
<b>If none, enter "0".</b>															
<b>6. Lead Wire Termination</b>	_____														
<b>T = Standard leads</b>															
U = Leads with spade lugs															
<b>7. Temperature Rating and Accuracy</b>	_____														
A <sup>①</sup> = -60 to 150°C (-75 to 302°F) ±1% (±.3°C) Accuracy @ 25°C															
B <sup>②</sup> = -60 to 260°C (-75 to 500°F) ±15% (±.3°C) Accuracy @ 25°C															
<b>8-9. Sheath Length "L" (inches)</b>	_____														
<b>02, 04 and 06</b>															
Whole inches: 02 to 24															
<b>10. Sheath Length "L" (fractional inch)</b>	_____														
<b>0 = No fraction, whole inches</b>															
1 = 1/8      5 = 5/8															
2 = 1/4      6 = 3/4															
3 = 3/8      7 = 7/8															
4 = 1/2															
<b>11. Element/Resistance at 25°C (77°F)</b>	_____														
E = 1,000Ω															
G = 3,000Ω															
T = 100,000Ω															
<b>12. Sheath</b>	_____														
<b>O = Standard sheath</b>															
<b>13-14. Lead Wire Length "E" (foot)</b>	_____														
<b>02 and 04</b>															
Whole feet: 01 to 15															
<b>15. Special Requirements</b>	_____														
<b>0 = None</b>															
X = Special requirements, consult factory															

① Only available with 1,000Ω or 3,000Ω.

② Only available with 100,000Ω.

## RTDs and Thermocouples

### ENVIROSEAL™-HD Sensor

Watlow's ENVIROSEAL™-HD temperature sensor keeps out moisture, oil and contaminants in all of your heavy-duty applications including those outside applications exposed to harsh weather, oils and other extreme moisture environments. The ENVIROSEAL-HD sensor is also designed to provide accurate, dependable measurements in high-vibration environments.

#### *Features and Benefits*

##### **Submersible and 1200psi pressure wash rated seal (not including connector area)**

- Protects the sensor from washdown or other extreme moisture environments

##### **Oil Resistant Materials**

- Sensors maintain a long life even when exposed to oil, gasoline, or diesel fuel

##### **Vibration resistant design, 25 lb pull out force rating**

- Tough, rugged design to hold up to the roughest applications

##### **-40 to 200°C (-40 to 392°F) sensor temperature rating**

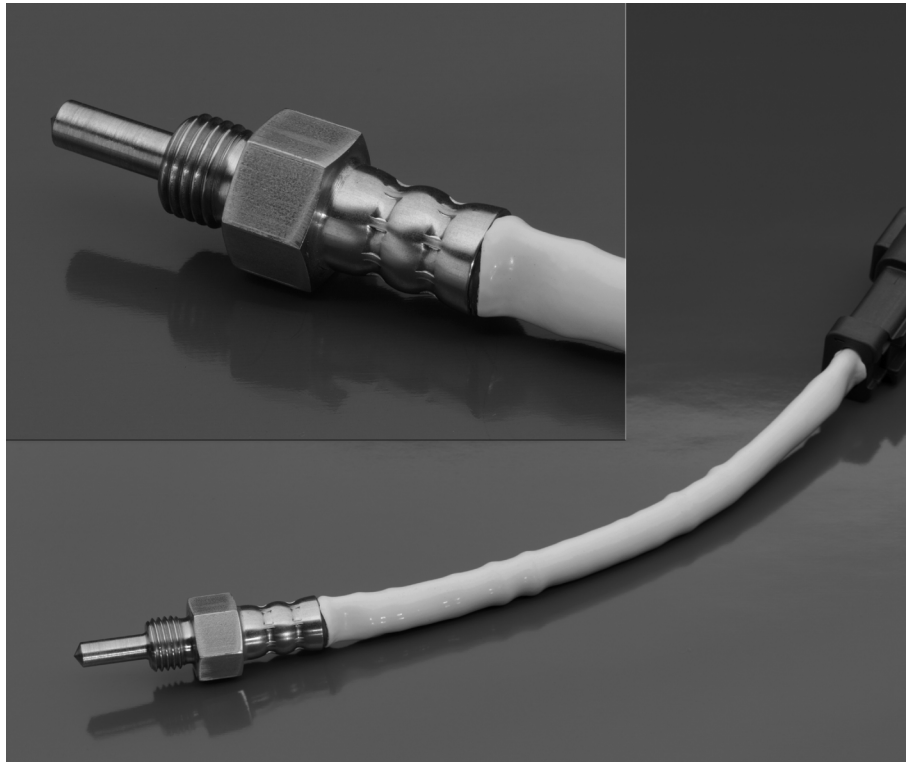
- Offers superior application flexibility

##### **Time response of two seconds**

- Fast response will measure 63.2 percent (first order) of the temperature change in two seconds or less

##### **250psi threaded fitting pressure rating**

- Suitable for most rugged applications



#### *Applications*

- Engine coolant or oil
- Refrigeration or condensation units
- Industrial equipment
- Heat exchangers
- Gear boxes
- Hydraulic fluid
- Marine

# RTDs and Thermocouples

## ENVIROSEAL™ HD Sensor

**Ordering Information**—To order, complete the part number on the right with the information below:

1 2 3 4 5 6 7 8 9 10  
H D

**3. Sensor Type**

- A = 100Ω DIN 0.00385 RTD Class A element, 2-wire
- B = 100Ω DIN 0.00385 RTD Class B element, 2-wire
- C = 1000Ω DIN 0.00385 RTD Class A element, 2-wire
- D = 1000Ω DIN 0.00385 RTD Class B element, 2-wire
- K = Ungrounded standard limits Type K thermocouple

**4-5. Sheath Length "L"**

- 07 = 0.75 in. (19.05 mm)
- 15 = 1.50 in. (38.1 mm)
- 30 = 3.00 in. (76.2 mm)

**6. Threaded Fitting**

- 4 = 0.25 in. (6.35 mm) NPT male threads  
"F" = 1.4 in. (35.56 mm)
- 8 = 0.125 in. (3.18 mm) NPT male threads  
"F" = 1.2 in. (30.48 mm)

**7. Fitting Material**

- B = Brass
- S = 316 stainless steel

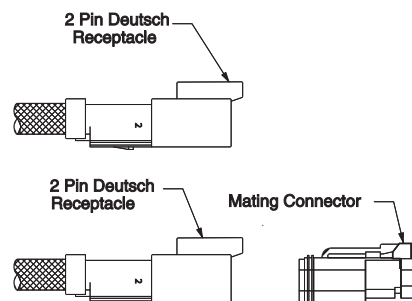
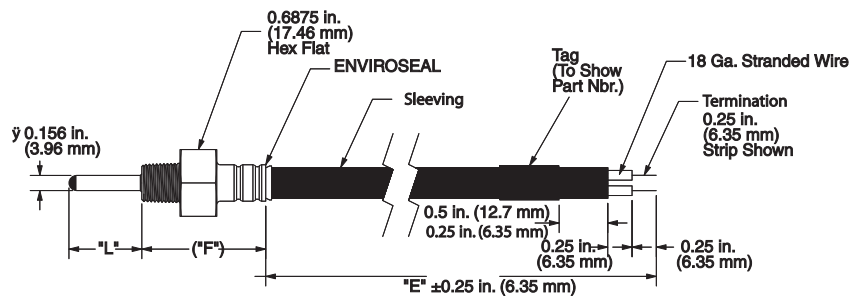
**8-9. Lead Length "E" (whole inches)**

(18 gauge stranded conductor lead wire)

- 06 = 6 in. (152.4 mm)
- 12 = 12 in. (304.8 mm)
- 24 = 24 in. (609.6 mm)

**10. Lead Wire Terminations**

- T = Standard 0.25 in. (6.35 mm) stripped ends
- 2 = 2-pin receptacle Deutsch connector 125°C (257°F)
- 4 = 2-pin receptacle Deutsch connector 125°C (257°F) with mating connector



# Notes