

RTD Selection

Just as thermocouple selection is based on the intended application, RTDs are selected in the same manner. The response time and operating environment such as temperature and atmosphere are factors as well as the length of service.

RTDs are available in a variety of combinations, the most commonly used material is platinum. TCP's standard platinum element has a resistance of 100 ohms @ 0°C and a temperature coefficient (Alpha) of 0.00385 ohm/ohm/degree C.

Platinum elements are predominantly used in the industry because they offer accuracy in a wide range.

Additionally, platinum is the most repeatable and stable of all metals. Other element materials used are copper, nickel, and nickel-iron.

TCP provides a highly sensitive line of RTDs. Standard units are supplied with a resistance of 100 ohms at 0°C. They are also available with resistances of 200, 400, 500 and 1000 ohms upon request. In addition, duplex and triplex sensors are available in a .25 inch diameter sheath.

TCP's standard RTDs have a resistance tolerance of ±0.1% at 0°C. Tolerances of ±0.3% at 0°C are available on special order. Standard 100 ohm RTDs are furnished with -45°C to 600°C (-50°F to 1200°F) temperature ranges. The maximum on the 200, 400, 500 and 1000 ohm units is 500°C (923°F).

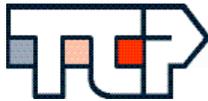
RTDs feature a high purity platinum with a standard temperature co-efficient of 0.00385 ohm/ohm/degree C. Platinum resistance sensors with other temperature coefficients such as 0.00391 ohm/ohm/degree C or higher are available on special request.

TCP utilizes stainless-steel tube construction in all standard RTD sensors. In addition, when flexibility, fast response and dependability are required, we provide a metal sheath with a hard-packed mineral oxide insulation. This is particularly suitable for high temperature, vibration, or high pressure applications.

The advantages of using RTDs are numerous. They offer high accuracy, repeatability, and stability. Another advantage is that cold junction compensation is unnecessary. Here is a brief summary of some of the advantages and disadvantages of both thermocouples and RTDs.

Comparison of RTD's and Thermocouples

| | Thermocouple | RTDs |
|-------------------------|--|--|
| Accuracy | Limits of error wider than RTD | Limits of error much closer than thermocouples |
| Ruggedness | Excellent, will not affect life expectancy of the probe | Somewhat sensitive to strain, vibration, shock and pressure |
| Temperature | -328° to 4200°F -200° to 2315°C | -50° to 1500°F -45° to 593°C |
| Size | Can be as small as .010" sheath diameter | Size limited to .062" sheath diameter |
| Drift | Should be calibrated periodically, higher than RTD's | 0.01°C to 0.1°C per year, less drift than thermocouples |
| Resolution | Must resolve millivolts per degree, lower signal to noise ratio. | Ohms per degree, much higher signal to noise ratio than thermocouple |
| Cold Junction Reference | Required | Not Required |
| Lead Wire | Must match lead wire calibration to thermocouple calibration. | Can use copper lead wire for extension wire |
| Response | Can be made small enough for millisecond response time. | Slower. Thermal mass results in a response time of seconds or more |
| Sensitivity | Can be made tip sensitive | Can not readily be made tip sensitive. Thermal mass prevents tip sensitive construction. |
| Linearity | Non-Linear | Linear over a wide operating range |
| Cost | Relatively lower | Higher than thermocouples |

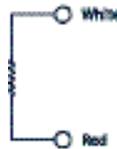


INTRODUCTION TO RTD'S

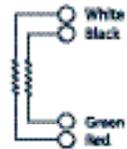
Element Construction

RTD sensor assemblies are available with 2, 3 and 4 wire leads. Two wire connected elements do not provide lead resistance compensation for the measuring device. Three and four wire connected elements provide a means for compensating lead resistance between the sensor and the measuring device.

2 Wire Single



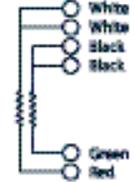
2 Wire Duplex



3 Wire Single



3 Wire Duplex



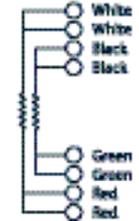
Three Wire: Provides one connection to one end of the element and two of the other end of the element. Connected to an instrument designed to accept three wire input, sufficient compensation is usually achieved for leadwire resistance and temperature change in leadwire resistance. This is the most commonly used configuration.

2 Wire: Provides one connection to each end of the element. This construction is suitable where the resistance of the lead wire may be considered as an additive constant in the circuit, and particularly where the changes in lead resistance due to ambient temperature changes may be ignored.

4 Wire Single



4 Wire Duplex



Four Wire: Provides two connections to each end of the element to completely compensate for leadwire resistance and temperature change in leadwire resistance. This configuration is used where highly accurate temperature measurement is vital.

RTD Standards

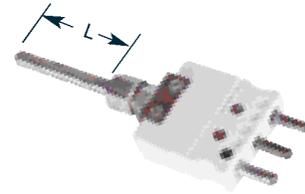
There are several RTD standards set by various organizations throughout the world. These specifications are not identical and readout instrumentation must be adjusted for the specific standard of the RTD used with that equipment. Differences in the alpha values of these standards can cause errors in measurement of an RTD if one standard is connected to the instrumentation of another standard.

| Organization | Standard | Alpha (Coefficient) | Nominal Resistance (ohms) at 0°C |
|---|---------------------|---------------------|----------------------------------|
| British Standards Association | B.S. EN 60751: 1996 | 0.003850 | 100 |
| Fachnormenausschu B Elektrochnek im Deutschen Normenausschu B | DIN 43760 | 0.003850 | 100 |
| International Electrotechnical Commission (Supersedes BS & DIN) | IEC 751: 1983 | 0.003850 | 100 |
| American Society for Testing Materials | ASTM 1137 | 0.003920 | 100 |
| US Department of Defense | MIL-T-24388 | 0.003920 | 100 |
| Japanese Industrial Standard (JIS) | JIS C 1604-1981 | 0.003916 | 100 |

RESISTANCE TEMPERATURE DETECTORS

Series 303

- Superior Stability, Repeatability and Accuracy
- Vibration and Shock Resistant
- Industry Standard 3-Pin Quick Disconnect
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of ±0.1% at 0°C
- Standard Temperature Coefficient .00385 Ω/Ω/°C
- Commonly Installed with Compression Fittings (Adapter) See Pages 118 to 119.



Enter a selection for each item, please fax your inquiry to TCP.

Example: 303 - A - 100 - F - 5 - 3 - 304 - 0

303 - - - - - - -

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|--|
| Standard: 100 Ohms at 0°C | |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | SHEATH DIAMETER |
|------|-------------------------------------|
| D | .125" (A and B Temp. Range only) |
| E | .187" |
| F | .250" |

| IMMERSION LENGTH "L" |
|--|
| Specify in inches 01 to 99. For lengths over 99 inches consult factory. |

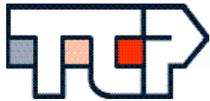
| CODE | OTHER PERTINENT DATA |
|---|----------------------|
| 0 | NONE |
| Specify temperature coefficients and tolerance if other than standard. Specify duplex, or triplex RTD bushing etc, as required. | |

| CODE | SHEATH MATERIAL |
|--|---------------------|
| 304 | 304 Stainless Steel |
| 316 | 316 Stainless Steel |
| 304 Stainless Steel standard temperature Range A, B, C | |
| 316 Stainless Steel standard Temperature Range D. | |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| Code 3 wire is standard | |

RTDs

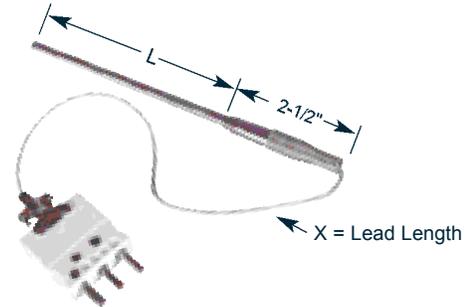
| | |
|--|--|
| | Metric Orders Welcome |
| | Place an mm in the appropriate selection box: <input type="text" value="100 mm"/> |



RESISTANCE TEMPERATURE DETECTORS

Series 404

- Superior Stability, Repeatability and Accuracy
- Vibration and Shock Resistant
- Industry Standard 3-Pin Quick Disconnect with Teflon flexible Lead Wire
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C
- Standard Temperature Coefficient $.00385 \Omega/\Omega^\circ\text{C}$
- Commonly Installed with Compression Fittings (Adapter) See Pages 118 to 119.



Enter a selection for each item, please fax your inquiry to TCR.

Example: 404 - A - 100 - F - 6 - 12 - 3 - 304 - 20 - 10 - 0

404 - [] - [] - [] - [] - [] - [] - [] - [] - [] - []

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|---------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|--|
| Standard: 100 Ohms at 0°C | |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | SHEATH DIAMETER |
|------|-------------------------------------|
| D | .125" (A and B Temp. Range only) |
| E | .187" |
| F | .250" |

| IMMERSION LENGTH "L" |
|----------------------|
| Specify in inches |

| LEAD LENGTH "X" |
|-------------------|
| Specify in inches |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

| CODE | OTHER PERTINENT DATA |
|---|----------------------|
| 0 | NONE |
| Specify temperature coefficients and tolerance if other than standard. Specify duplex, or triplex RTD bushing etc, as required. | |

| CODE | TERMINATION STYLE |
|---|-----------------------------|
| 10 | 111 2-pin for 2 wire |
| 40 | 3" Pig Tail (Bare Wire End) |
| 70 | 151 3-pin plug for 3 wire |
| Code 10 and 70 are standard for 3 and 2 wire. Not available for 4 wire. | |

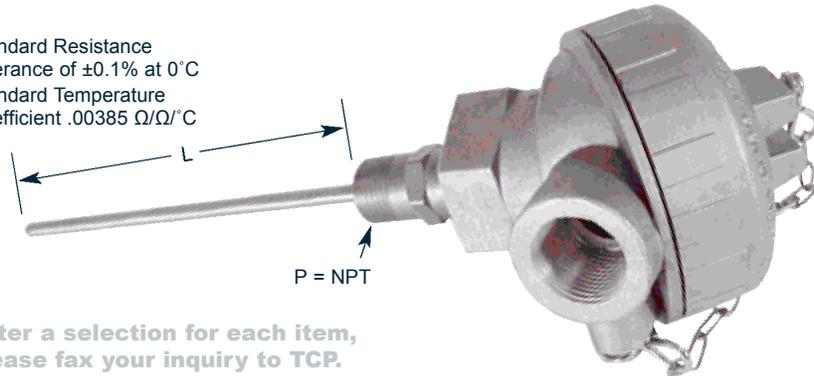
| CODE | LEAD WIRE |
|------|---------------------------|
| 10 | Fiberglass (standard) |
| 1S | Fiberglass w/SS Overbraid |
| 1F | Fiberglass w/SS Flexhose |
| 20 | Teflon |
| 2S | Teflon with SS Overbraid |
| 2F | Teflon with SS Flexhose |

| CODE | SHEATH MATERIAL |
|--|---------------------|
| 304 | 304 Stainless Steel |
| 316 | 316 Stainless Steel |
| 304 Stainless Steel standard temperature Range A, B, C | |
| 316 Stainless Steel standard Temperature Range D. | |
| Specify other material | |

RESISTANCE TEMPERATURE DETECTORS

Series 707

- Industrial Design with Cast Screw Cover Heads
- "Factory Mutual" Approved Heads in Cast Iron and Aluminum
- Various Male NPT Mounting Fittings are Available
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C
- Standard Temperature Coefficient $.00385 \Omega/\Omega/^{\circ}\text{C}$



Enter a selection for each item, please fax your inquiry to TCP.

Example: 707 - A - 100 - E - 5 - 3 - 304 - AL - 1/2 - 1 - 0

707 - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - []

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|---------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

RESISTANCE VALUES

Standard: 100 Ohms at 0°C

On request: 200, 400, 500 and 1000 Ohms

| CODE | SHEATH DIAMETER |
|------|-------------------------------------|
| D | .125" (A and B Temp. Range only) |
| E | .187" |
| F | .250" |

IMMERSION LENGTH "L"

Specify in inches

| CODE | NUMBER OF WIRES |
|------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |

Code 3 wire is standard

| CODE | OTHER PERTINENT DATA |
|------|------------------------------------|
| 0 | None |
| 999 | Special Request Consult Factory |

| CODE | SPRING LOADING |
|------|-----------------------|
| 0 | None |
| 1 | Spring Loaded Element |

None is standard.
Spring loading not available in mounting thread is 0.

| CODE | MOUNTING THREAD "P" |
|------|---------------------|
| 0 | None |
| 1/4 | 1/4" NPT |
| 3/8 | 3/8" NPT |
| 1/2 | 1/2" NPT |

Code 1/2 - 1/2" NPT is standard

| CODE | TERMINATION STYLE |
|------|-------------------|
| 0 | None |
| AL | Aluminum Head |
| CI | Cast Iron Head |
| P | Poly Head |

Code CI - Cast Iron is standard

| CODE | SHEATH MATERIAL |
|------|---------------------|
| 304 | 304 Stainless Steel |
| 316 | 316 Stainless Steel |

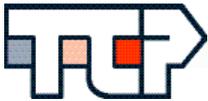
304 Stainless Steel standard temperature Range A, B, C
316 Stainless Steel standard Temperature Range D.
Specify other material

! Metric Orders Welcome

Place an **mm** in the appropriate selection box:

100 mm

RTDs



Thermo-Couple Products Co.

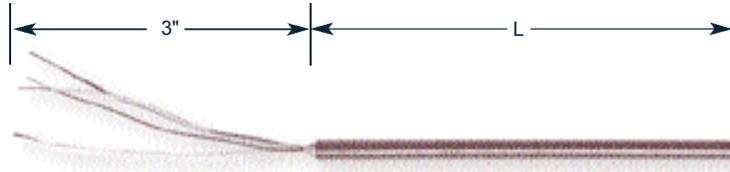
www.tcproducts.com

a division of Marsh Bellofram
www.marshbellofram.com
1-800-727-5646

RESISTANCE TEMPERATURE DETECTORS

Series 808

- Bare Leads Provided for Termination of Your Choice
- Replacement RTD Element
- Close Interchangeability
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C is Standard
- Standard Temperature Coefficient .00385 $\Omega/\Omega/^{\circ}\text{C}$



Enter a selection for each item, please fax your inquiry to TCP.

Example: 808 - - - - - - - -

808 - - - - - - - -

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|--|
| Standard: 100 Ohms at 0°C | |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | SHEATH DIAMETER |
|------|-------------------------------------|
| D | .125" (A and B Temp. Range only) |
| E | .187" |
| F | .250" |

| CODE | OTHER PERTINENT DATA |
|---|----------------------|
| 0 | NONE |
| Specify temperature coefficients and tolerance if other than standard. Specify duplex, or triplex RTD bushing etc, as required. | |

| CODE | SHEATH MATERIAL |
|--|---------------------|
| 304 | 304 Stainless Steel |
| 316 | 316 Stainless Steel |
| 304 Stainless Steel standard temperature Range A, B, C | |
| 316 Stainless Steel standard Temperature Range D. | |
| Specify other material | |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

| LEAD LENGTH "X" |
|--|
| Specify lead length in inches |
| Specify 0 if no lead required, 3" Pig tail is standard on all lead length. |

| IMMERSION LENGTH "L" |
|----------------------|
| Specify in inches |

Metric Orders Welcome

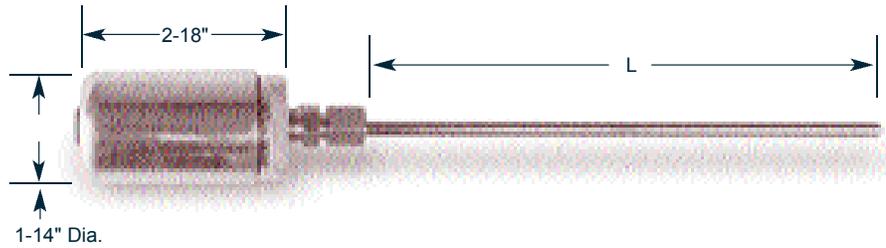
Place an **mm** in the appropriate selection box:

RTDs

RESISTANCE TEMPERATURE DETECTORS

Series 909

- Superior Stability, Repeatability and Accuracy
- Vibration and Shock Resistant
- Supplied with a Lightweight Miniature Screw Coverhead
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of ± 0.1% at 0°C is Standard
- Standard Temperature Coefficient .00385 Ω/Ω/°C



Enter a selection for each item, please fax your inquiry to TCP.

Example: 909 - A - 100 - F - 5 - 3 - 304 - 50 - 0

909 - - - - - - - - -

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|--|
| Standard: 100 Ohms at 0°C | |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | SHEATH DIAMETER |
|------|-------------------------------------|
| D | .125" (A and B Temp. Range only) |
| E | .187" |
| F | .250" |

| IMMERSION LENGTH "L" |
|----------------------|
| Specify in inches |

| CODE | OTHER PERTINENT DATA |
|---|----------------------|
| 0 | NONE |
| Specify temperature coefficients and tolerance if other than standard. Specify duplex, or triplex RTD bushing etc, as required. | |

| CODE | TERMINATION STYLE |
|------------------------|-------------------|
| 50 | Dust Cover |
| 51 | Waterproof Cover |
| Dust Cover is standard | |

| CODE | SHEATH MATERIAL |
|--|---------------------|
| 304 | 304 Stainless Steel |
| 316 | 316 Stainless Steel |
| 304 Stainless Steel standard temperature Range A, B, C | |
| 316 Stainless Steel standard Temperature Range D. | |
| Specify other material | |

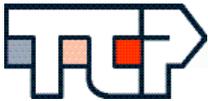
| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

RTDs

Metric Orders Welcome

Place an **mm** in the appropriate selection box:

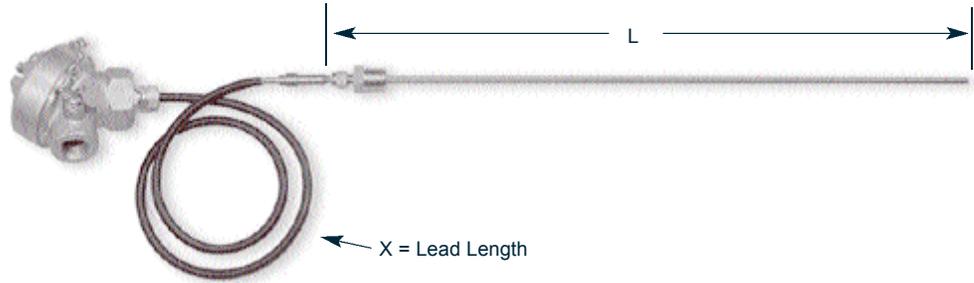
100 mm



REFINERY RTD ASSEMBLY

Series 2101

- Complete RTD Assembly with Cast Head
- PVC Coated Flex Armor Provides Moisture Resistance
- Complete with 1/2" NPT Mounting Adapter
- Design Fits Most Thermowells
- Standard Resistance Value 100 Ohms at 0°C, Others Available



Enter a selection for each item, please fax your inquiry to TCP.

Example: 2101 - - - - - - - - -

2101 - - - - - - - - -

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|---------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|--|
| Standard: 100 Ohms at 0°C | |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | SHEATH DIAMETER |
|------|-----------------|
| E | .187" |
| F | .250" |
| L | .312" |

Code F - .250 inches is standard
Consult factory for other diameters

Metric Orders Welcome

Place an **mm** in the appropriate selection box:

| CODE | OTHER PERTINENT DATA |
|---|----------------------|
| 0 | NONE |
| Specify temperature coefficients and tolerance if other than standard. Specify duplex, or triplex RTD bushing etc, as required. | |

| CODE | TERMINATION STYLE |
|--------------------------------|-------------------|
| 0 | None |
| AL | Aluminum Head |
| CI | Cast Iron Head |
| P | Poly Head |
| Code CI -Cast Iron is standard | |

| CODE | SHEATH MATERIAL |
|--|---------------------|
| 304 | 304 Stainless Steel |
| 316 | 316 Stainless Steel |
| 304 Stainless Steel standard temperature Range A, B, C | |
| 316 Stainless Steel standard Temperature Range D. | |
| Specify other material | |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

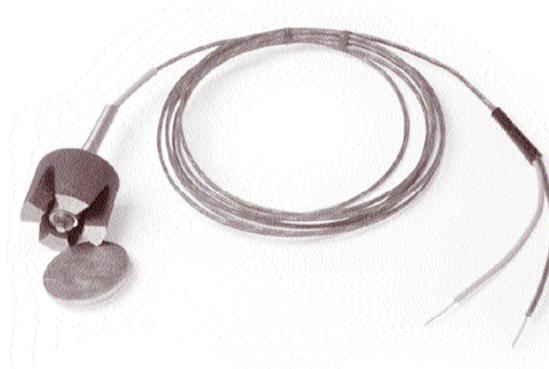
| LEAD LENGTH "X" |
|--------------------------------------|
| 36 inches standard, if other specify |

| IMMERSION LENGTH "L" |
|----------------------|
| Specify in inches |

MAGNE-RTD

Series 5627

- Magnet Holding Force is 16 lbs.
- Rugged Assembly for Most Applications.
- Measures Temperature from Any Ferrous Surface
- Capable of Use to 1000°F (535°C) Without Degradation
- The Powerful Alnico Magnet Forces the Springloaded Sensing Tip Into Contact with the Sensor Surface.
- 1" Diameter



Enter a selection for each item, please fax your inquiry to TCP.

Example:

5627 A - 100 - 72 - 3 - 70 - 1S - 0

5627 - - - - - -

| CODE | Temperature Range | Insulation |
|------|------------------------------------|---------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |

| RESISTANCE VALUES |
|---|
| Standard: 100 Ohms at 0°C |
| On request: 200, 400, 500 and 1000 Ohms |

| IMMERSION LENGTH "L" |
|--|
| Specify in inches 01 to 99. For lengths over 99 inches consult factory. |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| Code 3 wire is standard | |

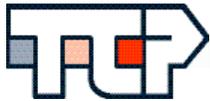
| CODE | OTHER PERTINENT DATA |
|--|----------------------|
| 0 | NONE |
| Specify temperature coefficients and tolerance if other than standard. | |

| CODE | LEAD WIRE |
|------|---------------------------|
| 10 | Fiberglass (standard) |
| 1S | Fiberglass w/SS Overbraid |
| 20 | Teflon |
| 2S | Teflon with SS Overbraid |

| CODE | TERMINATION STYLE |
|---------------------|------------------------------|
| 10 | 151 Standard Plug for 2 Wire |
| 70 | 151 3-pin plug for 3 Wire |
| 40 | 3" Pig Tail |
| Code 40 is standard | |

RTDs

| | |
|--|--|
| | Metric Orders Welcome |
| | Place an mm in the appropriate selection box: <input type="text" value="100 mm"/> |



Thermo-Couple Products Co.

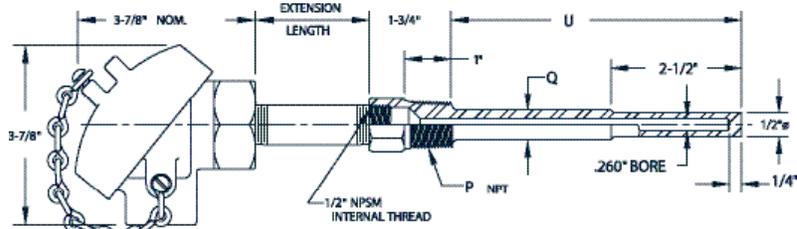
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www.marshbellofram.com
1-800-727-5646

STANDARD RTD THERMOWELL ASSEMBLY

Series 26000

- Complete RTD/Thermowell Assembly
- Supplied with an Explosion Proof Cast Head
- Resistance Value 100 Ohms at 0°C Standard, Others Available
- Resistance Tolerance of $\pm 0.1\%$ at 0°C is Standard
- Temperature Coefficient $.00385 \Omega/\Omega/^\circ\text{C}$ Standard



| | | | |
|------------------------|------|------|------|
| Process Connection "P" | 1/2" | 3/4" | 1" |
| Diameter "Q" | 5/8" | 3/4" | 7/8" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26000- **S** - **A** - **2** - **4** - **A** - **1S** - **3** - **3/4** - **C** - **4.5** - **0**

26000- - - - - - - - - - - -

| CODE | ASSEMBLY STYLE |
|------|---------------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (<i>Special order only</i>) |

| CODE | HEAD MATERIAL |
|------|---------------|
| A | Aluminum |
| F | Cast Iron |

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|-------------------|--------------------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (<i>special order</i>) |

On request: 200, 400, 500 and 1000 Ohms

| CODE | OTHER PERTINENT DATA |
|------|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |

Specify temperature coefficients and tolerance if other than standard.

| CODE | THERMOWELL INSERTION LENGTH "U" |
|------|---------------------------------|
| 2.5 | 2.5" |
| 4.5 | 4.5" |
| 7.5 | 7.5" |
| 10.5 | 10.5" |
| 13.5 | 13.5" |
| 16.5 | 16.5" |
| 22.5 | 22.5" |

| CODE | THERMOWELL MATERIAL |
|------|--------------------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (<i>C-1018</i>) |

Other materials available on special request

| CODE | PROCESS CONNECTION "P" |
|------|------------------------|
| 1/2 | 1/2" NPT |
| 3/4 | 3/4" NPT |
| 1 | 1" NPT |

| CODE | NUMBER OF WIRES |
|------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |

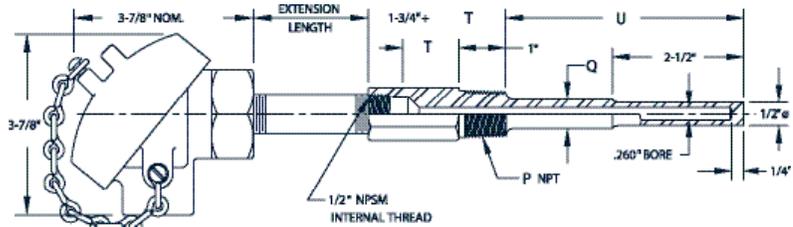
Code 3 wire is standard

RTDs

LAGGED RTD THERMOWELL ASSEMBLY

Series 26100

- Complete RTD/Lagged Thermowell Assembly
- Supplied with Threaded .260" Bore Thermowell and Explosion Proof Head
- Resistance Value 100 Ohms at 0°C Standard, Others Available
- Resistance Tolerance of ±0.1% at 0°C is Standard
- Temperature Coefficient .00385 Ω/Ω/°C Standard



| | | | |
|------------------------|------|------|------|
| Process Connection "P" | 1/2" | 3/4" | 1" |
| Diameter "Q" | 5/8" | 3/4" | 7/8" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26100- **S** - **A** - **2** - **4** - **A** - **1S** - **3** - **3/4** - **C** - **4.5** - **0**

26100- - - - - - - - - - - -

| CODE | ASSEMBLY STYLE |
|------|------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (Special order only) |

| CODE | HEAD MATERIAL |
|--------------------------------|---------------|
| A | Aluminum |
| F | Cast Iron |
| Code F - Cast Iron is standard | |

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|---------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|-----------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (special order) |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | OTHER PERTINENT DATA |
|--|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |
| Specify temperature coefficients and tolerance if other than standard. | |

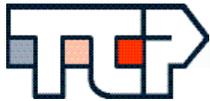
| CODE | THERMOWELL INSERTION LENGTH "U" |
|------|---------------------------------|
| 2.5 | 2.5" T = 2" Standard |
| 4.5 | 4.5" T = 2" Standard |
| 7.5 | 7.5" T = 3" Standard |
| 10.5 | 10.5" T = 3" Standard |
| 13.5 | 13.5" T = 3" Standard |
| 16.5 | 16.5" T = 3" Standard |
| 22.5 | 22.5" T = 3" Standard |

| CODE | THERMOWELL MATERIAL |
|--|-----------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (C-1018) |
| Other materials available on special request | |

| CODE | PROCESS CONNECTION "P" |
|------|------------------------|
| 1/2 | 1/2" NPT |
| 3/4 | 3/4" NPT |
| 1 | 1" NPT |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

RTDs



Thermo-Couple Products Co.

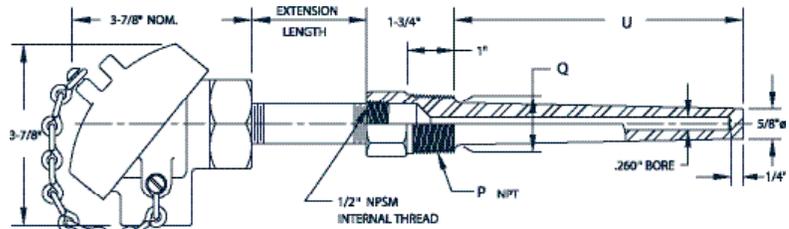
www.tcproducts.com

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www.marshbellofram.com
1-800-727-5646

HEAVY DUTY RTD THERMOWELL ASSEMBLY

Series 26200

- Complete RTD/Lagged Thermowell Assembly
- Supplied with Threaded .260" Bore Thermowell
- Explosion Proof-Head
- Standard Resistance Value 100 Ohms at 0°C , Others Available
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C is Standard
- Standard Temperature Coefficient .00385 $\Omega/\text{Q}/^\circ\text{C}$ Standard



| | | | |
|------------------------|------|------|---------|
| Process Connection "P" | 1/2" | 3/4" | 1" |
| Diameter "Q" | 5/8" | 7/8" | 1-1/16" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26200- **S** - **A** - **2** - **4** - **A** - **1S** - **3** - **3/4** - **C** - **4.5** - **0**

26200- - - - - - - - - - - -

| CODE | ASSEMBLY STYLE |
|------|------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (Special order only) |

| CODE | HEAD MATERIAL |
|--------------------------------|---------------|
| A | Aluminum |
| F | Cast Iron |
| Code F - Cast Iron is standard | |

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |

| CODE | Temperature Range | Insulation |
|------|----------------------------------|---------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|-----------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (special order) |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | OTHER PERTINENT DATA |
|--|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |
| Specify temperature coefficients and tolerance if other than standard. | |

| CODE | THERMOWELL INSERTION LENGTH "U" |
|------|---------------------------------|
| 2.5 | 2.5" |
| 4.5 | 4.5" |
| 7.5 | 7.5" |
| 10.5 | 10.5" |
| 13.5 | 13.5" |
| 16.5 | 16.5" |
| 22.5 | 22.5" |

| CODE | THERMOWELL MATERIAL |
|--|-----------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (C-1018) |
| Other materials available on special request | |

| CODE | PROCESS CONNECTION "P" |
|------|------------------------|
| 1/2 | 1/2" NPT |
| 3/4 | 3/4" NPT |
| 1 | 1" NPT |

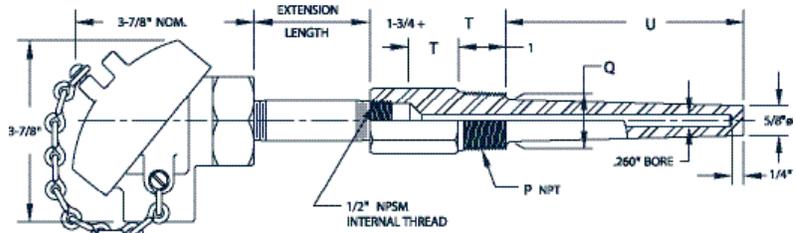
| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

RTDs

HEAVY DUTY RTD LAGGED THERMOWELL ASSEMBLY

Series 26250

- Complete RTD/Lagged Thermowell Assembly
- Supplied with Threaded .260" Bore Thermowell and Explosion Proof Head
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C
- Standard Temperature Coefficient .00385 $\Omega/\Omega/^{\circ}\text{C}$



| | | | |
|------------------------|------|------|---------|
| Process Connection "P" | 1/2" | 3/4" | 1" |
| Diameter "Q" | 5/8" | 7/8" | 1-1/16" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26250- **S** - **A** - **2** - **4** - **A** - **1S** - **3** - **3/4** - **C** - **4.5** - **0**

26250- - - - - - - - - - - -

| CODE | ASSEMBLY STYLE |
|------|------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (Special order only) |

| CODE | HEAD MATERIAL |
|------|---------------|
| A | Aluminum |
| F | Cast Iron |

Code F - Cast Iron is standard

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|---------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|-----------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (special order) |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | OTHER PERTINENT DATA |
|--|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |
| Specify temperature coefficients and tolerance if other than standard. | |

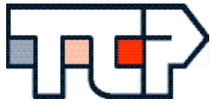
| CODE | THERMOWELL INSERTION LENGTH "U" |
|------|---------------------------------|
| 2.5 | 2.5" T = 2" Standard |
| 4.5 | 4.5" T = 2" Standard |
| 7.5 | 7.5" T = 3" Standard |
| 10.5 | 10.5" T = 3" Standard |
| 13.5 | 13.5" T = 3" Standard |
| 16.5 | 16.5" T = 3" Standard |
| 22.5 | 22.5" T = 3" Standard |

| CODE | THERMOWELL MATERIAL |
|--|-----------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (C-1018) |
| Other materials available on special request | |

| CODE | PROCESS CONNECTION "P" |
|------|------------------------|
| 1/2 | 1/2" NPT |
| 3/4 | 3/4" NPT |
| 1 | 1" NPT |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

RTDs



Thermo-Couple Products Co.

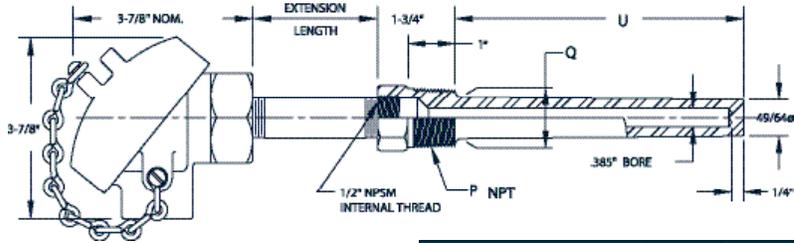
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1-800-727-5646

HEAVY DUTY THERMOWELL ASSEMBLY

Series 26300

- Complete RTD/Lagged Thermowell Assembly
- Supplied with a .385" Bore Tapered Thermowell and Explosion Proof Head
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C
- Standard Temperature Coefficient .00385 $\Omega/\Omega/^\circ\text{C}$



| | | |
|------------------------|------|---------|
| Process Connection "P" | 3/4" | 1" |
| Diameter "Q" | 7/8" | 1-1/16" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26300- **S** - **A** - **2** - **4** - **A** - **1S** - **3** - **1** - **C** - **4.5** - **0**

26300- - - - - - - - - - - -

RTDs

| CODE | ASSEMBLY STYLE |
|------|------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (Special order only) |

| CODE | HEAD MATERIAL |
|--------------------------------|---------------|
| A | Aluminum |
| F | Cast Iron |
| Code F - Cast Iron is standard | |

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|-----------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (special order) |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | OTHER PERTINENT DATA |
|--|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |
| Specify temperature coefficients and tolerance if other than standard. | |

| CODE | THERMOWELL INSERTION LENGTH "U" |
|------|---------------------------------|
| 2.5 | 2.5" |
| 4.5 | 4.5" |
| 7.5 | 7.5" |
| 10.5 | 10.5" |
| 13.5 | 13.5" |
| 16.5 | 16.5" |
| 22.5 | 22.5" |

| CODE | THERMOWELL MATERIAL |
|--|-----------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (C-1018) |
| Other materials available on special request | |

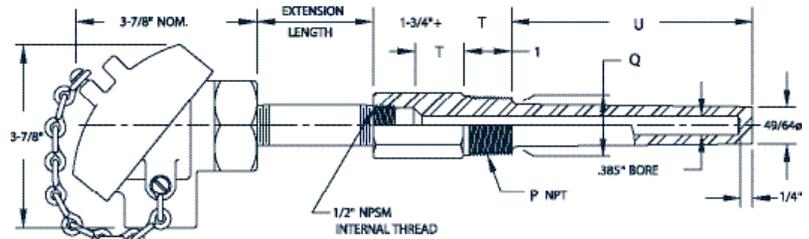
| CODE | PROCESS CONNECTION "P" |
|------|------------------------|
| 3/4 | 3/4" NPT |
| 1 | 1" NPT |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

HEAVY DUTY RTD LAGGED THERMOWELL ASSEMBLY

Series 26350

- Complete RTD/Lagged Thermowell Assembly
- Supplied with a .385" Bore Tapered Thermowell and Explosion Proof Head
- Standard Resistance Value 100 Ohms at 0°C, Others Available
- Standard Resistance Tolerance of ±0.1% at 0°C
- Standard Temperature Coefficient .00385 Ω/Ω/°C



| | | |
|------------------------|------|---------|
| Process Connection "P" | 3/4" | 1" |
| Diameter "Q" | 7/8" | 1-1/16" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26350- **S** - **A** - **2** - **4** - **A** - **1S** - **3** - **1** - **C** - **4.5** - **0**

26350- - - - - - - - - - - -

| CODE | ASSEMBLY STYLE |
|------|---------------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (<i>Special order only</i>) |

| CODE | HEAD MATERIAL |
|------|---------------|
| A | Aluminum |
| F | Cast Iron |

Code F - Cast Iron is standard

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|--------------------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (<i>special order</i>) |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | OTHER PERTINENT DATA |
|--|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |
| Specify temperature coefficients and tolerance if other than standard. | |

| CODE | THERMOWELL INSERTION LENGTH "U" |
|------|---------------------------------|
| 2.5 | 2.5" T = 2" Standard |
| 4.5 | 4.5" T = 2" Standard |
| 7.5 | 7.5" T = 3" Standard |
| 10.5 | 10.5" T = 3" Standard |
| 13.5 | 13.5" T = 3" Standard |
| 16.5 | 16.5" T = 3" Standard |
| 22.5 | 22.5" T = 3" Standard |

| CODE | THERMOWELL MATERIAL |
|--|--------------------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (<i>C-1018</i>) |
| Other materials available on special request | |

| CODE | PROCESS CONNECTION "P" |
|------|------------------------|
| 3/4 | 3/4" NPT |
| 1 | 1" NPT |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

RTDS



Thermo-Couple Products Co.

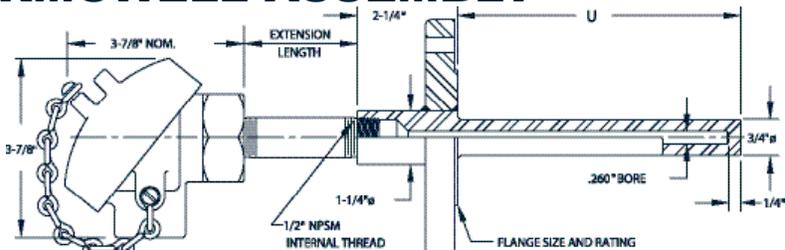
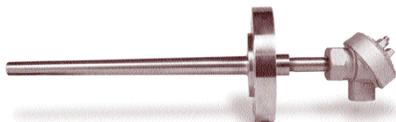
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FLANGED RTD THERMOWELL ASSEMBLY

Series 26700

- Flange Fully Welded to Thermowell
- .260" Bore Flanged Thermowell Assembly and Explosion Proof Head
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C
- Standard Temperature Coefficient .00385 $\Omega/\Omega/^{\circ}\text{C}$



| | |
|--------------|-------|
| Bore "B" | .260" |
| Diameter "Q" | 3/4" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26700- S - A - 2 - 4 - A - 1S - 3 - 1 - 150 - RF - C - 4 - 0

26700- [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - []

| CODE | ASSEMBLY STYLE |
|------|---------------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (<i>Special order only</i>) |

| CODE | HEAD MATERIAL |
|------|---------------|
| A | Aluminum |
| F | Cast Iron |

Code F - Cast Iron is standard

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|-------------------|--------------------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (<i>special order</i>) |

On request: 200, 400, 500 and 1000 Ohms

| CODE | NUMBER OF WIRES |
|------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |

Code 3 wire is standard

| CODE | OTHER PERTINENT DATA |
|------|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |

Specify temperature coefficients and tolerance if other than standard.

| CODE | THERMOWELL INSERTION LENGTH "U" |
|------|---------------------------------|
| 2 | 2" |
| 4 | 4" |
| 7 | 7" |
| 10 | 10" |
| 13 | 13" |
| 16 | 16" |
| 22 | 22" |

Others consult factory

| CODE | THERMOWELL MATERIAL |
|------|-----------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (C-1018) |

Other materials available on special request

| CODE | FLANGE FACE |
|------|-----------------|
| RF | Raised Face |
| RTJ | Ring Type Joint |

| CODE | FLANGE RATING |
|------|---------------|
| 150 | 150 lb |
| 300 | 300 lb |
| 600 | 600 lb |
| 900 | 900 lb |
| 1500 | 1500 lb |

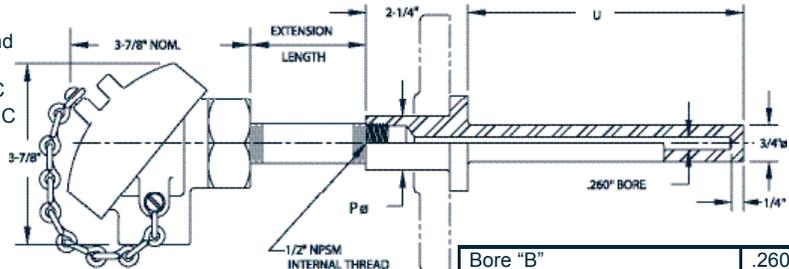
| CODE | FLANGE FACE |
|------|-------------|
| 1 | 1" |
| 1.5 | 1-1/2" |
| 2 | 2" |

RTDs

VAN STONE RTD THERMOWELL ASSEMBLY

Series 26800

- .260" Bore Van Stone Thermowell Assembly and Explosion Proof Head
- Standard Resistance Tolerance of $\pm 0.1\%$ at 0°C
- Standard Temperature Coefficient $.00385 \Omega/\Omega/^\circ\text{C}$



| | |
|--------------|-------|
| Bore "B" | .260" |
| Diameter "Q" | 3/4" |

Example:

Enter a selection for each item, please fax your inquiry to TCP.

26800- **S** - **A** - **2** - **4** - **A** - **1S** - **3** - **1** - **150** - **LJ** - **C** - **4** - **0**

26800- - - - - - - - - - - - - -

| CODE | ASSEMBLY STYLE |
|------|---------------------------------------|
| S | Simplex |
| D | Duplex |
| T | Triplex (<i>Special order only</i>) |

| CODE | HEAD MATERIAL |
|--------------------------------|---------------|
| A | Aluminum |
| F | Cast Iron |
| Code F - Cast Iron is standard | |

| CODE | EXTENSION CONFIGURATION |
|------|------------------------------|
| 2 | Head and Nipple |
| 4 | Head and Nipple/Union/Nipple |

| CODE | EXTENSION LENGTH |
|----------------------------|------------------|
| 2 | 2" |
| 4 | 4" |
| 6 | 6" |
| Code 6 is standard size 6" | |

| CODE | Temperature Range | Insulation |
|------|-------------------------------------|------------------|
| A | -50°F to 350°F (-45°C to 175°C) | FEP Teflon |
| B | -50°F to 800°F (-45°C to 425°C) | Fiberglass |
| C | -50°F to 1100°F (-45°C to 600°C) | Ceramic |
| D | -50°F to 1100°F (-45°C to 600°C) | Compacted MgO |

| RESISTANCE VALUES | |
|---|--------------------------------------|
| 1S | 100 Ohm Simplex |
| 1D | 100 Ohm Duplex |
| 1T | 100 Triplex (<i>special order</i>) |
| On request: 200, 400, 500 and 1000 Ohms | |

| CODE | NUMBER OF WIRES |
|-------------------------|-----------------|
| 2 | 2 Wire |
| 3 | 3 Wire |
| 4 | 4 Wire |
| Code 3 wire is standard | |

| CODE | OTHER PERTINENT DATA |
|--|----------------------|
| 0 | None |
| 2 | Spring Loaded |
| 999 | Special Request |
| Specify temperature coefficients and tolerance if other than standard. | |

| CODE | THERMOWELL INSERTION LENGTH "U" |
|------------------------|---------------------------------|
| 2 | 2" |
| 4 | 4" |
| 7 | 7" |
| 10 | 10" |
| 13 | 13" |
| 16 | 16" |
| 22 | 22" |
| Others consult factory | |

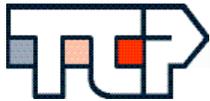
| CODE | THERMOWELL MATERIAL |
|--|-----------------------|
| C | 304 Stainless Steel |
| H | 316 Stainless Steel |
| M | Monel |
| S | Carbon Steel (C-1018) |
| Other materials available on special request | |

| CODE | FLANGE FACE |
|------------------------------------|-------------|
| 0 | None |
| LJ | Lap Joint |
| Lap Joint material is Carbon Steel | |

| CODE | FLANGE RATING |
|------|---------------|
| 0 | None |
| 150 | 150 lb |
| 300 | 300 lb |

| CODE | FLANGE FACE |
|------|-------------|
| 1 | 1" |
| 1.5 | 1-1/2" |

RTDs



TEMPERATURE / RESISTANCE RELATIONSHIP AND TOLERANCE FOR ALPHA OF .00385Ω/Ω/ °C

Table of Temperature / Resistance Relationship and Tolerance for Alpha of .00385Ω/Ω/ °C

| °C (°F) | 0 | -10 | -20 | -30 | -40 | -50 | -60 | -70 | -80 | -90 | -100 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| -100 (-148) | 60.25 | 56.19 | 52.11 | 48.00 | 43.87 | 39.71 | 35.53 | 31.32 | 27.08 | 22.80 | 18.49 |
| 0 (32) | 100.00 | 96.09 | 92.16 | 88.22 | 84.27 | 80.31 | 76.33 | 72.33 | 68.33 | 64.30 | 60.25 |
| °C (°F) | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| 0 (32) | 100.00 | 103.90 | 107.79 | 111.67 | 115.54 | 119.40 | 123.24 | 127.07 | 130.89 | 134.70 | 138.50 |
| 100 (212) | 138.50 | 142.29 | 146.06 | 149.82 | 153.54 | 157.31 | 161.04 | 164.76 | 168.46 | 172.16 | 175.84 |
| 200 (392) | 175.84 | 179.51 | 183.17 | 186.82 | 190.45 | 194.07 | 197.69 | 201.29 | 204.88 | 208.45 | 212.02 |
| 300 (572) | 212.02 | 215.57 | 219.12 | 222.65 | 226.17 | 229.67 | 233.17 | 236.65 | 240.13 | 243.59 | 247.04 |
| 400 (752) | 247.04 | 250.48 | 253.90 | 257.32 | 260.72 | 264.11 | 267.49 | 270.86 | 274.22 | 277.56 | 280.90 |
| 500 (932) | 280.90 | 284.22 | 287.53 | 290.83 | 294.11 | 297.39 | 300.65 | 303.91 | 307.15 | 310.38 | 313.59 |
| 600 (1,112) | 313.59 | 316.80 | 319.99 | 323.18 | 326.35 | 329.51 | 332.66 | 335.79 | 338.92 | 342.03 | 345.13 |
| 700 (1,292) | 345.13 | 348.22 | 351.30 | 354.37 | 357.42 | 360.47 | 363.50 | 366.52 | 369.53 | 372.52 | 375.51 |
| 800 (1,472) | 375.51 | 381.45 | 381.45 | 384.40 | 387.34 | 390.26 | --- | --- | --- | --- | --- |

Table of Tolerance Values (Ref. DIN 43760)

| Temperature | Resistance Value | Tolerance | | | |
|-------------|------------------|-----------|-------|---------|-------|
| | | Class A | | Class B | |
| | | TEMP. | OHMS | TEMP. | OHMS |
| -200 | 18.49 | ±0.55 | ±0.24 | ±1.3 | ±0.56 |
| -100 | 60.25 | ±0.35 | ±0.14 | ±0.8 | ±0.32 |
| 0 | 100.00 | ±0.15 | ±0.06 | ±0.3 | ±0.12 |
| 100 | 138.50 | ±0.35 | ±0.13 | ±0.8 | ±0.30 |
| 200 | 175.84 | ±0.55 | ±0.20 | ±1.3 | ±0.48 |
| 300 | 212.02 | ±0.75 | ±0.27 | ±1.8 | ±0.64 |
| 400 | 247.04 | ±0.95 | ±0.33 | ±2.3 | ±0.79 |
| 500 | 280.90 | ±1.15 | ±0.38 | ±2.8 | ±0.93 |
| 600 | 313.59 | ±1.35 | ±0.43 | ±3.3 | ±1.06 |
| 650 | 329.51 | ±1.45 | ±0.46 | ±3.6 | ±1.13 |
| 700 | 345.13 | | | ±3.8 | ±1.17 |
| 800 | 375.51 | | | ±4.3 | ±1.28 |
| 850 | 390.26 | | | ±4.6 | ±1.34 |

RTDs