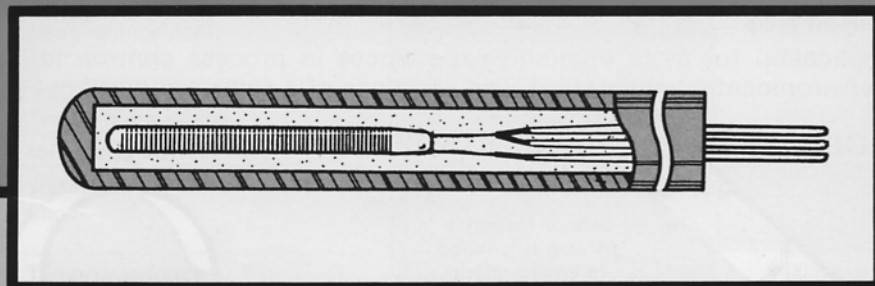
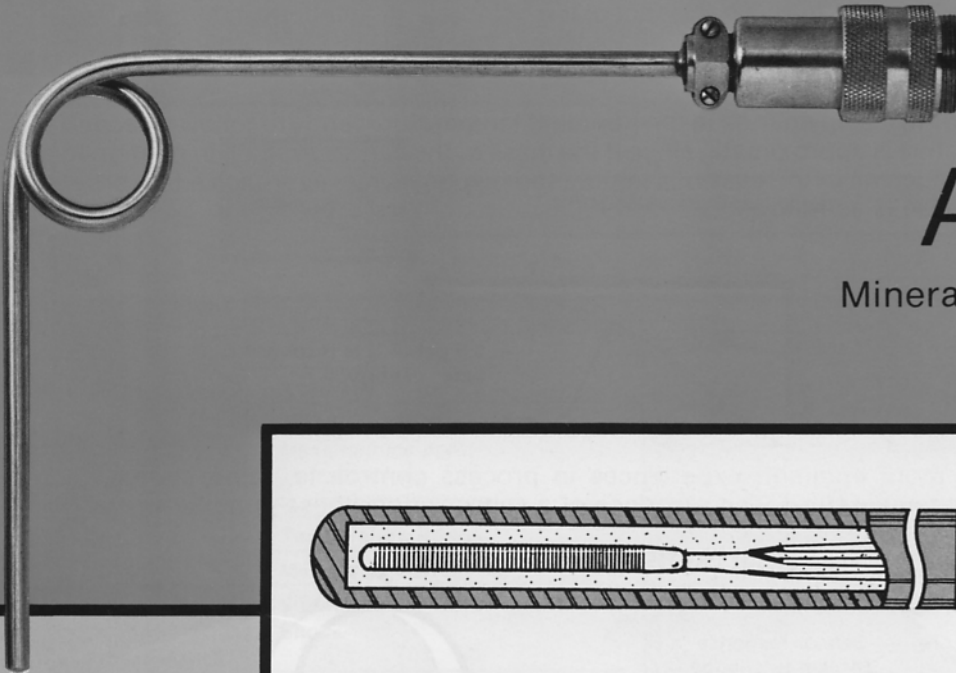




RESISTANCE
TEMPERATURE
DETECTORS

ARiDET®

Mineral Insulated RTD Elements



FEATURES

- Time Constant of 2.2 sec and less
- Temperature Range: -200 to +600°C (-320 to +1110°F)
- Pressure Range: Vacuum to +50,000 psia
- Shock Resistance to 1000G in all 3 axis
- Withstand vibration of $\pm 50G$, 60 to 2000 Hz
- Accuracy: ± 0.1 ohm @ 0°C ($\pm 0.1\%$ for 100 Ω)
- Reproducibility: $\pm 0.1\%$ of resistance for 100 Ω element
- Very long lengths. Entire length can be exposed to high temperature
- Available with 4-20 ma temperature transmitter/amplifier
- Superior Corrosion Resistance with low carbon 316 ST/ST sheaths
- Can be sharply bent with no change in performance.

LABORATORY ACCURACY WITH INDUSTRIAL RUGGEDNESS

Platinum resistance thermometers are used for interpolation between the IPTS-68 fixed temperature points of ice and antimony (0°C to 630.74°C), generally used where accuracy and stability are most important.

The ARiDET® approach to RTD's will bring $\pm .05^\circ$ laboratory accuracy to the toughest industrial process — without special handling considerations. **ARI INDUSTRIES, INC.** has combined the inherent accuracy of a precisely wound Platinum Resistance element with AerOpak® compacted ceramic insulated cable. The result is a low cost yet rugged sensor that will take factory handling — retaining the stability needed for today's process control.

Available with either the 99.999%+ high purity JIS C-1604-81 or 99.99% DIN 43760 temperature vs resistance curve.

See temperature vs resistance tables for how to obtain laboratory accuracy.

ARI is a Registered US Trademark Protected by US Patents 3,032,444; 3,048,641; 3,625,775; 3,144,507; 2,994,733 and 4,087,775. In Canada Patent No. 1040456. In UK Patent No. 1564175.

ARI Industries Inc

BULLETIN 8.0

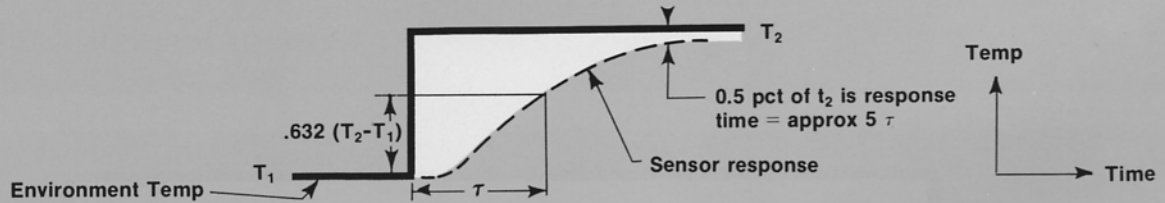
MAY 1996

TIME RESPONSE CHARACTERISTICS

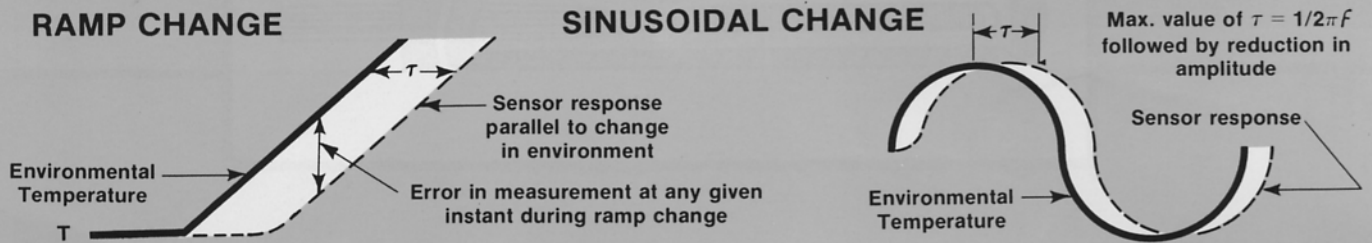
The response of an ARi Resistance Temperature Detector is defined by two notable characteristics when exposed to an instantaneous (step) change in environment temperature. These are:

- Time Constant (τ). The time to reach 63.2 pct of the complete step change in temperature.
- Response Time. Time to reach within 0.5 pct of final temperature in a step change. This is approximately equal to 5 times the Time Constant.

The response of a temperature sensor to a step change in environment temperature tends to follow a second order differential equation. However, this is approximate, since if the mass of the sensor is small in relation to the mass of the fluid passing over it (such as in the case of a liquid), the response may approach a first order differential equation. A typical response is as follows:



Time Constant has application for more common experiences in process control, ie, ramp change or sinusoidal changes in environmental temperature. The response of a sensor under these conditions are:



Time constant is related to the environmental conditions by the following approximate relation (Ref NASA TN 2599)

$$\tau = f \frac{(D)^{1.5}}{(\rho V)^{0.5}}$$

Where D = Diameter of sensor
 ρ = Density of fluid or gas
 V = Velocity of fluid

Knowing the time constant (τ) for a given sensor at one given set of conditions, it can be computed for another set of conditions.

Time constant data for ARi ARiDET® Resistance Temperature Detectors are as follows:

Condition 1 In water at a flow rate of 3 ft per second and $T_2 - T_1 = 190^\circ\text{F}$, perpendicular to axis of sensor.

| | | | |
|---------------------|-------|------|------|
| SENSOR DIAM, inches | 0.125 | .188 | .250 |
| TIME CONSTANT, sec. | 0.8 | 1.6 | 2.2 |

Condition 2 In air at a flow rate of 65 ft/sec and density of 0.769 lb/ft³. Mass velocity of 5 lbm/ft² sec and $T_2 - T_1 = 61^\circ\text{F}$. Flow perpendicular to axis of sensor.

| | | | |
|---------------------|-------|------|------|
| SENSOR DIAM, inches | 0.125 | .188 | .250 |
| TIME CONSTANT, sec | 7.5 | 14.5 | 20.5 |

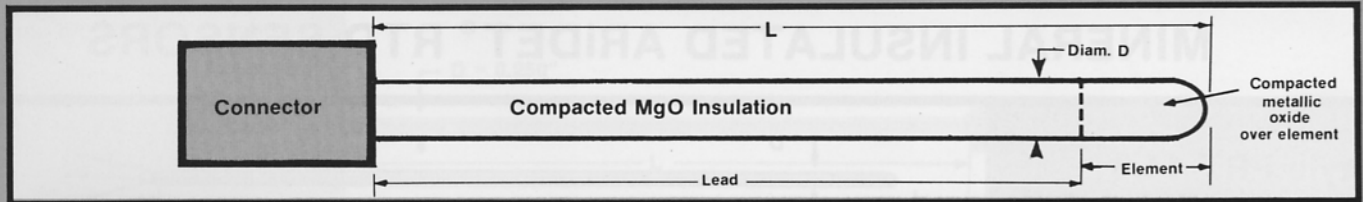
SELECTION/MATCHING

Completed probes may be matched in pairs to the nearest 0.01 ohm at 0°C for differential temperature measurements to 0.05°C.

Completed probes may be supplied with selected ice point resistances within a narrow band to eliminate the need for compensation in indicating circuits.

SPECIFICATIONS

ARi ARiDET® consists of a specially installed platinum resistance element completely encased in compacted metallic oxide insulation of high thermoconductivity to insure minimum temperature differential between the sensor surface and the element. Standard sensors have 3 constantan equi-resistance lead wires in lead portion with compacted MgO insulation. Sheath material is 316 L st/st in fully annealed condition. Performance specifications are shown for the element portion and the lead portion.



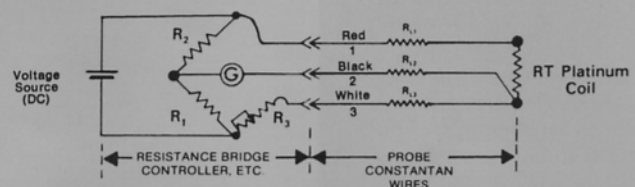
| | LEAD | ELEMENT |
|--|---|--|
| Accuracy | | ±0.01 ohm at 0° C |
| Stability <i>Maximum ice point shift after long term thermal cycling</i> | | -130 to +93° C ±.05% -130 to 315° C ±.10% 315 to 600° C ±.5% |
| Temperature Range | -250 to +1000° C | -200 to +600° C |
| Measuring Current | | 10 milliamps DC max |
| Vibration Shock | Vibration: ±50G, 60 to 2000 Hz Shock: 1000G Along all three mutually perpendicular axes when correctly mounted. | |
| Temp/Res. Curve (0 to 100° C) | | 0.00385Ω/Ω/°C per DIN 43760 0.003916Ω/Ω/°C per JIS C 1604-81 |
| Individual Calib. | | To nearest ±0.01 ohm @ 0° C |
| Self Heating Error | | Less than 0.02° C/MW |
| Max. External Pressure | 50,000 psi (3510 Kg/cm ²) | |
| Stock Length L | 24 inch (610 mm) | |

| SENSOR PARAMETERS | | | |
|---|--------------|--------------|--------------|
| Diameter, inch (mm) | 0.125 (3.18) | 0.188 (4.78) | 0.250 (6.35) |
| Temp. sensitive length, inch (mm) | 1.1 (28.0) | 1.1 (28.0) | 1.1 (28.0) |
| Bending Restriction, Distance from tip to be left straight, inch (mm) | 2.1 (53.3) | 2.1 (53.3) | 2.1 (53.3) |
| Minimum Bending Radius, inch (mm) | 0.5 (12.7) | 0.75 (19.0) | 1.0 (25.4) |
| Maximum length feet (meter) | 700 (213) | 300 (91) | 175 (53) |
| Minimum length inch (mm) | 4 (102) | 4 (102) | 4 (102) |
| Constantan 3 wire leads, resistance in ohms per inch-each wire | 0.061 | 0.025 | 0.015 |

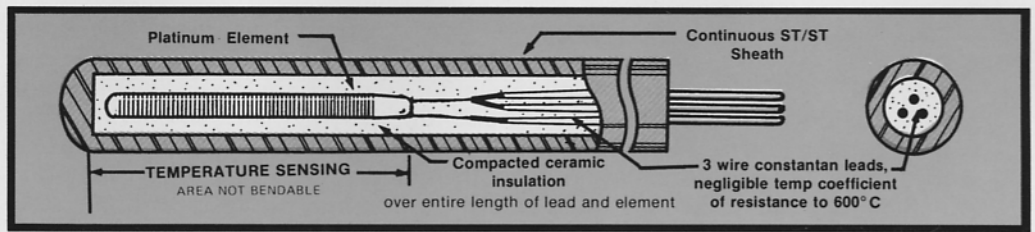
TYPICAL 3 WIRE MEASURING CIRCUIT FOR RTD'S

A 3-wire system may be used to eliminate the effect of lead wire resistance changes by introducing R_L (lead wire resistance) into each leg of a bridge. The third lead wire is added to the detector circuit without affecting bridge balance. The resultant circuit is sensitive only to resistance element temperature changes.

$R_{L1} = R_{L2} = R_{L3}$ (Lead Wire Resistance)
 $R_1 = R_2$
 $R_3 =$ Variable Resistance, Equal to RT Range
 $G =$ Galvanometer



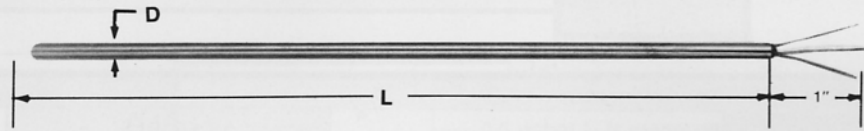
UNIQUE
ARIDET®
 CONSTRUCTION



MINERAL INSULATED ARIDET® RTD SENSORS

Style PRT-14.3

Basic unit, constantan wires bared for direct attachment to terminals.



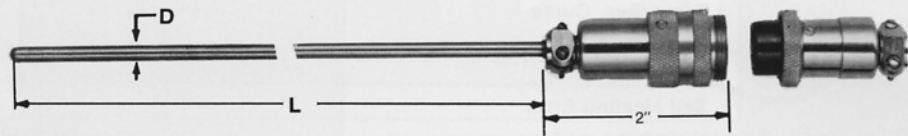
Style PRT-22.3

Teflon insulated and shielded lead wires attached to basic probe, epoxy potting compound, U.S. Patent 3,144,507 strain relief.



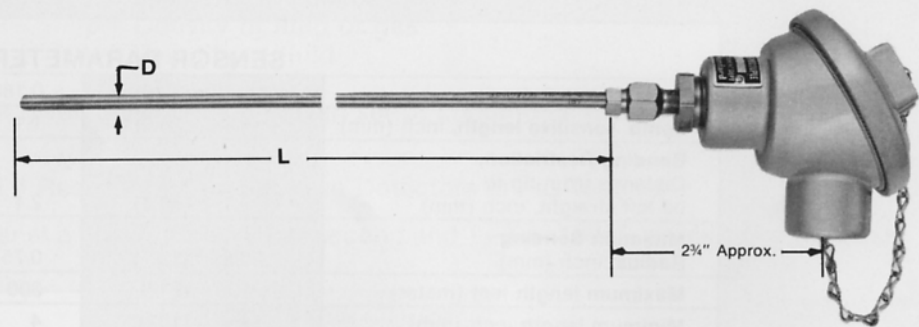
Style PRT-90.3

with quick disconnect
 Sealed, vibration resistant connector with extra pin for shielding, mate supplied overall connector length 3.25" when mated.



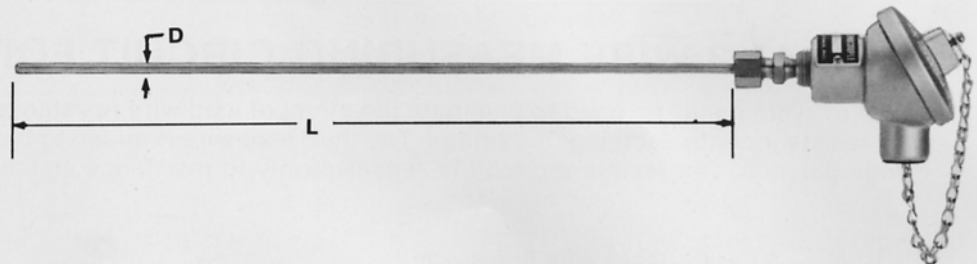
Style PRT-96.3

with standard size connection head
 Industrial weatherproof aluminum head with internal screw terminals 3/4" NPT exit thread for hard wiring.



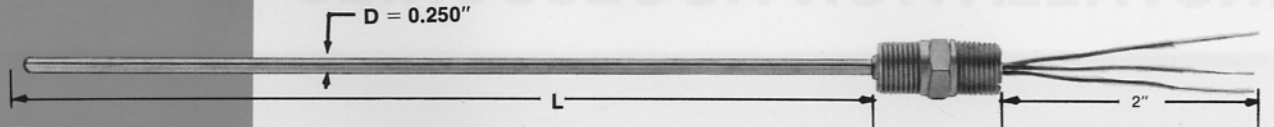
Style PRTX-96.3

with temperature transmitter.

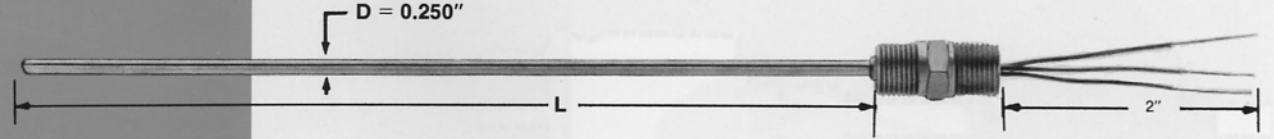


Style PRT-50733.3

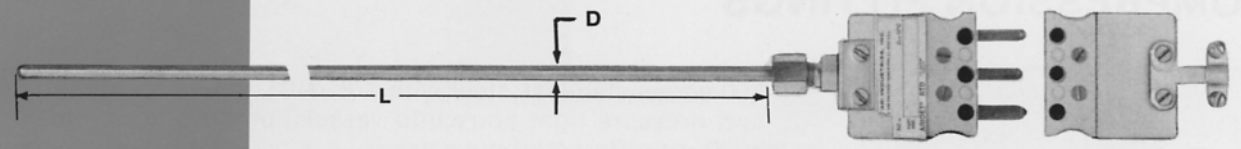
with miniature size connection head
 Miniature weatherproof Aluminum Connection head with internal screw terminals. 1/2" NPT exit thread for hard wiring.



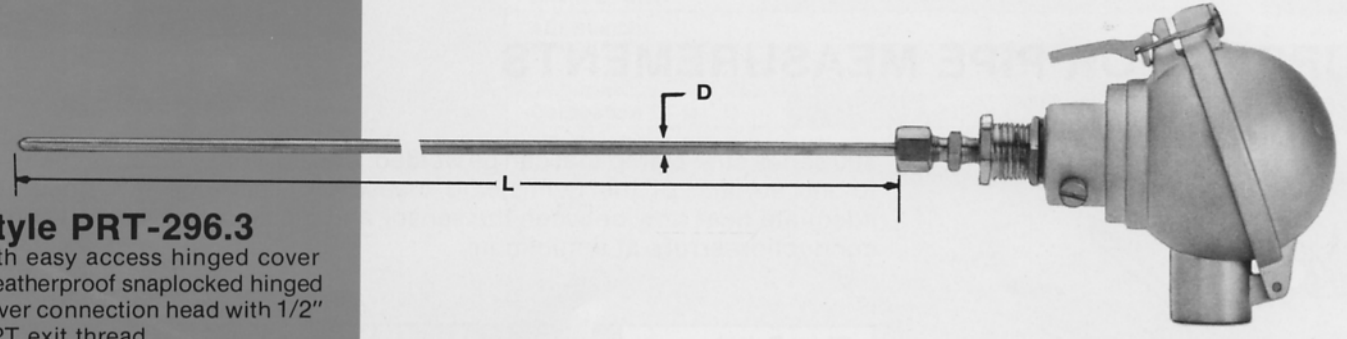
Style PRT-52400.3
with fixed hex nipple
Replacement element with 1/2"
NPT hex nipple silver brazed to
sheath.



Style PRT-50735.3
with spring loaded Hex Nipple
Replacement element with 1/2"
NPT hex nipple spring loaded.

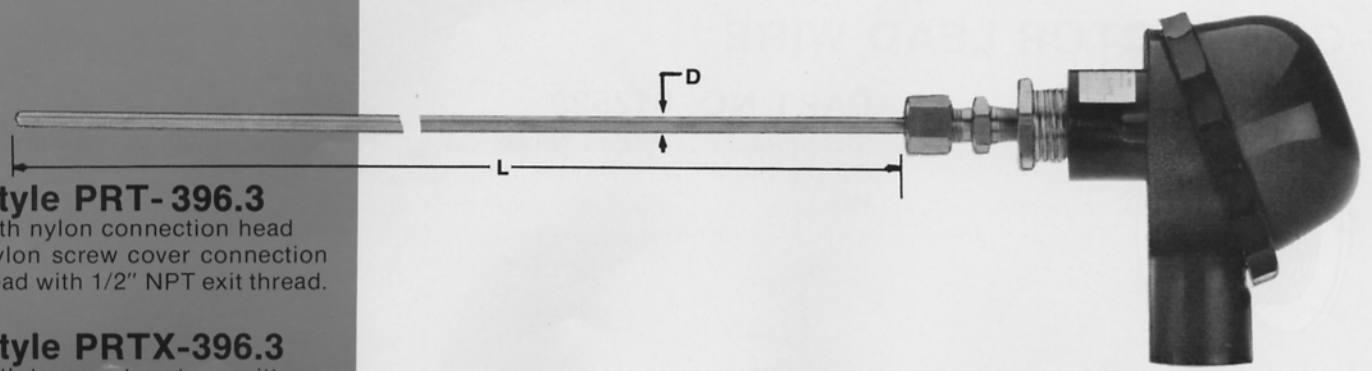


Style PRT-91.3
with 3 prong quick disconnect
Quick disconnect and mate.



Style PRT-296.3
with easy access hinged cover
Weatherproof snaplocked hinged
cover connection head with 1/2"
NPT exit thread.

Style PRTX-296.3
with temperature transmitter

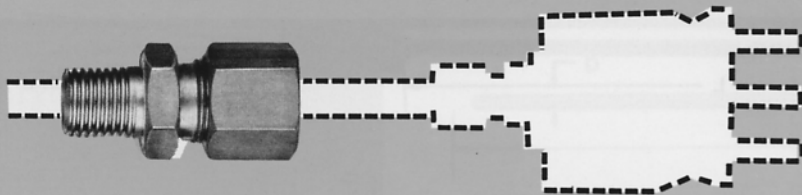


Style PRT-396.3
with nylon connection head
Nylon screw cover connection
head with 1/2" NPT exit thread.

Style PRTX-396.3
with temperature transmitter

INSTALLATION ACCESSORIES

Pressure or Vacuum Tight Applications

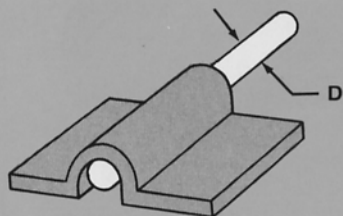


COMPRESSION FITTINGS

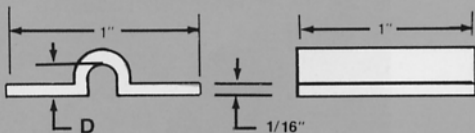
300 series stainless steel with 1/8" NPT thread for setting immersion and pressure tight entry into vessels, process lines, etc. Useable to 4000 psi differential pressure.

| | | | |
|---------------|----------|----------|----------|
| Diam. D, inch | 0.125 | .188 | .250 |
| Part Number | PTM-D2SS | PTM-E2SS | PTM-F2SS |

SURFACE OR PIPE MEASUREMENTS

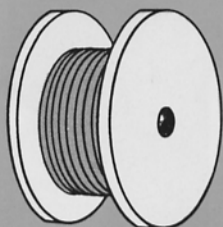


300 series st/st clamp that can be welded, brazed, spot welded or glued to the surface of the item being measured. The wide tabs insure adequate heat flow between the sensor and measured object to keep conduction errors at a minimum.



| | | | |
|---------------|----------|----------|----------|
| Diam. D, inch | 0.125 | .188 | .250 |
| Part Number | 490999-D | 490999-E | 490999-F |

3-CONDUCTOR LEAD WIRE



PART NO. 012529

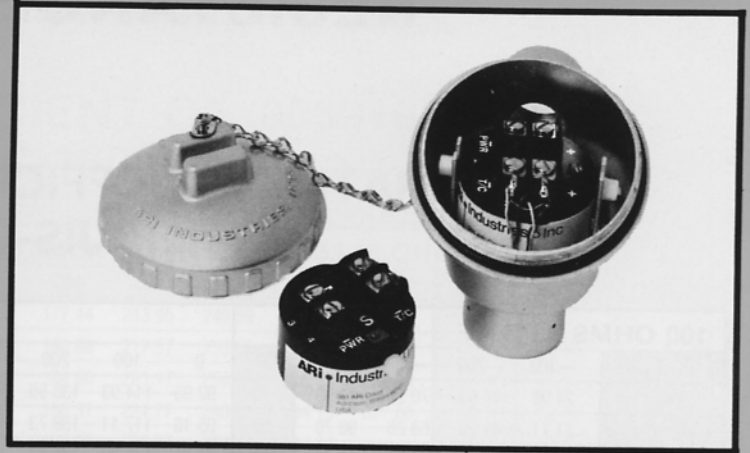
3 Conductor stranded Nickel 20 ga. Teflon over each with tinned copper braid overall and teflon wrap overall. Color coded, 2 black, 1 red.

TEMPERATURE TRANSMITTERS

Spring Loaded

PART NO. 47041
fits T-96.3, T-296.3, T-396.3

Specify calibration and span



HOW TO ORDER

ARiDET® RTD's are available in three diameters.

| | | | |
|----------------------|-------|------|------|
| Diam. D, inch | 0.125 | .188 | .250 |
| ARi Symbol | D | E | F |

Elements made with 100Ω at 0°C and two calibrations.

| | | |
|----------------------------|---------|----------|
| Calibration Ω/ Ω/°C | 0.00385 | 0.003916 |
| ARi Symbol | 100 DIN | 100 |

1. Establish Part Number:

STYLE — L D CALIB.

Select Style from Pages 4 or 5
Length in inches stocked lengths are 24" (min. length is 4")

Use ARi Symbol from above for calib.

Use ARi Symbol from above for Diameter

2. Specify quantity and any special tests.
3. Specify installation accessories and quantity.
4. If temperature transmitter is required to produce 4-20ma with 24VDC excitation, use Style PRTX. Specify span. See ARi Bulletins on temperature transmitters for standard spans.
5. Shipped by UPS, insured or motor freight, insured.

TEMPERATURE VS RESISTANCE DATA IN °F

**TEMPERATURE COEFFICIENT OF .003916Ω/Ω/° C.
REF. JIS-C-1604-81**

| 100 OHMS AT 32° F | | | | | FUNDAMENTAL INTERVAL 39.16 OHMS | | | | | | | | | | | | | |
|-------------------|-------|-------|-------|-------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| F | -300 | -200 | -100 | 0 | F | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | ° F |
| -0 | 24.08 | 47.53 | 70.52 | 92.93 | 0 | 92.93 | 114.93 | 136.59 | 157.88 | 178.81 | 199.37 | 219.58 | 239.44 | 258.92 | 278.05 | 296.76 | 315.14 | 0 |
| -10 | 21.71 | 45.20 | 68.26 | 90.70 | 10 | 95.13 | 117.11 | 138.73 | 159.99 | 180.88 | 201.41 | 221.59 | 241.40 | 260.85 | 279.95 | 298.61 | 316.97 | 10 |
| -20 | 19.23 | 42.96 | 66.00 | 88.47 | 20 | 97.35 | 119.29 | 140.87 | 162.09 | 182.95 | 203.44 | 223.58 | 243.36 | 262.78 | 281.85 | 300.56 | 318.80 | 20 |
| -30 | 16.83 | 40.62 | 63.70 | 86.24 | 30 | 99.56 | 121.47 | 143.01 | 164.20 | 185.02 | 205.47 | 225.57 | 245.32 | 264.70 | 283.66 | 302.31 | 320.63 | 30 |
| -40 | | 38.27 | 61.40 | 84.00 | 40 | 101.77 | 123.64 | 145.16 | 166.29 | 187.08 | 207.50 | 227.56 | 247.27 | 266.62 | 285.56 | 304.16 | | 40 |
| -50 | | 35.91 | 59.10 | 81.77 | 50 | 103.97 | 125.80 | 147.28 | 168.39 | 189.14 | 209.52 | 229.54 | 249.22 | 268.53 | 287.51 | 305.99 | | 50 |
| -60 | | 33.54 | 56.79 | 79.52 | 60 | 106.17 | 127.97 | 149.40 | 170.48 | 191.20 | 211.54 | 231.52 | 251.17 | 270.44 | 289.36 | 307.82 | | 60 |
| -70 | | 31.18 | 54.48 | 77.28 | 70 | 108.36 | 130.13 | 151.53 | 172.57 | 193.25 | 213.55 | 233.50 | 253.13 | 272.35 | 291.21 | 309.65 | | 70 |
| -80 | | 28.82 | 52.17 | 75.04 | 80 | 110.56 | 132.28 | 153.65 | 174.65 | 195.30 | 215.57 | 235.48 | 255.06 | 274.25 | 293.06 | 311.48 | | 80 |
| -90 | | 26.45 | 49.85 | 72.80 | 90 | 112.75 | 134.44 | 155.77 | 176.73 | 197.33 | 217.57 | 237.46 | 256.99 | 276.15 | 294.91 | 313.31 | | 90 |
| -100 | | 24.08 | 47.53 | 70.52 | 100 | 114.93 | 136.59 | 157.88 | 178.81 | 199.37 | 219.58 | 239.44 | 258.92 | 278.05 | 296.76 | 315.14 | | 100 |
| Ω/° F Ave. | .242 | .234 | .230 | .224 | | .220 | .217 | .213 | .209 | .205 | .202 | .199 | .195 | .191 | .187 | .184 | .183 | |

**TEMPERATURE COEFFICIENT .00385 Ω/Ω/° C.
REF. DIN 43760**

| 100 OHMS AT 32° F | | | | | FUNDAMENTAL INTERVAL 38.50 OHMS | | | | | | | | | | | | | |
|-------------------|-------|-------|-------|-------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| ° F | -300 | -200 | -100 | 0 | ° F | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | ° F |
| -0 | 25.1 | 48.38 | 70.95 | 93.01 | 0 | 93.01 | 114.68 | 135.97 | 156.90 | 177.48 | 197.69 | 217.55 | 237.06 | 256.20 | 274.99 | 293.43 | 311.50 | 0 |
| -10 | 22.71 | 46.09 | 68.72 | 90.81 | 10 | 95.20 | 116.82 | 138.08 | 158.97 | 179.51 | 199.70 | 219.52 | 238.99 | 258.10 | 276.85 | 295.25 | 313.29 | 10 |
| -20 | 20.33 | 43.80 | 66.49 | 88.61 | 20 | 97.38 | 118.97 | 140.18 | 161.04 | 181.55 | 201.69 | 221.48 | 240.92 | 259.99 | 278.71 | 297.07 | 315.07 | 20 |
| -30 | 17.97 | 41.49 | 64.25 | 86.41 | 30 | 99.57 | 121.10 | 142.29 | 163.11 | 183.58 | 203.69 | 223.44 | 242.84 | 261.88 | 280.56 | 298.89 | 316.86 | 30 |
| -40 | | 39.18 | 62.00 | 84.21 | 40 | 101.74 | 123.24 | 144.38 | 165.17 | 185.61 | 205.68 | 225.40 | 244.76 | 263.76 | 282.41 | 300.70 | | 40 |
| -50 | | 36.87 | 59.75 | 82.01 | 50 | 103.90 | 125.37 | 146.48 | 167.23 | 187.63 | 207.67 | 227.35 | 246.68 | 265.64 | 284.26 | 302.51 | | 50 |
| -60 | | 34.54 | 57.49 | 79.81 | 60 | 106.06 | 127.50 | 148.57 | 169.29 | 189.65 | 209.65 | 229.30 | 248.59 | 267.52 | 286.10 | 304.32 | | 60 |
| -70 | | 32.21 | 55.22 | 77.61 | 70 | 108.22 | 129.62 | 150.66 | 171.34 | 191.67 | 211.63 | 231.24 | 250.50 | 269.40 | 287.93 | 306.12 | | 70 |
| -80 | | 29.87 | 52.95 | 75.39 | 80 | 110.38 | 131.74 | 152.74 | 173.39 | 193.68 | 213.61 | 233.19 | 252.40 | 271.27 | 289.77 | 307.92 | | 80 |
| -90 | | 27.48 | 50.67 | 73.18 | 90 | 112.53 | 133.86 | 154.82 | 175.43 | 195.69 | 215.58 | 235.12 | 254.31 | 273.13 | 291.60 | 309.71 | | 90 |
| -100 | | 25.1 | 48.38 | 70.95 | 100 | 114.68 | 135.97 | 156.90 | 177.48 | 197.69 | 217.55 | 237.06 | 256.20 | 274.99 | 293.43 | 311.50 | | 100 |
| Ω/° F Ave. | .237 | .233 | .226 | .221 | | .217 | .213 | .209 | .206 | .202 | .199 | .195 | .191 | .188 | .184 | .181 | .179 | |

TEMPERATURE VS RESISTANCE DATA IN °C

**TEMPERATURE COEFFICIENT OF .003916Ω/Ω/°C
REF. JIS C-1604-81**

| 100 OHMS AT 0° C | | | FUNDAMENTAL INTERVAL 39.16 OHMS | | | | | | | | |
|------------------|-------|--------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|-----|
| °C | -100 | 0 | C | 0 | 100 | 200 | 300 | 400 | 500 | 600 | °C |
| -0 | 59.79 | 100.00 | 0 | 100.00 | 139.16 | 177.14 | 213.95 | 249.59 | 284.04 | 317.33 | 0 |
| -10 | 55.47 | 96.02 | 10 | 103.97 | 143.01 | 180.88 | 217.57 | 253.09 | 287.43 | 320.59 | 10 |
| -20 | 51.32 | 92.03 | 20 | 107.93 | 146.85 | 184.60 | 221.17 | 256.57 | 290.79 | 323.84 | 20 |
| -30 | 47.16 | 88.02 | 30 | 111.87 | 150.68 | 188.31 | 224.77 | 260.05 | 294.15 | 327.08 | 30 |
| -40 | 42.97 | 84.00 | 40 | 115.81 | 154.49 | 192.01 | 228.35 | 263.51 | 297.50 | | 40 |
| -50 | 38.76 | 79.97 | 50 | 119.73 | 158.30 | 195.70 | 231.92 | 266.96 | 300.83 | | 50 |
| -60 | 34.53 | 75.93 | 60 | 123.64 | 162.09 | 199.37 | 235.47 | 270.40 | 304.15 | | 60 |
| -70 | 30.27 | 71.87 | 70 | 127.54 | 165.87 | 203.03 | 239.02 | 273.83 | 307.47 | | 70 |
| -80 | 25.98 | 67.79 | 80 | 131.42 | 169.64 | 206.69 | 242.55 | 277.25 | 310.76 | | 80 |
| -90 | 21.66 | 63.70 | 90 | 135.30 | 173.40 | 210.33 | 246.08 | 280.65 | 314.05 | | 90 |
| -100 | 17.31 | 59.59 | 100 | 139.16 | 177.14 | 213.95 | 249.59 | 284.04 | 317.33 | | 100 |
| Ω/°C Ave. | .423 | .404 | | .390 | .380 | .368 | .356 | .345 | .333 | .325 | |

**TEMPERATURE COEFFICIENT OF .00385Ω/Ω/°C
REF. DIN 43760**

| 100 OHMS AT 0° C | | | FUNDAMENTAL INTERVAL 38.5 OHMS | | | | | | | | |
|------------------|-------|--------|--------------------------------|--------|--------|--------|--------|--------|--------|--------|-----|
| °C | -100 | 0 | C | 0 | 100 | 200 | 300 | 400 | 500 | 600 | °C |
| -1 | 60.20 | 100.00 | 0 | 100.00 | 138.50 | 175.84 | 212.03 | 247.06 | 280.93 | 313.65 | 0 |
| -10 | 56.13 | 96.07 | 10 | 103.90 | 142.28 | 179.51 | 215.58 | 250.50 | 284.26 | 316.86 | 10 |
| -20 | 52.04 | 92.13 | 20 | 107.79 | 146.06 | 183.17 | 219.13 | 253.93 | 287.57 | 320.05 | 20 |
| -30 | 47.93 | 88.17 | 30 | 111.67 | 149.82 | 186.82 | 222.66 | 257.34 | 290.87 | 323.24 | 30 |
| -40 | 43.80 | 84.21 | 40 | 115.54 | 153.57 | 190.46 | 226.18 | 260.75 | 294.16 | | 40 |
| -50 | 39.65 | 80.25 | 50 | 119.40 | 157.32 | 194.08 | 229.69 | 264.14 | 297.43 | | 50 |
| -60 | 35.48 | 76.28 | 60 | 123.24 | 161.04 | 197.70 | 233.19 | 267.52 | 300.70 | | 60 |
| -70 | 31.28 | 72.29 | 70 | 127.07 | 164.76 | 201.30 | 236.67 | 270.89 | 303.95 | | 70 |
| -80 | 27.03 | 68.28 | 80 | 130.89 | 168.47 | 204.88 | 240.15 | 274.25 | 307.20 | | 80 |
| -90 | 22.71 | 64.25 | 90 | 134.70 | 172.16 | 208.46 | 243.61 | 277.60 | 310.43 | | 90 |
| -100 | 18.44 | 60.20 | 100 | 138.50 | 175.84 | 212.03 | 247.06 | 280.93 | 313.65 | | 100 |
| Ω/°C Ave. | .418 | .398 | | .385 | .373 | .362 | .350 | .339 | .327 | .320 | |

LABORATORY ACCURACY

Each ARIDET® RTD can be supplied with an exact (± 0.01 ohm) resistance value obtained at 32°F (0°C). This individual calibration data can be used to obtain accuracies of $\pm 0.05^\circ\text{F}$ at 32°F and $\pm 0.01\%$ of resistance thruout the range.

The temperature vs resistance tables are based on a 32° F ice point resistance of 100.00 ohms (R_0). From 32°F to sensor upper limit, the RTD equation is $R_t = R_0(1 + At + Bt^2)$ where R_0 , A and B are constants. These temperature vs resistance tables are based on the A and B constants for the platinum wire used in place of 100.00 ohms, the tabular data can be factored to yield $\pm 0.01\%$ accuracy for that particular RTD sensor.

Example: If the calibrated R_0 value is 99.89 ohms, multiply tabular values by 0.9989 to derive a corrected R vs T table. At 100°C the new value for a DIN 43760 RTD would be 138.35 ohms instead of 138.50 ohms.

MADE TO ORDER PRT ASSEMBLIES

CALIBRATION: All assemblies shown can be supplied with a different calibration and 0°C resistance value.

LENGTHS: Standard lengths for the 3 diameters is 24 inch (610mm). Longer lengths of compacted MgO insulated lead portion can be supplied up to the following:

| | | | |
|----------------------------------|--------------|--------------|--------------|
| Diameter D, inch (mm) | 0.125 (3.18) | 0.188 (4.78) | 0.250 (6.35) |
| Max. length feet (meters) | 700 (213) | 300 (91) | 175 (53) |

Duplex elements at 0.250 inch diameter will be approximately same length.

DUPLEX ELEMENTS:

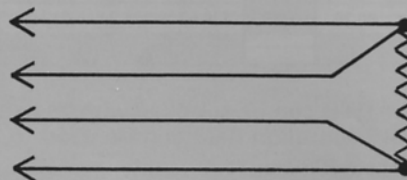
Can be supplied at 0.250 inch diameter only where suitable terminations can be made. Temperature Transmitters for Duplex circuits are not available for internal mounting in Connection Heads. The following styles can be made with Duplex Elements. Specify the 6-wire style for Duplex elements.

| | | | | | |
|---------------------|----------|----------|----------|-----------|-----------|
| 3-WIRE STYLE | PRT-14.3 | PRT-22.3 | PRT-96.3 | PRT-296.3 | PRT-396.3 |
| 6-WIRE STYLE | PRT-14.6 | PRT-22.6 | PRT-96.6 | PRT-296.6 | PRT-396.6 |

SINGLE CIRCUIT

-4 WIRE:

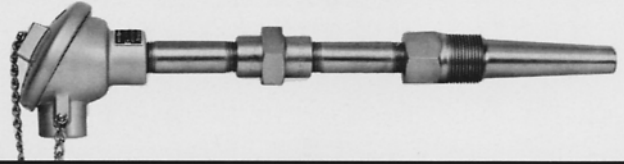
PRT type assemblies can be made with four leadwires with the following circuit.



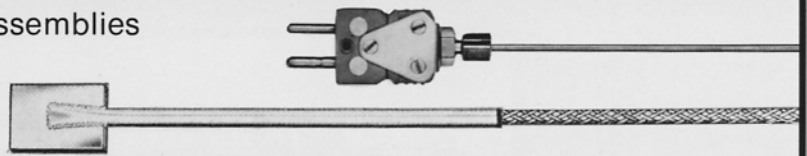
Send us your drawings/sketches for prompt quotations.

OTHER ARI PRODUCTS

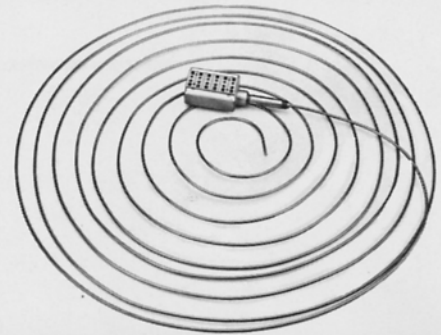
Thermowells and
Temperature Transmitters
Bulletin 6.1, 6.2, 6.3



AerOpak® Thermocouple Assemblies
Bulletin 1.0, 2.0, 3.0



Multilevel Temperature Profiling Assemblies
Bulletin 7.3



Electric Heaters
Bulletin 5.1, 5.2, 5.3



AerOpak®
Mineral Insulated Cable
Bulletin 4.0, 4.1

