

# RTD and Thermocouple Temperature Sensors

with Connection Head



Thermocouple or RTD

Cast Aluminum, Polypropylene or Stainless Steel Head

Weather Proof

Welded or Spring Loaded Stem

The Trerice Connection Head is available with both Type J and Type K Thermocouples, as well as RTD sensors. The weatherproofed head provides a conduit connection and is available in cast aluminum (screw cover), polypropylene (flip cover) and stainless steel (screw cover). The stem is either welded directly to the 1/2 NPT threaded connection, or is spring loaded to provide maximum sensitivity. The spring loaded stem must always be installed in a thermowell.

Extension wire and transmitter accessories are also available. Please consult the Temperature Sensor Accessories Section for details.

For applications where the process media may be corrosive or contained under pressure, the use of a thermowell is required to prevent damage to the sensor and facilitate its removal from the process. To prevent leakage of the process media, spring loaded sensors must always be installed in a thermowell.

## Specifications

### Sensor

T/C: Type J, Type K  
RTD: 100Ω, 1000Ω

### Hot Junction

T/C: Ungrounded  
RTD: Platinum, 3-wire

### Stem

316 stainless steel  
1/4" diameter

### Insulation

Ceramic

### Head

Cast aluminum, polypropylene, or stainless steel

### Process Connection

1/2 NPT welded or spring loaded

### Conduit Connection

3/4 NPT female

### Approximate Shipping Weight

1.1 lbs [0.50 kg]

## How to Order

Sample Order Number TJDZ04UWA  
TJD Z 04 U W A

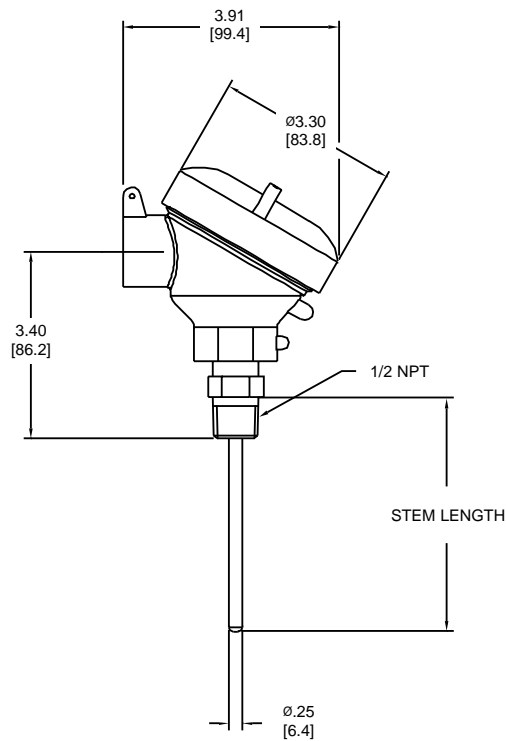
Sensor	Stem Style	Stem Length	Hot Junction	Connection	Head Material
<b>TJD</b> Type J T/C	<b>Z</b> 316SS, 1/4 O.D.	<b>02</b> 2 1/2" Stem	<b>U</b> Ungrounded (T/C)	<b>S</b> Spring Loaded, 1/2 NPT	<b>A</b> Aluminum
<b>TKD</b> Type K T/C		<b>04</b> 4" Stem	<b>D</b> 3 Wire (RTD)	<b>W</b> Welded, 1/2 NPT	<b>P</b> Polypropylene
<b>TDD</b> 100Ω RTD		<b>06</b> 6" Stem			<b>S</b> Stainless Steel
<b>TMD</b> 1000Ω RTD		<b>09</b> 9" Stem			
		<b>12</b> 12" Stem			

Other: Specify length in inches (24" maximum)

# RTD and Thermocouple Temperature Sensors

with Connection Head

All dimensions are nominal.  
Dimensions in [ ] are in millimeters.



## Sensor Specifications

### Thermocouple

Type	Color Code	Positive Lead	Negative Lead	Temperature Range
J	Black	Iron* (Fe) [white]	Constantan (Cu-Ni) [red]	32° to 1382°F (0° to 750°C)
K	Yellow	Nickel-Chromium (Ni-Cr) [yellow]	Nickel-Aluminum* (Ni-Al) [red]	32° to 2282°F (0° to 1250°C)

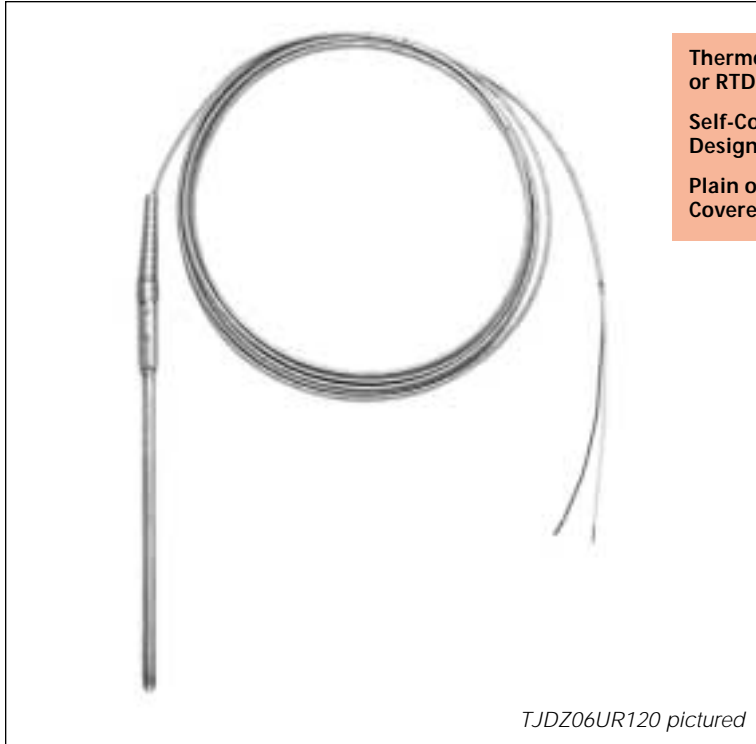
\*magnetic lead

### RTD

Type	Material	Resistance	Temperature Coefficient	Temperature Range
D	Platinum (Pt)	100Ω	$\alpha = 0.00385\Omega/\Omega/^\circ\text{C}$	-50° to 700°F (-45° to 400°C)
M	Platinum (Pt)	1000Ω	$\alpha = 0.00385\Omega/\Omega/^\circ\text{C}$	-50° to 700°F (-45° to 400°C)

# RTD and Thermocouple Temperature Sensors

with Integral Leadwire



Thermocouple or RTD  
Self-Contained Design  
Plain or Teflon Covered Stem

Trerice Integral Leadwire Sensors are available with an RTD, or a Type J or K Thermocouple. The stem transition includes a spring relief to prevent damage to the leadwire. A Teflon covered sensor and leadwire is offered for use with open tanks or corrosive process media (the Teflon covered sensor does not include a spring relief).

For applications where the process media may be corrosive or contained under pressure, the use of a thermowell is required to prevent damage to the sensor and facilitate its removal from the process.

TJDZ06UR120 pictured

## Specifications

<b>Sensor</b> T/C: Type J, Type K RTD: 100Ω, 1000Ω	<b>Stem</b> 316 stainless steel, 1/4" diameter	<b>Termination</b> Integral leadwire with spring relief or Teflon sheath (450°F maximum)	<b>Leadwire Jacketing</b> T/C: Fiberglass RTD: Teflon
<b>Hot Junction</b> T/C: Ungrounded RTD: Platinum, 3 wire	<b>Insulation</b> Ceramic		<b>Approximate Shipping Weight</b> 0.5 lbs [0.23 kg]

## How to Order

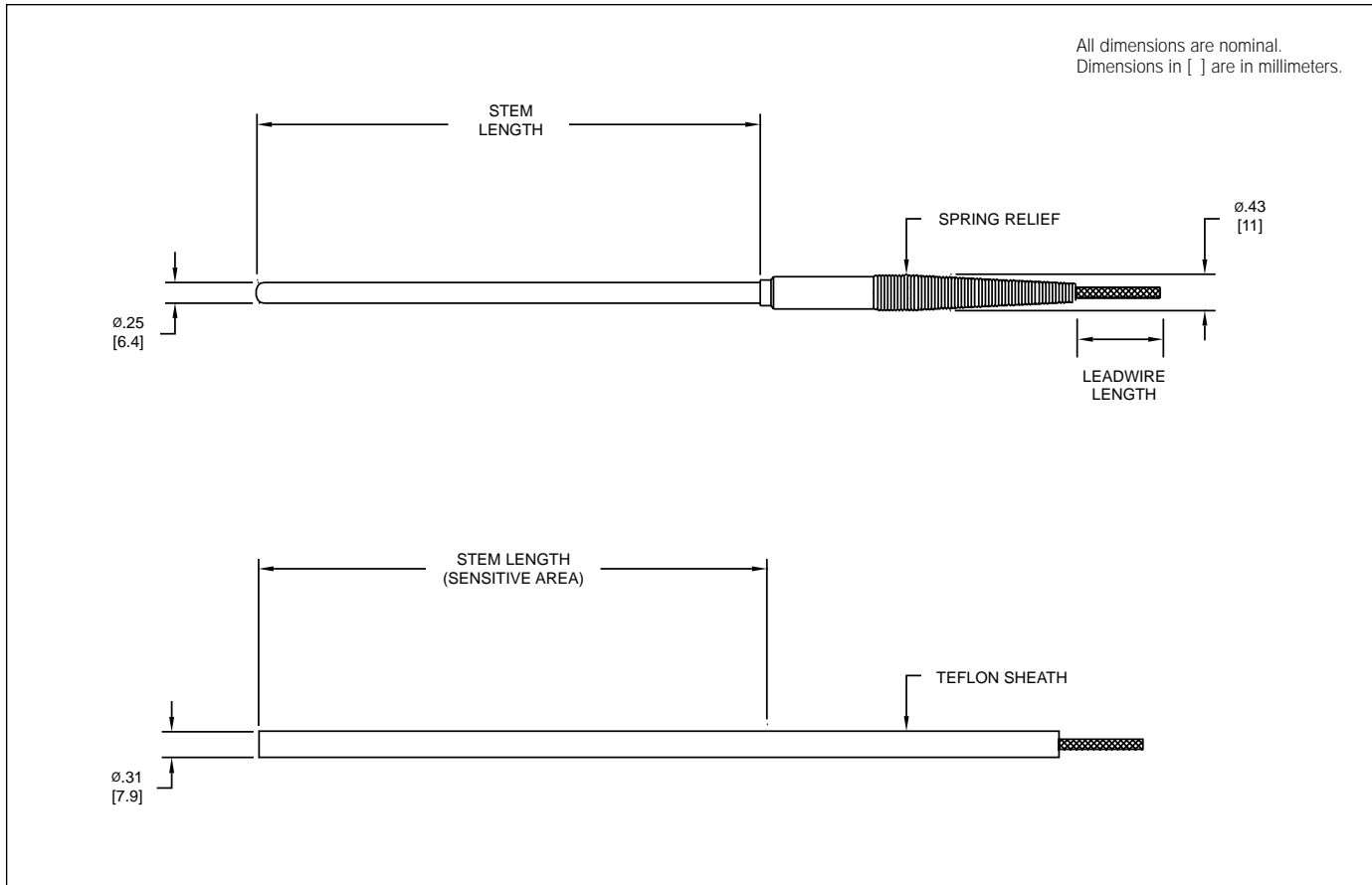
Sample Order Number TDDZ06DT024

Sensor	Stem Style	Stem Length	Hot Junction	Connection Style	Leadwire Length
<b>TJD</b> Type J T/C	<b>Z</b> 316SS, 1/4 O.D.	<b>02</b> 2 1/2" Stem	<b>U</b> Ungrounded (T/C)	<b>R</b> Integral Leadwire with Relief Spring	Specify Length in Inches
<b>TKD</b> Type K T/C		<b>04</b> 4" Stem	<b>D</b> 3 Wire (RTD)	<b>T</b> Integral Leadwire with Teflon Sheath	(i.e., 10 feet=120)
<b>TDD</b> 100Ω RTD		<b>06</b> 6" Stem			
<b>TMD</b> 1000Ω RTD		<b>09</b> 9" Stem			
		<b>12</b> 12" Stem			

Other: Specify length in inches (24" maximum)

# RTD and Thermocouple Temperature Sensors

with Integral Leadwire



## Sensor Specifications

### Thermocouple

Type	Color Code	Positive Lead	Negative Lead	Temperature Range
J	Black	Iron* (Fe) [white]	Constantan (Cu-Ni) [red]	32° to 1382°F (0° to 750°C)
K	Yellow	Nickel-Chromium (Ni-Cr) [yellow]	Nickel-Aluminum* (Ni-Al) [red]	32° to 2282°F (0° to 1250°C)

\*magnetic lead

### RTD

Type	Material	Resistance	Temperature Coefficient	Temperature Range
D	Platinum (Pt)	100Ω	$\alpha = 0.00385\Omega/\Omega/^\circ\text{C}$	-50° to 700°F (-45° to 400°C)
M	Platinum (Pt)	1000Ω	$\alpha = 0.00385\Omega/\Omega/^\circ\text{C}$	-50° to 700°F (-45° to 400°C)

Note: Teflon covered sensors are limited to 450°F (232°C).

# Thermocouple Temperature Sensor

## Plug with Mating Jack



Type J or K  
Thermocouple  
Color Coded  
Plug  
Polarized  
Mating Jack

The Trerice Plug with Mating Jack Sensor is available with a Type J or Type K Thermocouple. This sensor is of a simple design, and provides for easy installation or replacement. The plug is color coded by thermocouple type, and the mating jack is polarized to ensure proper installation.

Extension wire is also available. Please consult the Temperature Sensor Accessories Section for details.

TJDZ06UP pictured

## Specifications

<b>Sensor</b> T/C: Type J, Type K  <b>Hot Junction</b> Ungrounded	<b>Stem</b> 316 stainless steel, 1/4" diameter  <b>Insulation</b> Ceramic	<b>Connection</b> Standard size plug with mating jack	<b>Plug</b> Quick disconnect, color coded  <b>Approximate Shipping Weight</b> 0.3 lbs [0.14 kg]
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## How to Order

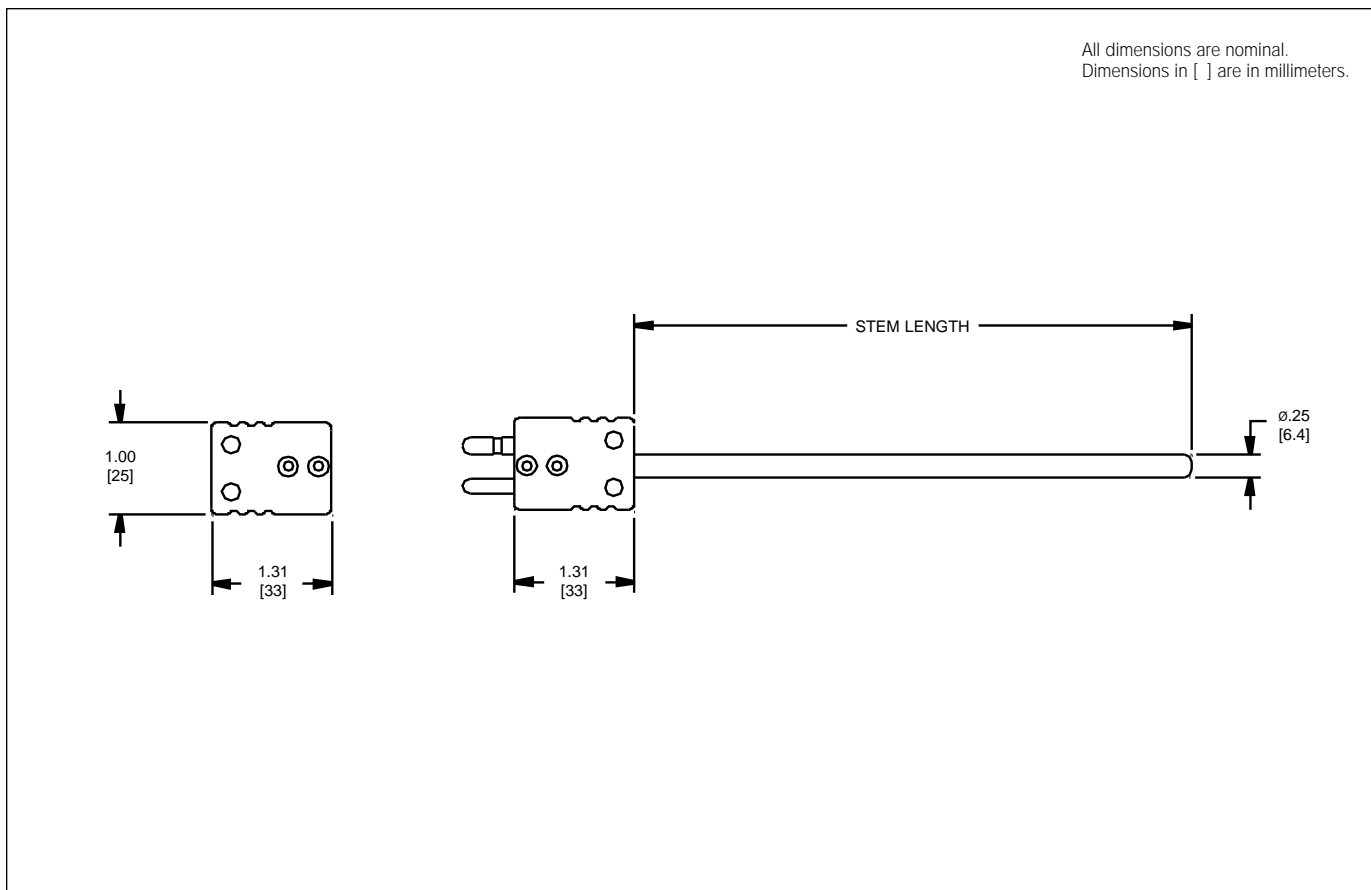
Sample Order Number TKDZ06UP  
TKD Z 06 U P

Sensor	Stem Style	Stem Length	Hot Junction	Connection Style
TJD Type J T/C	Z 316SS, 1/4 O.D.	02 2 1/2" Stem 04 4" Stem 06 6" Stem 09 9" Stem 12 12" Stem	U Ungrounded	P Plug with Mating Jack
TKD Type K T/C				

Other: Specify length in inches (24" maximum)

# Thermocouple Temperature Sensor

Plug with Mating Jack



## Sensor Specifications

### Thermocouple

Type	Color Code	Positive Lead	Negative Lead	Temperature Range
J	Black	Iron* (Fe) [white]	Constantan (Cu-Ni) [red]	32° to 1382°F (0° to 750°C)
K	Yellow	Nickel-Chromium (Ni-Cr) [yellow]	Nickel-Aluminum* (Ni-Al) [red]	32° to 2282°F (0° to 1250°C)

\*magnetic lead

Note: Plug is limited to 400°F (205°C).