# Thermocouple and RTD


**Oil & Gas**
**Refining & Chemical**
**Power Generation**
**OEM & Panel Builders**

REOTEMP

## Thermocouples & RTDS 3-10 DAYS

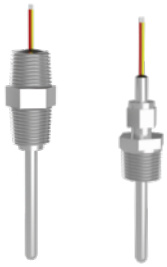

Head Assembly


Remote Head Assembly


Model W Hart Transmitter


Z-Temp


Stem Assembly with Plug


Stem Assembly with Plain Leads

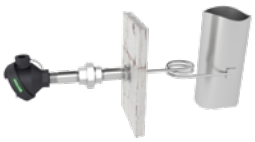

Stem Assembly with Transition


Ceramic Protection Tube


Metal Protection Tube


MaxLife Silicon Carbide Platinum Thermocouple


Thermowell

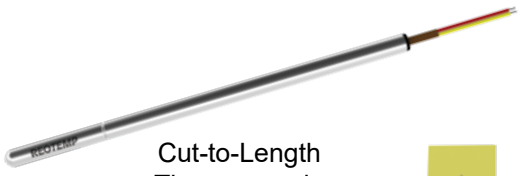

Weld Pad (Tube Skin)


Thermocouple Replacement Element

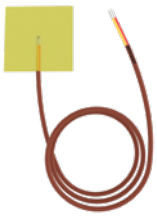

Magnetic Handheld Probe


Stainless Steel Piercing Probe


Pipe Mounting Kit


Cut-to-Length Thermocouple


Embedment Bearing

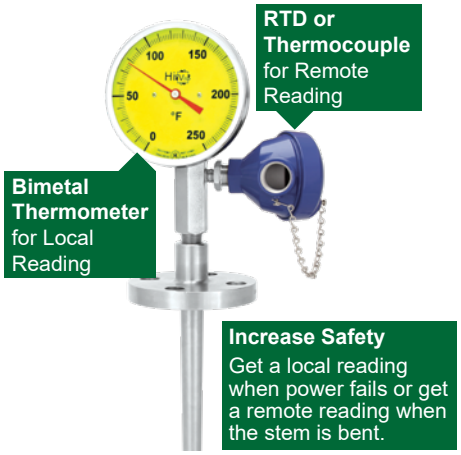

Surface Mount


Slimline Transmitter


Remote Digital Thermometer


Digital Thermometer


Railcar Thermometer



DMT

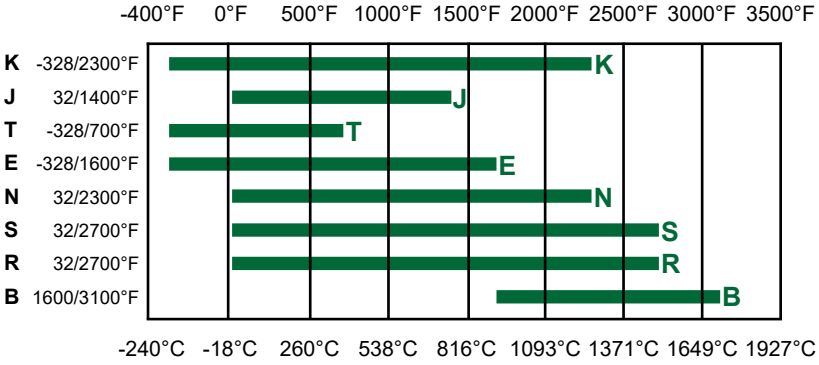

Multipoint Sensors

## Work with the Electrical Temperature Experts

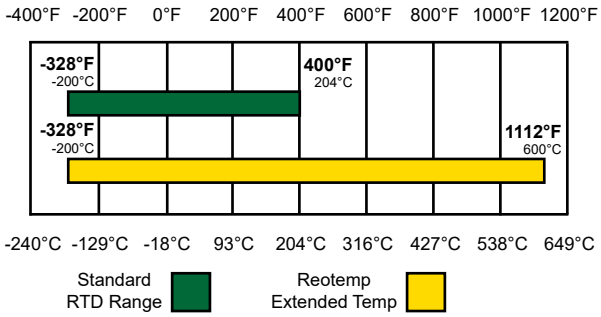
- ► Meet with Our Product Engineering Team to Develop Application Specific Solutions
- ► Crossover Existing Part Numbers
- ► Calibration Certificates, Wake Frequency Calculations, Material Test Reports, and PMI
- ► 2D and 3D Drawings

# Reference Material

### THERMOCOUPLE TEMPERATURE OPERATING RANGES




### RTD TEMPERATURE LIMITS




### THERMOCOUPLE & RTD ACCURACIES

| | Type K | Type J | Type T | Type E | Type N | Type S | Type R | Type B | RTD Class B | RTD Class A |
|---|---|---|---|---|---|---|---|---|---|---|
| -328°F | * | – | * | * | – | – | – | – | ± 2.34°F | ± 2.34°F |
| -148°F | * | – | * | * | – | – | – | – | ± 1.44°F | ± 1.44°F |
| 32°F | ± 3.96°F | ± 3.96°F | ± 1.8°F | ± 3.06°F | ± 3.96°F | ± 2.7°F | ± 2.7°F | – | ± 0.54°F | ± 0.27°F |
| 392°F | ± 3.96°F | ± 3.96°F | ± 2.7°F | ± 3.06°F | ± 3.96°F | ± 2.7°F | ± 2.7°F | – | ± 2.34°F | ± 0.99°F |
| 752°F | ± 5.4°F | ± 5.4°F | – | ± 3.6°F | ± 5.4°F | ± 2.7°F | ± 2.7°F | – | ± 4.14°F | ± 4.14°F |
| 1112°F | ± 8.1°F | ± 8.1°F | – | ± 5.4°F | ± 8.1°F | ± 2.7°F | ± 2.7°F | – | ± 5.94°F | ± 5.94°F |
| 1472°F | ± 10.8°F | – | – | ± 7.2°F | ± 10.8°F | ± 3.6°F | ± 3.6°F | – | – | – |
| 1832°F | ± 13.5°F | – | – | – | ± 13.5°F | ± 4.5°F | ± 4.5°F | ± 9°F | – | – |
| 2192°F | ± 16.2°F | – | – | – | ± 16.2°F | ± 5.4°F | ± 5.4°F | ± 10.8°F | – | – |
| 2552°F | – | – | – | – | – | ± 6.3°F | ± 6.3°F | ± 12.6°F | – | – |
| 2912°F | – | – | – | – | – | – | – | ± 14.4°F | – | – |

**Hi-Accuracy™**

**Looking for better accuracy?**

**RTDs**
Up to 5x more accurate than Class B RTDs with the Hi-Accuracy™ option.

**Thermocouples**
Up to 2x more accurate with the Special Limits of Error option.

Note: The accuracies in the above table are estimates given at fixed points, they do not apply to temperature ranges and are intended only as examples to give a general idea of what can be expected. Consult Reotemp if a specific accuracy is required or to confirm accuracies at any points not listed in the above table.
*Thermocouples are normally supplied to meet the tolerances specified in the table for temperatures above 32°F. The same materials, however, may not fall within the tolerances for temperatures below 32°F. If materials are required to meet the tolerances stated for temperatures below 32°F, contact Reotemp sales.

### TEMP. LIMITS OF WIRE JACKETS

| Jacket | Temp. Limit |
|---|---|
| PVC | 221°F |
| Teflon | 400°F |
| Fiberglass | 900°F |

### THERMOCOUPLE WIRE COLOR CODES (U.S.A. ANSI)

| | Thermocouple Grade | Extension Grade | Plug/Jack | | Thermocouple Grade | Extension Grade | Plug/Jack |
|---|---|---|---|---|---|---|---|
| K | Brown, Yellow +, Red - | Yellow, Yellow +, Red - | Yellow | N | Brown, Orange +, Red - | Orange, Orange +, Red - | Orange |
| J | Brown, White +, Red - | Black, White +, Red - | Black | S | None Established | Green, Black +, Red - | Green |
| T | Brown, Blue +, Red - | Blue, Blue +, Red - | Blue | R | None Established | Green, Black +, Red - | Green |
| E | Brown, Purple +, Red - | Purple, Purple +, Red - | Purple | B | None Established | Grey, Grey +, Red - | White |

## Why Reotemp?

**Online Product Configurators**
Our online product configurators are powerful tools that make specifying temperature and pressure instrumentation quick & easy. Create part numbers, see list pricing, & generate custom engineering drawings in seconds.

**Fast Standard Lead Times**

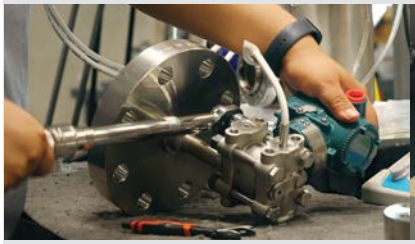
**Expedites Available**

**Manufacturing in the USA Since 1965**
Reotemp is a globally recognized American manufacturer of temperature and pressure instrumentation.


Mechanical Temperature


Mechanical Pressure


Electrical Temperature


Diaphragm Seals


Electrical Pressure


Thermowells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