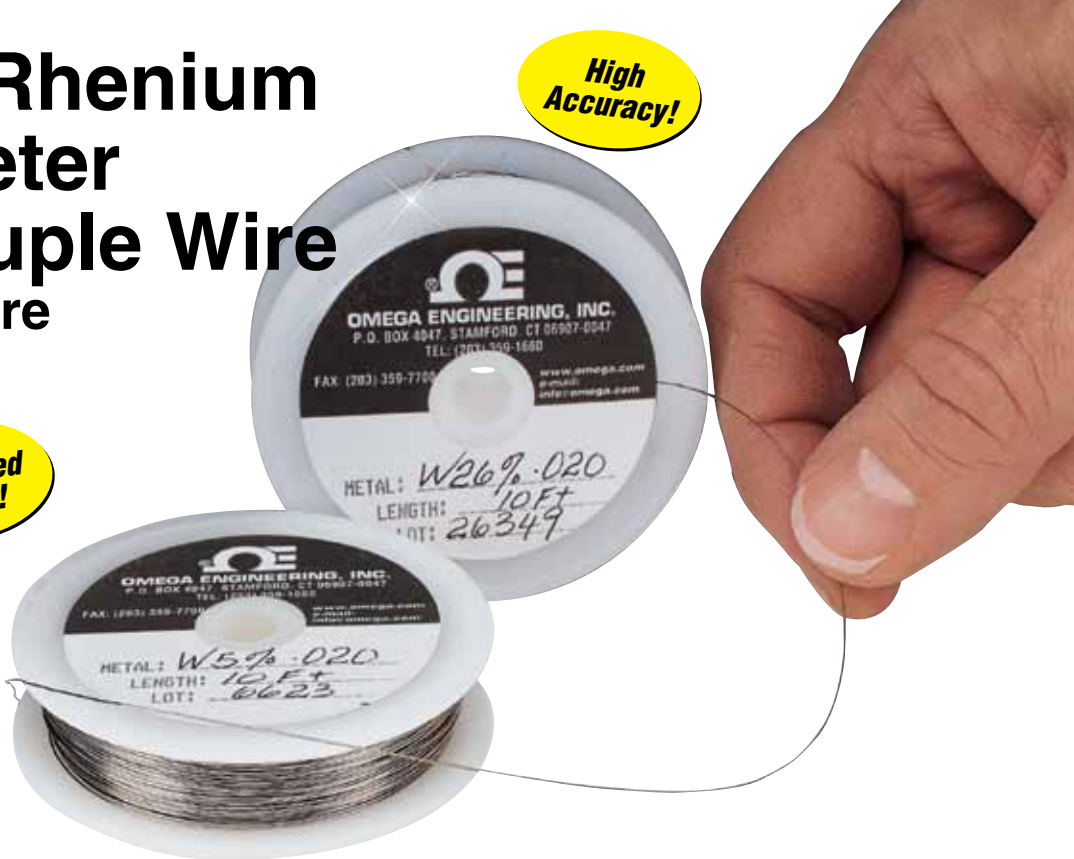
Tungsten-Rhenium Fine Diameter Thermocouple Wire

High-Temperature Applications



- **Calibrated Accuracy Guaranteed**
- **Melting Point in Excess of 2315°C (4200°F)**

Tungsten-rhenium thermocouple alloy combinations were developed to meet the need for measuring ultra-high temperatures in the 2315°C (4200°F) range.

OMEGA sells 3 widely used tungsten-rhenium thermocouple alloy combinations:

Type G: Tungsten (+) vs. Tungsten 26% rhenium (–)

Type C: Tungsten 5% rhenium (+) vs. Tungsten 26% rhenium (–)

Type D: Tungsten 3% rhenium (+) vs. Tungsten 25% rhenium (–)

To guarantee the limits of error, OMEGA® sells tungsten-rhenium thermocouple wire only in matched pairs by the double foot. Because of the inherent brittleness of unalloyed tungsten, rhenium has been added to the positive leg of types C and D to improve handling characteristics. The average emf of types C and D is slightly less than that of the unalloyed type G.

All 3 thermocouple combinations can be used to 4200°F (2315°C) in hydrogen or inert-gas atmospheres and in a vacuum. They deteriorate rapidly under oxidizing conditions and should not be used in air or atmospheres containing oxygen.

For other wire sizes and large quantities, consult the Special Quotations department.

Uninsulated Refractory Metal Thermocouple Wire

To Order

Symbol	Material	Wire Dia. mm (inch)	Model Number
G*	Tungsten vs. Tungsten 26% Re	0.08 (0.003) 0.13 (0.005) 0.25 (0.010) 0.38 (0.015) 0.51 (0.020)	**WW26-003** **WW26-005** **WW26-010** **WW26-015** **WW26-020**
C*	Tungsten 5% Re vs. Tungsten 26% Re	0.08 (0.003) 0.13 (0.005) 0.25 (0.010) 0.38 (0.015) 0.51 (0.020)	**W5W26-003** **W5W26-005** **W5W26-010** **W5W26-015** **W5W26-020**
D*	Tungsten 3% Re vs. Tungsten 25% Re	0.13 (0.005) 0.25 (0.010) 0.38 (0.015) 0.51 (0.020)	**W3W25-005** **W3W25-010** **W3W25-015** **W3W25-020**

** Not an ANSI symbol.*
*** Sold only as matched pairs. A double foot is 1' of positive and 1' of matched negative wire.*
Note: *Metric dimensions are approximate.*
Ordering Example: W5W26-010, *1' of 0.25 mm (0.010") Dia., uninsulated refractory metal tungsten-rhenium thermocouple wire.*

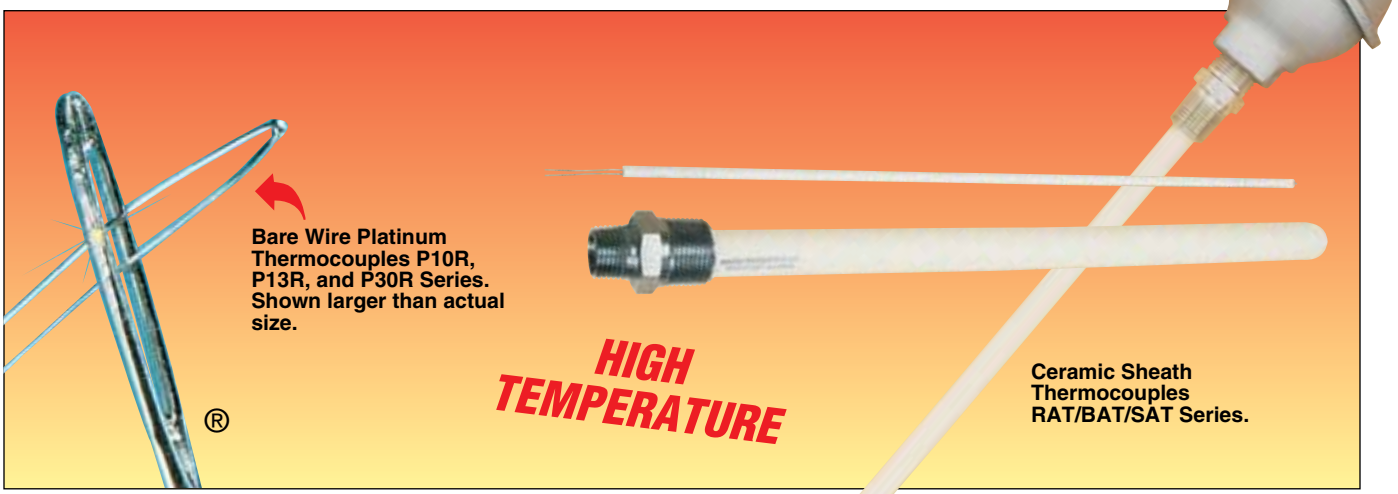
Extension-Grade Wire
Uninsulated Lead Wire for Tungsten-Rhenium Thermocouples

Symbol	Thermocouple Used With	Model Number	Temperature Range °C (°F)	Wire Dia.
CX*	W5%Re vs W26%Re	**EX-C-010**	204 to 426 (400 to 800)	10 mil
		EX-C-020	204 to 426 (400 to 800)	20 mil

Insulated extension-grade wire also available.
** Not an ANSI symbol.*

Extreme (High) Temperature Sensors and Accessories

Platinum Thermocouples Type R, S, and B, Tungsten-Rhenium Type C and D



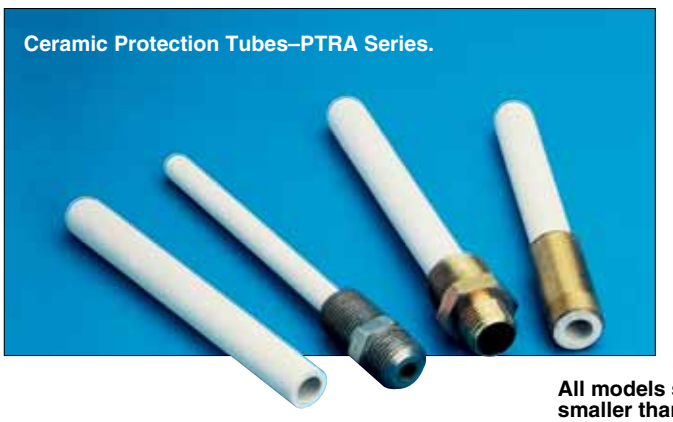
Bare Wire Platinum Thermocouples P10R, P13R, and P30R Series. Shown larger than actual size.

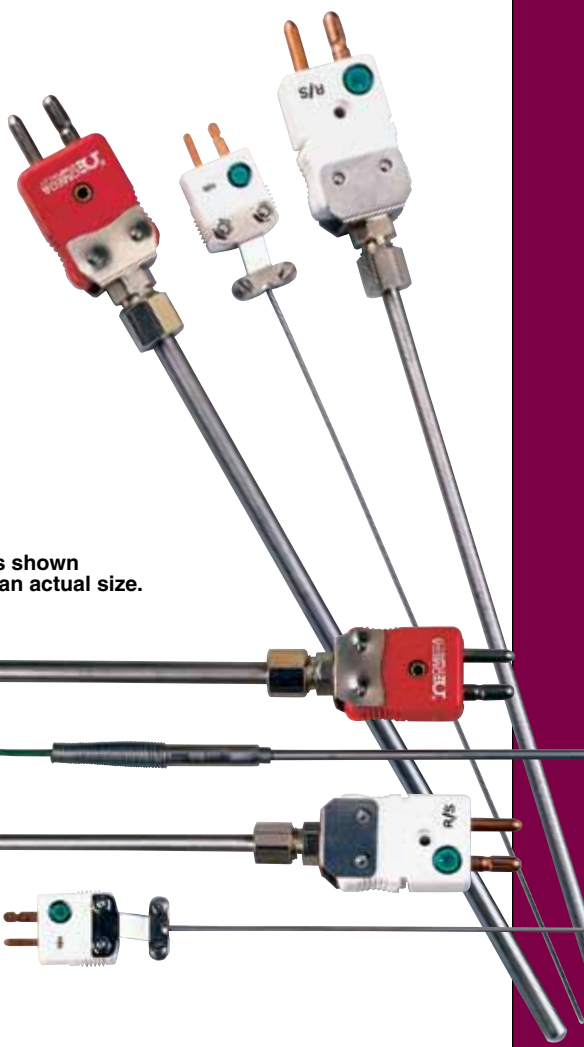
Ceramic Sheath Thermocouples RAT/BAT/SAT Series.

High Temperature Ceramic Accessories ORX Series.

Extreme (High) Temperature Metal Sheathed Probes (2315°C [4200°F]) XMO Series.

Ceramic Connectors NOX Series.





All models shown smaller than actual size.

Insulated Duplex Extension Wire

To Order

Material	Thermocouple Used With	Model Number	Maximum Temperature °C	Maximum Temperature °F	Wire Dia. AWG	Wire Dia. mm
Cu-Alloy 11	R and S	**EXTT-RS-24**	200	392	24	0.51
		EXGG-RS-24	200	392	24	0.51
		EXTT-RS-20	200	392	20	0.81
Cu-Cu	B	**EXTT-B-26S**	100	212	26	0.40
		EXTT-B-24S	100	212	24	0.51
		EXTT-B-20	100	212	20	0.81
Ni/Al-Ni/Cu	C	**EXGG-C-24**	427	800	24	0.81
		EXTT-C-24	260	500	24	0.81