

Platinum-Rhodium-Single Fine-Diameter Thermocouple Wire for High-Temperature Applications

- ✓ Types S, R, and B
- ✓ Type R and S Temperature Ranges from 1398 to 1482°C (2550 to 2700°F)
- ✓ Type B is Rated for Continuous Use Up to 1704°C (3100°F)

For high resistance to oxidation and corrosion at high temperatures, NEWPORT offers the highest-quality uninsulated wire for 3 types of "noble metal" thermocouples:

Type S: Platinum (–) vs. Platinum 10% Rhodium (+)

Type R: Platinum (–) vs. Platinum 13% Rhodium (+)

Type B: Platinum 6% Rhodium (–) vs. Platinum 30% Rhodium (+)

Types R and S are recommended for continuous use in oxidizing or inert atmospheres up to 1398°C (2550°F) or short-term exposures to 1482°C (2700°F). Type B is rated for continuous use up to 1704°C (3100°F) in oxidizing or inert atmospheres. When operating near these maximum temperatures, the heavier-gage wire sizes are recommended.

All 3 thermocouple types can be used in a vacuum for short periods. Type B offers the greatest stability in such applications. None should be used in reducing atmospheres or in atmospheres containing metallic or non-metallic vapors unless protected by non-metallic protection tubes. Do not insert directly into metallic protection tubes.

Sizes range from 0.025 to 0.812 mm (0.001 to 0.032") diameter. When requested, wire is supplied in matched pairs that meet or exceed standard limits of error. Special-limits-of-error wire is supplied on request and must be ordered as matched pairs.

Gold and CHROMEGA® Thermocouples and Wire

PFA Insulated Gold-0.07 Atomic% Fe Wire (Negative)

Model Number	Dia. mm (inch)
TFAU.07FE-003	0.076 (0.003)
TFAU.07FE-005	0.13 (0.005)
TFAU.07FE-010	0.25 (0.010)

High Accuracy!



Uninsulated Noble Metal Thermocouple Wire

To Order Visit newportUS.com/sppl for Pricing and Details

Material	Nom Wire Dia. mm (inch)	Model No.	Material	Nom Wire Dia. mm (inch)	Model No.
Platinum (RN, SN)	0.03 (0.001)	SPPL-001	Platinum 13% Rh (RP)	0.03 (0.001)	SP13RH-001
	0.05 (0.002)	SPPL-002		0.05 (0.002)	SP13RH-002
	0.08 (0.003)	SPPL-003		0.08 (0.003)	SP13RH-003
	0.13 (0.005)	SPPL-005		0.13 (0.005)	SP13RH-005
	0.20 (0.008)	SPPL-008		0.20 (0.008)	SP13RH-008
	0.25 (0.010)	SPPL-010		0.25 (0.010)	SP13RH-010
	0.38 (0.015)	SPPL-015		0.38 (0.015)	SP13RH-015
	0.51 (0.020)	SPPL-020		0.51 (0.020)	SP13RH-020
	0.64 (0.025)	SPPL-025		0.64 (0.025)	SP13RH-025
	0.81 (0.032)	SPPL-032		0.81 (0.032)	SP13RH-032
Platinum 10% Rh (SP)	0.03 (0.001)	SP10RH-001	Platinum 6% Rh (BN)	0.20 (0.008)	SP6RH-008
	0.05 (0.002)	SP10RH-002		0.25 (0.010)	SP6RH-010
	0.08 (0.003)	SP10RH-003		0.38 (0.015)	SP6RH-015
	0.13 (0.005)	SP10RH-005		0.51 (0.020)	SP6RH-020
	0.20 (0.008)	SP10RH-008		0.81 (0.032)	SP6RH-032
	0.25 (0.010)	SP10RH-010	Platinum 30% Rh (BP)	0.20 (0.008)	SP30RH-008
	0.38 (0.015)	SP10RH-015		0.25 (0.010)	SP30RH-010
	0.51 (0.020)	SP10RH-020		0.38 (0.015)	SP30RH-015
	0.64 (0.025)	SP10RH-025		0.51 (0.020)	SP30RH-020
	0.81 (0.032)	SP10RH-032		0.81 (0.032)	SP30RH-032

Note: Metric dimensions are approximate.

Ordering Example: 100" of SP13RH-005, 0.005" Dia. Platinum 13% Rh wire.

Insulated Duplex Extension Grade Wire

Thermocouple Material	Used With	Model AWG	Temp Number	Maximum	
				°C	°F
Cu-Alloy 11	R and S	24	EXTT-RS-24	200	392
		24	EXGG-RS-24	200	392
		20	EXTT-RS-20	200	392
Cu-Cu	B	26	EXTT-B-26S	100	212
		24	EXPP-B-24S	100	212
		20	EXGG-B-20	100	212

Note: Published prices are based on market value at time of printing and are subject to change due to Nickel surcharges, Chromium and precious-metal market fluctuations.

Platinum-Rhodium Matched Pair

Fine-Diameter Thermocouple Wire for High-Temperature Applications

- ✓ Types S, R, and B Selected to Give the Highest Accuracy
- ✓ Available in Tungsten/Tungsten-Rhenium Alloys Types G, C, D

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Type B: Platinum 6% Rhodium (–) vs. Platinum 30% Rhodium (+)

Types R and S are recommended for continuous use in oxidizing or inert atmospheres up to 1398°C (2550°F) or short-term exposures to 1482°C (2700°F). Type B is rated for continuous use up to 1704°C (3100°F) in oxidizing or inert atmospheres. When operating near these maximum temperatures, the heavier-gage wire sizes are recommended.

All 3 thermocouple types can be used in a vacuum for short periods. Type B offers the greatest stability in such applications. None should be used in reducing atmospheres or in atmospheres containing metallic or non-metallic vapors unless protected by non-metallic protection tubes. Do not insert directly into metallic protection tubes.

Sizes range from 0.03 to 0.81 mm (0.001 to 0.032") diameter. These matched pairs are selected to meet or exceed standard limits of error. Reference Grade wire is also available as matched pairs; consult sales for price and availability.

Discount Schedule	
1 to 24"	Net
25 to 99"	.5%
100 to 249"	.7%
250 and up	.10%



Uninsulated Matched Pair Noble Metal Thermocouple Wire

To Order Visit newportUS.com/sppl for Pricing and Details

T/C Type	Material	Wire Dia. mm (inch)	Model No.
R	Platinum vs Platinum-13% Rhodium	0.03 (0.001)	SP13R-001
		0.05 (0.002)	SP13R-002
		0.08 (0.003)	SP13R-003
		0.13 (0.005)	SP13R-005
		0.20 (0.008)	SP13R-008
		0.25 (0.010)	SP13R-010
		0.38 (0.015)	SP13R-015
		0.51 (0.020)	SP13R-020
		0.64 (0.025)	SP13R-025
S	Platinum vs Platinum-10% Rhodium	0.03 (0.001)	SP10R-001
		0.05 (0.002)	SP10R-002
		0.08 (0.003)	SP10R-003
		0.13 (0.005)	SP10R-005
		0.20 (0.008)	SP10R-008
		0.25 (0.010)	SP10R-010
		0.38 (0.015)	SP10R-015
		0.51 (0.020)	SP10R-020
		0.64 (0.025)	SP10R-025
B	Platinum-6% Rhodium vs Platinum-30% Rhodium	0.03 (0.001)	SP10R-032
		0.05 (0.002)	SP10R-032
		0.08 (0.003)	SP10R-032
		0.13 (0.005)	SP10R-032
		0.20 (0.008)	SP10R-032
		0.25 (0.010)	SP30R-008
		0.38 (0.015)	SP30R-010
		0.51 (0.020)	SP30R-015
		0.64 (0.025)	SP30R-020
		0.81 (0.032)	SP30R-032

* Ordering unit of measure is double inch. A double inch is 25 mm (1") of positive and 25 mm (1") of matching negative wire.

Ordering Example: Quantity = 100" of SP10R-010, 100" of Type S positive and 100" of matching Type S negative wire, 0.010 Dia., 100 x 16.00 = \$1600.

Note: Metric dimensions are approximate.

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