

# THERMOCOUPLE WIRE

## Twisted FEP Insulated 400°F (200°C)

### APPLICATIONS

- Temperature Sensors
- Aerospace
- Transportation
- Cryogenics
- Autoclaves
- FDA Approved Applications
- Composites

### AVAILABLE OPTIONS

- Metal Overbraids
- Galvanized Half-Oval Armor
- Tight Lay Lengths
- Multi-Pair Cables
- ETFE Insulation Rated to 300°F (150°C)
- Special Color Codes
- Calibration Test Reports

### PRODUCT FEATURE

- Continuous use up to 400°F (200°C)
- Excellent Chemical Resistant
- Excellent Electrical Properties
- Flame Retardant
- Passes IEEE 383 Flame Test
- Passes VW-1 Flame Test



### PRODUCT SPECIFICATIONS

**CONDUCTORS:** Solid or stranded thermocouple wire per ASTM E230 & ANSI MC96.1

**INSULATIONS:** Flame retardant extruded fluoropolymer FEP

**CONSTRUCTION:** Twisted conductors

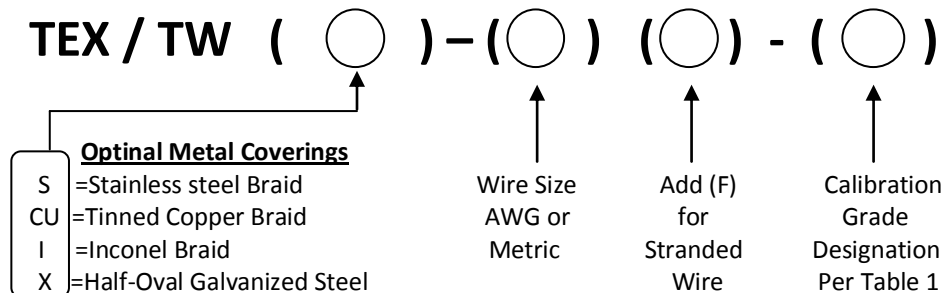
**LAY LENGTH:** 1-1/2" (38MM) to 2-1/2" (64MM)

**OPERATING TEMPERATURE:** -328°F (-200°C) to +400°F (+200°C) continuous

**LIMITS OF ERROR:** Conforms to ASTM E230, IEC 584 and ANSI MC 96.1

**COLOR CODE:** Conforms to ASTM E230 and ANSI MC 96.1 (International Color Codes Available)

### ORDERING CODE



Conductor Size		Insulation Thickness		Jacket Thickness		Outer Diameter		Net Weight	
AWG	(MM)	inches	(MM)	inches	(MM)	inches	(MM)	LB/MF	(KG/KM)
16	(1.29)	.008	(.20)	2-1/2	(64)	.134	(3.4)	19	(28)
16F*	(1.47)	.008	(.20)	2-1/2	(64)	.148	(3.8)	21	(31)
18	(1.02)	.008	(.20)	2	(51)	.112	(2.8)	12	(18)
20	(0.81)	.008	(.20)	2	(51)	.096	(2.4)	8.3	(12)
20F*	(0.97)	.008	(.20)	2	(51)	.104	(2.6)	9.2	(14)
22	(0.64)	.008	(.20)	2	(51)	.082	(2.1)	5.6	(8.3)
24	(0.51)	.008	(.20)	1-1/2	(38)	.072	(1.8)	4.3	(6.4)
24F*	(0.61)	.008	(.20)	1-1/2	(38)	.080	(2.0)	4.8	(7.1)
26	(0.41)	.008	(.20)	1-1/2	(38)	.064	(1.6)	3.1	(4.6)
28	(0.32)	.008	(.20)	1-1/2	(38)	.058	(1.5)	2.0	(3.0)
30	(0.25)	.008	(.20)	1-1/2	(38)	.052	(1.3)	1.5	(2.2)

**MANY ITEMS AVAILABLE FROM STOCK WITHIN 24 HOURS**

The products referenced above represent the most popular constructions. Other constructions can be manufactured to meet individual specification and application requirements. Contact factory for additional information.

**Table 1**

Initial Calibration Tolerances Per ASTM E230 and ANSI MC96.1

Thermocouple Type	Temperature Range °F (°C)	Grade Designation	Tolerance-Reference Junction 32F (0C)		
			Standard Grade Limits °F (°C) whichever is greater	Grade Designation	Special Grade Limits °F (°C) whichever is greater
<b>Thermocouple Wire</b>					
T	32 (0) to 700 (370)	T	±1.8 (1) or ±0.75%	TT	±0.9 (0.5) or 0.4%
J	32 (0) to 1400 (760)	J	±4 (2.2) or ±0.75%	JJ	±2 (1.1) or 0.4%
E	32 (0) to 1600 (870)	E	±3.1 (1.7) or ±0.50%	EE	±1.8 (1) or 0.4%
K or N	32 (0) to 2300 (1260)	K or N	±4 (2.2) or ±0.75%	KK or NN	±2 (1.1) or 0.4%
T*	-328 (-200) to 32 (0)	T	±1.8 (1) or ±1.5%	TT	±0.9 (0.5) or 0.8%**
E*	-328 (-200) to 32 (0)	E	±3.1 (1.7) or ±1%	EE	±1.8 (1) or 0.5%**
K*	-328 (-200) to 32 (0)	K	±4 (2.2) or ±2%	KK	**
<b>Extension Wire</b>					
TX	32 (0) to 212 (100)	TX	±1.8 (1)	TTX	±0.9 (0.5)
JX	32 (0) to 400 (200)	JX	±4 (2.2)	JJX	±2 (1.1)
EX	32 (0) to 400 (200)	EX	±3.1 (1.7)	EEX	±1.8 (1)
KX or NX	32 (0) to 400 (200)	KX or NX	±4 (2.2)	KKX or NNX	±2 (1.1)
RX or SX	32 (0) to 400 (200)	RX or SX	±9 (5)		
BX	32 (0) to 212 (100)	BX***	±7.6 (4.2)		
BX	32 (0) to 400 (200)	BX ALLOY***	±6.7 (3.7)		

\* Thermocouple material is normally supplied to meet tolerances above 0°C (32°F). If material is required to meet tolerances below 0°C (32°F), the purchase order must so state. Special selection of material is required.

\*\* Suggested initial calibration tolerance. Requirements should be discussed between purchaser and supplier.

\*\*\* Copper vs. copper can be used as an extension for Type B thermocouples if the transition is below 100°C (212°F). Above 100°C (212°F), PCLW30-6 alloy should be used as the positive extension wire.