

Thermocouple Tolerances and Calibration

ANSI Tolerances

All thermocouple wire and extension wire is supplied to meet Standard Tolerances of ANSI Circular MC96.1–1982. Special tolerances are also available per ANSI MC96.1 at an extra charge. The standard and special tolerances for thermocouple and extension wires are given in the accompanying tables — see pages 14-103 and 14-105. Where tolerances are given in percent, the percentage applies to the temperature being measured.

Calibration and Certification

Thermocouple wire and elements can be factory calibrated and certified at an extra charge. Each thermocouple, coil, reel, or spool of wire is then tagged to show the individual departure from curve. The normal calibrating temperature range is 32°F–2000°F (0°C–1093°C), depending on wire type, gauge size and insulation type. A certificate of calibration is furnished upon request for all calibrated items. Each item calibrated is also tagged with the results.

ANSI Type J Duplex Thermocouple Wire

ANSI color code— White positive/Red negative— Over All Brown

“J” Thermocouple Wire – Stocked on 100 and 250 Foot Spools



TC Type	Wire Type	Insulation	Insulation Temperature Limits (°F/°C)	Nominal Overall Dimensions (inches)	Part Number	
					100 Foot Spool	250 Foot Spool
J	20 Gauge Solid	Fiberglass	900/482	.060 × .106	TCWR-1028	TCWR-1032
J	20 Gauge Stranded	Fiberglass	900/482	.066 × .118	TCWR-1033	TCWR-1035
J	24 Gauge Solid	Fiberglass	900/482	.048 × .082	TCWR-1037	TCWR-1069
J	24 Gauge Stranded	Fiberglass	900/482	.048 × .082	TCWR-1038	TCWR-1070
J	20 Gauge Stranded	Fiberglass with SS overbraid	900/482	.088 × .140	TCWR-1047	TCWR-1051
J	20 Gauge Solid	FEP Teflon®	400/204	.068 × .116	TCWR-1060	TCWR-1062
J	24 Gauge Stranded	Fiberglass with SS overbraid	900/482	.074 × .100	TCWR-1048	TCWR-1052

“J” Thermocouple Wire – Order Length Required (50 Foot Minimum)

B & S ga.	Wire Type	Insulation Over All	Insulation Each Conductor	Maximum Temp.		Nominal Overall Dimensions (inches)	Part Number
				°F	°C		
16	Solid	Glass Braid	Glass Braid	900	482	.080 × .144	TCW-101-123
18	Stranded (7/26)	Glass Braid w/ SS Braid O/A	Glass Braid	900	482	.122 × .175	TCW-101-130
20	Solid	Hi-temp Glass Braid	Hi-temp Glass Braid	1400	760	.086 × .136	TCW-101-115
20	Solid	Amber colored Kapton® tape	Color coded Kapton® tape	500	260	.055 × .099	TCW-101-112
20	Stranded (7/28)	Kapton®	Kapton®	500	260	.058 × .108	TCW-101-131
24	Solid	Glass Braid	Double Glass wrap	900	482	.043 × .074	TCW-101-113
24	Solid	Rip-cord construction	PVC (extruded)	221	105	.046 × .092	TCW-101-116
24	Solid	Glass Braid w/ SS Braid	Glass Braid	900	482	.074 × .100	TCW-101-119
30	Solid	Glass Braid	Double Glass wrap	900	482	.033 × .054	TCW-101-114