

Bare Thermocouple Wire - Base Metal Matched Conductors

Specify	Calibration	Wire Grade	Gage	Approx. Double foot per lb. (m per 454 g)
309A1A1	Chromel - Alumel	Standard	8	10 (3)
309A1A2	Chromel - Alumel	Standard	14	40 (12)
309A1A3	Chromel - Alumel	Standard	20	162 (49)
309A1C1	Iron - Constantan	Standard	8	10 (3)
309A1C2	Iron - Constantan	Standard	14	43 (13)
309A1C3	Iron - Constantan	Standard	20	175 (53)
309A1C5	Iron - Constantan	Standard	24	410 (125)
309A1C7	Iron - Constantan	Standard	7 & 8	9 (2.7)
309A1G1	Iron - Constantan	Premium	8	10 (3)
309A1G2	Iron - Constantan	Premium	14	43 (13)
309A1G3	Iron - Constantan	Premium	20	175 (53)
309A1B3	Copper Constantan	Standard	20	162 (49)
309A1B13	Copper Constantan	Premium	20	162 (49)
309A1D1	Chromel - Constantan	Standard	8	10 (3)
309A1D2	Chromel - Constantan	Standard	14	40 (12)
309A1D3	Chromel - Constantan	Standard	20	162 (49)
309A1D5	Chromel - Constantan	Standard	24	385 (117)

Insulated Thermocouple Wire

Glass with Silicone:

Each conductor is insulated with a double glass wrap with varnish impregnation, conductors paralleled and covered with fiber glass braid which is impregnated with silicone. Continuous operating temperature is 900°F (482°C).

Nylon:

Each conductor covered with nylon, conductors paralleled and bonded together. Maximum temperature is 320°F (160°C).

Fused TFE Tape:

Each conductor is insulated with fused TFE tape, conductors paralleled and covered with fused TFE tape. Continuous operating temperature is 500°F (260°C)

Thick Glass Braid:

Each conductor is insulated with thick fiber glass braid with silicone resin impregnation, conductors paralleled and covered with thick fiber glass braid with silicone resin impregnation. Used with larger gage wire. Continuous operating temperature is 900°F (482°C). Impregnation retained to 400°F (204°C).

HITEMP Fiber Glass:

Each conductor is insulated with high temperature fiber glass braid with varnish impregnation, conductors paralleled and covered with high temperature fiber glass braid with varnish impregnation. Continuous operating temperature is 1300°F (704°C). Impregnation retained to 400°F (204°C)..

Vitreous Silica:

Each conductor is insulated with braided vitreous silica yarn, conductors paralleled and covered with braided vitreous silica yarn. No impregnation. Continuous operating temperature is 1600°F (871°C).

Ceramic Fiber:

Each conductor is insulated with ceramic fiber braid, conductors paralleled and covered with ceramic fiber braid. No impregnation. Continuous operating temperature is 2200°F (1204°C).

* Insulated T/C wire is available with premium grade accuracy. Also available with metal braids or armor. Contact Fort Washington for price.

** If continuous or special lengths are required, be sure to specify at time of order.

Insulated Thermocouple Wire

TYPE T

Copper Constantan

Specify	Gage Size	Insulation		Positive Copper	Negative Constantan	Overall	Maximum Temperature
309B1C2	20	Glass with Silicone		Blue	Red	Brown	500°F (260°C)
309B1C4	24	Glass with Silicone		Blue	Red	Brown	400°F (204°C)
309B1C5	30	Glass with Silicone		Blue	Red	Brown	400°F (204°C)
309B1N4	24	Nylon		Blue	Red	Clear	320°F (160°C)
309B1N4P	24	Nylon *		Blue	Red	Clear	320°F (160°C)
309B1T2	20	Fused TFE Tape		Blue	Red	Brown	500°F (260°C)
309B1T3	24	Fused TFE Tape		Blue	Red	Brown	400°F (204°C)

TYPE J

Iron Constantan

Specify	Gage Size	Insulation		Positive Iron	Negative Constantan	Overall	Maximum Temperature
309B3C1	14	Thick Glass Braid w/Silicone		White	Red	Brown	900°F (482°C)
309B3C2	20	Glass with Silicone		White	Red	Brown	900°F (482°C)
309B3C4	24	Glass with Silicone		White	Red	Brown	700°F (371°C)
309B3C5	30	Glass with Silicone		White	Red	Brown	700°F (371°C)
309B3C6	20	HITEMP Fiber Glass Braid		White	Red	Brown	900°F (482°C)
309B3N4	24	Nylon		White	Red	Clear	320°F (160°C)
309B3N4P	24	Nylon		White	Red	Clear	320°F (160°C)
309B3T3	20	Fused TFE Tape		White	Red	Brown	500°F (260°C)
309B3T4	24	Fused TFE Tape		White	Red	Brown	500°F (260°C)

TYPE K

Chromel Alumel

Specify	Gage Size	Insulation		Positive Chromel	Negative Alumel	Overall	Maximum Temperature
309B2C1	14	Thick Glass Braid w/Silicone		Yellow	Red	Brown	900°F (482°C)
309B2C2	20	Glass with Silicone		Yellow	Red	Brown	900°F (482°C)
309B2C4	24	Glass with Silicone		Yellow	Red	Brown	900°F (482°C)
309B2C5	30	Glass with Silicone		Yellow	Red	Brown	900°F (482°C)
309B2C6	20	HITEMP Fiber Glass Braid		Yellow	Red	Brown	1300°F (704°C)
309B2T2	20	Fused TFE Tape		Yellow	Red	Brown	500°F (260°C)
309B2T4	24	Fused TFE Tape		Yellow	Red	Brown	500°F (260°C)
309B2N2	20	Braided Vitreous Silica		None	None	None	1600°F (871°C)
309B2A2	20	Ceramic Fiber Braid		None	None	None	2200°F (1204°C)

TYPE E

Chromel Constantan

Specify	Gage Size	Insulation		Positive Chromel	Negative Alumel	Overall	Maximum Temperature
309B4C2	20	Glass with Silicone		Purple	Red	Brown	900°F (482°C)
309B4G2	20	HITEMP Fiber Glass Braid		Purple	Red	Brown	1000°F (593°C)
309B4T3	20	Fused TFE Tape		Purple	Red	Brown	500°F (260°C)

* Premium Grade Accuracy

Thermocouple Extension Wire Insulation

PVC:

Each conductor is insulated with extruded PVC, conductors are paralleled and covered with extruded PVC. Continuous operating temperature is 221°F (105°C). Ideal for use in conduit and wiring trays.

PVC with Drain and Shield:

Each conductor is insulated with extruded PVC, conductors are twisted with copper drain wire and covered with aluminized polyester tape which is wrapped around the wires to impart 100% shielding to the cable. Layer of extruded PVC is applied overall. Continuous operating temperature is 221°F (105°C). This insulation is ideal for microprocessor-based systems and installations that are sensitive to induced voltages and "noise".

Teflon:

Each conductor is insulated with extruded FEP teflon, conductors paralleled and covered with extruded FEP teflon. Continuous operating temperature is 400°F (204°C). Ideal for use where long lengths are pulled through conduit due to its low coefficient of friction and good abrasion resistance.

Teflon with Drain and Shield:

Each conductor is insulated with extruded FEP teflon, conductors are twisted with copper drain wire and covered with aluminized polyester tape which is wrapped around the wires to impart 100% shielding to the cable. Layer of extruded FEP teflon is applied overall. Continuous operating temperature is 400°F (204°C). This insulation is ideal for microprocessor-based systems with long lengths installed in conduit.

TFE Tape and Synthetic Braid:

Each conductor is insulated with TFE tape and silicone impregnated synthetic yarn, conductors are paralleled and covered with synthetic yarn which has moisture resistant impregnation. Continuous operating temperature is 550°F (288°C). Impregnation retained to 400°F (204°C).

- * T/C extension wire is available with premium grade accuracy (except R&S). Also available with metal braids of armor. Contact Fort Washington for price.
- ** If continuous or special lengths are required, be sure to specify at time of order.

Thermocouple Extension Wire**TYPE T****For Copper Constantan T/C**

Specify	Gage Size	Insulation		Color Code			Maximum Temperature
				Positive	Negative	Overall	
301W2P4	16	PVC		Blue	Red	Blue	221°F (105°C)
301W2P4P	16	PVC*		Blue	Red	Blue	221°F (105°C)
301W2P6	20	PVC		Blue	Red	Blue	221°F (105°C)
301W2P4S	16	PVC, Twisted w/Drain & Shield		Blue	Red	Blue	221°F (105°C)
301W2P6S	20	PVC, Twisted w/Drain & Shield		Blue	Red	Blue	221°F (105°C)
301W2T4	16	Teflon		Blue	Red	Blue	400°F (204°C)
301W2T6	20	Teflon		Blue	Red	Blue	400°F (204°C)
301W2P4D	16	Teflon, Twisted w/ Drain & Shield		Blue	Red	Blue	400°F (204°C)

TYPE J**For Iron Constantan T/C**

Specify	Gage Size	Insulation		Color Code			Maximum Temperature
				Positive	Negative	Overall	
303W2P4	16	PVC		White	Red	Black	221°F (105°C)
303W2P14	16	PVC*		White	Red	Black	221°F (105°C)
303W2P6	20	PVC		White	Red	Black	221°F (105°C)
303W2P4S	16	PVC, Twisted w/Drain & Shield		White	Red	Black	221°F (105°C)
303W2P6S	20	PVC, Twisted w/Drain & Shield		White	Red	Black	221°F (105°C)
303W2T4	16	Teflon		White	Red	Black	400°F (204°C)
303W2T6	20	Teflon		White	Red	Black	400°F (204°C)
303W2P4D	16	Teflon, Twisted w/Drain & Shield		White	Red	Black	400°F (204°C)
303W2T4T	16	TFE Tape & Syn, Braid, Impreg.		White	Red	Black	550°F (288°C)

TYPE K**For Chromel Alumel T/C**

Specify	Gage Size	Insulation		Color Code			Maximum Temperature
				Positive	Negative	Overall	
305W2P14	16	PVC		Yellow	Red	Yellow	221°F (105°C)
305W2P14P	16	PVC*		Yellow	Red	Yellow	221°F (105°C)
305W2P16	20	PVC		Yellow	Red	Yellow	221°F (105°C)
305W2P14S	16	PVC, Twisted w/Drain & Shield		Yellow	Red	Yellow	221°F (105°C)
305W2P16S	20	PVC, Twisted w/Drain & Shield		Yellow	Red	Yellow	221°F (105°C)
305W2T4	16	Teflon		Yellow	Red	Yellow	400°F (204°C)
305W2T6	20	Teflon		Yellow	Red	Yellow	400°F (204°C)
305W2T4D	16	Teflon, Twisted w/Drain & Shield		Yellow	Red	Yellow	400°F (204°C)
305W2T4T	16	TFE Tape & Syn, Braid, Impreg.		Yellow	Red	Yellow	550°F (288°C)

* Premium Grade Accuracy

TYPE E

For Chromel Constantan T/C

Specify	Gage Size	Insulation		Color Code			Maximum Temperature
				Positive	Negative	Overall	
308W4P4	16	PVC		Purple	Red	Purple	221°F (105°C)
308W4P6	20	PVC		Purple	Red	Purple	221°F (105°C)
308W4P4S	16	PVC, Twisted w/Drain & Shield		Purple	Red	Purple	221°F (105°C)
308W4P6S	20	PVC, Twisted w/Drain & Shield		Purple	Red	Purple	221°F (105°C)
308W4T6	16	Teflon		Purple	Red	Purple	400°F (204°C)
308W4T6D	16	Teflon, Twisted w/Drain & Shield		Purple	Red	Purple	400°F (204°C)

For Platinum-Rhodium (R&S) T/C

Specify	Gage Size	Insulation		Color Code			Maximum Temperature
				Positive	Negative	Overall	
306W2P4	16	PVC		Black	Red	Green	221°F (105°C)
306W2P6	20	PVC		Black	Red	Green	221°F (105°C)
306W2P4S	16	PVC, Twisted w/Drain & Shield		Black	Red	Green	221°F (105°C)
306W2P6S	20	PVC, Twisted w/Drain & Shield		Black	Red	Green	221°F (105°C)
306W2T4	16	Teflon		Black	Red	Green	400°F (204°C)
306W2T6	20	Teflon		Black	Red	Green	400°F (204°C)
306W2T4D	16	Teflon, Twisted w/Drain & Shield		Black	Red	Green	400°F (204°C)
306W2T4T	16	TFE Tape & Syn, Braid, Impreg.		Black	Red	Green	550°F (288°C)

Multiple Conductor Copper Cable

Weatherproof insulation is recommended where ambient temperatures do not exceed 220°F and the atmosphere is non-corrosive.

Specify	Gage Size	Insulation		Color Code			
				Conductor			Overall
30914H1-D	14	Polyvinyl		White	Red	Blue	Black
30914H1-P	18	Polyvinyl		White	Green	Black	Black