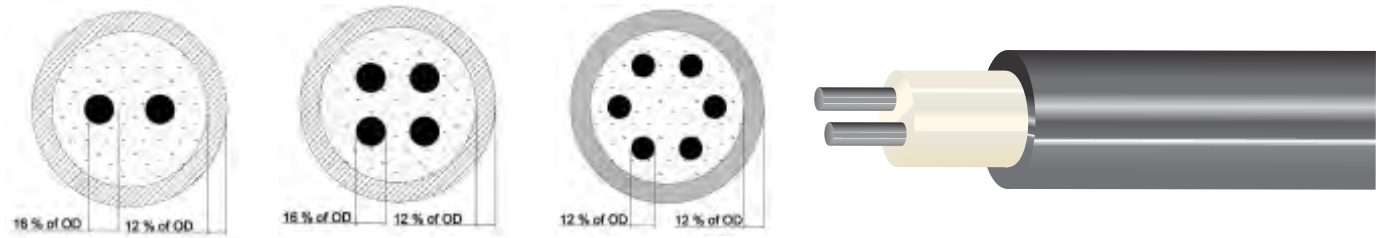


MI THERMOCOUPLE CABLE

Mineral insulated thermocouple cables have inner conductors of Thermocouple base material as per standard ASTM E 585/585M and ASTM E 839.



Number of Pair	Sheath Diameter (mm)	Nominal Wall Thickness (mm)	Element Diameter (mm)	Insulation Thickness (mm)	Insulation Resistance (MΩ)	Sheath Material	Conductor Type	Insulation	Calibration Accuracy
Simplex	1.50	≥ 0.15	≥ 0.23	≥ 0.11	≥ 100 MΩ	SS316L SS321 SS310 SS446 SS304 Inconel 600 Inconel 601 and others	K Type J Type E Type N Type R Type S Type	MgO (Standard Purity ≥ 97%) MgO (High Purity ≥ 99.4%)	Class 1/Class 2 Accuracy as per IEC 584-2/ANSI MC 96.1/ASTM E 230
	2.00	≥ 0.20	≥ 0.30	≥ 0.14					
	2.50	≥ 0.25	≥ 0.38	≥ 0.18					
	3.00	≥ 0.30	≥ 0.45	≥ 0.21					
	4.50	≥ 0.45	≥ 0.68	≥ 0.32					
	6.00	≥ 0.60	≥ 0.90	≥ 0.42					
	6.40	≥ 0.64	≥ 0.96	≥ 0.45					
	8.00	≥ 0.80	≥ 1.20	≥ 0.56					
	9.50	≥ 0.95	≥ 1.43	≥ 0.67					
	10.00	≥ 1.00	≥ 1.50	≥ 0.70					
12.70	≥ 1.27	≥ 1.91	≥ 0.89						
Duplex	1.50	≥ 0.15	≥ 0.18	≥ 0.08	≥ 100 MΩ	SS316L SS321 SS310 SS446 SS304 Inconel 600 Inconel 601 and others	K Type J Type E Type N Type R Type S Type	MgO (Standard Purity ≥ 97%) MgO (High Purity ≥ 99.4%)	Class 1/Class 2 Accuracy as per IEC 584-2/ANSI MC 96.1/ASTM E 230
	2.00	≥ 0.20	≥ 0.24	≥ 0.11					
	2.50	≥ 0.25	≥ 0.30	≥ 0.14					
	3.00	≥ 0.30	≥ 0.36	≥ 0.17					
	4.50	≥ 0.45	≥ 0.54	≥ 0.25					
	6.00	≥ 0.60	≥ 0.72	≥ 0.33					
	6.40	≥ 0.64	≥ 0.77	≥ 0.35					
	8.00	≥ 0.80	≥ 0.96	≥ 0.44					
	9.50	≥ 0.95	≥ 1.14	≥ 0.52					
	10.00	≥ 1.00	≥ 1.20	≥ 0.55					
12.70	≥ 1.27	≥ 1.52	≥ 0.70						
Triplex	3.00	≥ 0.30	≥ 0.27	≥ 0.12	≥ 100 MΩ	SS316L SS321 SS310 SS446 SS304 Inconel 600 Inconel 601 and others	K Type J Type E Type N Type R Type S Type	MgO (Standard Purity ≥ 97%) MgO (High Purity ≥ 99.4%)	Class 1/Class 2 Accuracy as per IEC 584-2/ANSI MC 96.1/ASTM E 230
	4.50	≥ 0.45	≥ 0.41	≥ 0.18					
	6.00	≥ 0.60	≥ 0.54	≥ 0.24					
	6.40	≥ 0.64	≥ 0.58	≥ 0.26					
	8.00	≥ 0.80	≥ 0.72	≥ 0.32					
	9.50	≥ 0.95	≥ 0.86	≥ 0.38					
	10.00	≥ 1.00	≥ 0.90	≥ 0.40					
	12.70	≥ 1.27	≥ 1.14	≥ 0.51					

Ordering Example

60K600 : 6.0 mm OD, K Type, Simplex, Inconel 600 Sheath with high purity of MgO Insulation and accuracy class 1 as per specification IEC 584

64NN316 : 6.4 mm OD, N Type, Duplex, SS316L Sheath with high purity of MgO Insulation and accuracy class 1 as per specification IEC 584

MI THERMOCOUPLE CABLE

Standard Deviation of Mineral Insulated Thermocouple Cable as per IEC 584-2

Type	Temperature Range	Tolerance for Class 1 Accuracy	Tolerance for Class 2 Accuracy
K/N	-40°C to +1100°C	+/- 1.5°C or +/-0.004(t)	+/- 2.5°C or +/-0.0075(t)
J	-40°C to +750°C	+/- 1.5°C or +/-0.004(t)	+/- 2.5°C or +/-0.0075(t)
T	-40°C to +350°C	+/- 0.5°C or +/-0.004(t)	+/- 1.0°C or +/-0.0075(t)
E	-40°C to +800°C	+/- 1.5°C or +/-0.004(t)	+/- 2.5°C or +/-0.0075(t)
R/S	0°C to +1600°C	+/-1°C or +/--[1+0.003(t-1100)]	+/- 1.5°C or +/-0.0025(t)

Mineral Insulated Thermocouple Cables with Precious Thermocouple:

Precious metal thermocouples are exceptionally suited for high-temperature applications under oxidizing conditions. They are used in chemical plants when absolute resistance to all kinds of acids is required.

Resistance of Precious Metal Mineral Insulated Thermocouples in different Atmosphere								
Sheath Material	Thermocouple	Max. Operating Temperature	Oxygen	Nitrogen	Hydrogen	Carbon	Chlorine	Sulphur
Inconel 600 2.4816	S Type	1100°C	Good	Good	Good	Good	Good	Conditional
	R Type	1100°C	Good	Good	Good	Good	Good	Conditional
	B Type	1100°C	Good	Good	Good	Good	Good	Conditional
pt10%Rh	S Type	1300°C	Good	Good	Conditional	Conditional	Conditional	Conditional
	R Type	1300°C	Good	Good	Conditional	Conditional	Conditional	Conditional
	B Type	1300°C	Good	Good	Conditional	Conditional	Conditional	Conditional