Mineral Insulated Cable Type K J T E MI Thermocouple Cable In Heat Treatment Fields

Our Product Introduction

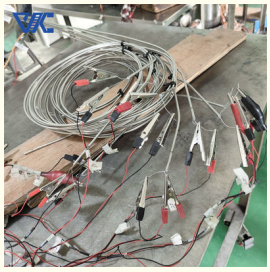
Basic Information

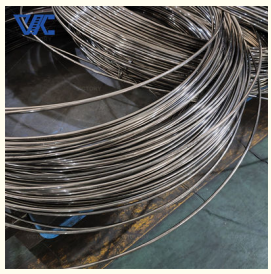
- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: K,N,E,J,T,B,R,S Types
- Minimum Order Quantity: 5 Kg
- Price: Negotiable
- Packaging Details: in coils, carton and wooden case.
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 50 - 999 meters $2.88

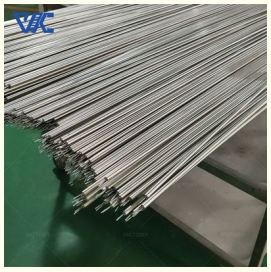
Product Specification

- Product Name: MI Thermocouple Cable
- Warranty: 1 Year
- Conductor Material: NiCr-NiSi,NiCrSi-NiSi, NiCr-Konstantan, Fe-Konstantan, Cu-Kon
- Sheath Material: SS304,SS321, SS316, SS310, INCL600,601, Nicrobell,SS446
- Dia(mm): 0.25mm To 12.7mm
- Insulator: 99.6% High Purity MgO
- Temperature Range: 0~1100(℃)
- Application: Metal Processing And Heat Treatment Fields
- Highlight: **Type MI Thermocouple Cable**, **Mineral Insulated MI Thermocouple Cable**, **Type K Mineral Insulated Cable**

More Images







Product Description

Our Product Introduction

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Introduction:

MI thermocouple cables play an important role in scientific research and laboratory applications. It can measure temperature changes stably and provide accurate temperature data. Whether it is physics, chemistry or materials science, MI thermocouple cables can meet the needs of scientific researchers for temperature measurement and control. They are widely used to study the properties and behavior of substances under different temperature conditions, as well as to study phase changes, thermodynamic properties and material properties.

In laboratory applications, MI thermocouple cables are also widely used in various experiments and tests. Whether it is temperature monitoring of chemical reactions, temperature control in biological experiments, or temperature regulation in material performance testing, MI thermocouple cables can provide accurate and reliable temperature measurement and stable control.

The product parameters of MI thermocouple cables include conductor material, sheath material, diameter range, insulation material and temperature range, etc. Appropriate selection of product parameters can meet the specific needs of laboratory applications and ensure the accuracy and stability of temperature measurements.

Product Features:

Wide temperature measurement range: Armored thermocouples are suitable for a wide temperature range and can measure experimental environments from extremely low temperatures to extremely high temperatures, covering the measurement needs of conventional temperature ranges and extreme conditions.
High flexibility: Armored thermocouples can be customized according to actual needs, including the selection of different lengths, diameters and armoring materials to adapt to different experimental conditions and requirements.
High-precision measurement: Armored thermocouples have high temperature measurement accuracy and stability and can provide accurate temperature data.

Advantage:

Fast response: The armored thermocouple has the ability to respond quickly to temperature changes, and can sense temperature changes in real time and quickly convert them into electrical signal output.
Strong durability: The armored thermocouple is made of high-temperature and corrosion-resistant materials, has good mechanical strength and oxidation resistance, and can work stably for a long time in complex experimental environments.
High reliability: Armored thermocouples are precisely calibrated and quality controlled, have high reliability and repeatability, and can provide accurate and reliable temperature measurement results.

Specific applications:

Laboratory research: Armored thermocouples are widely used in various scientific research fields in laboratories, including physics, chemistry, materials science, etc. It can be used to measure the temperature in the experimental device, monitor temperature changes during the experiment, and provide important data support for researchers.
Materials research: In materials research, armored thermocouples can be used to measure temperature-related physical properties such as thermal conductivity, phase transition temperature, thermal expansion coefficient, etc. of materials, providing important reference for material performance research and development.
Life sciences: In the field of life sciences, armored thermocouples can be used for temperature measurement and control in biological reactions, cell culture, and biological enzyme activity, providing an experimental basis for biological research and bioengineering.

Other relevant knowledge:

The temperature measurement principle of the armored thermocouple is based on the thermoelectric effect, in which two different metal wires generate a thermoelectric potential difference through the thermoelectric effect, and the temperature is determined by measuring the thermoelectric potential difference.

In laboratory applications, the selection of armored thermocouples should be based on experimental conditions, requirements and measurement ranges. Different armoring materials and specifications are suitable for different experimental environments and temperature ranges.

Armored thermocouples can be used with temperature measuring instruments (such as thermometers, data acquisition systems) to obtain and record temperature data.

When using armored thermocouples for temperature measurement, attention needs to be paid to protecting the armored cable from mechanical damage or environmental corrosion to ensure the accuracy and reliability of the measurement.

Armored thermocouples may encounter some limitations and challenges in some special application areas (such as high-temperature molten metal, high-pressure environments, etc.), so the actual situation needs to be considered comprehensively when selecting and using them.

In short, as a common temperature measurement device, armored thermocouples have extensive applications and important roles in scientific research and laboratory applications. By measuring temperature, they provide important data support for researchers and promote various Scientific progress and technological innovation in the field.

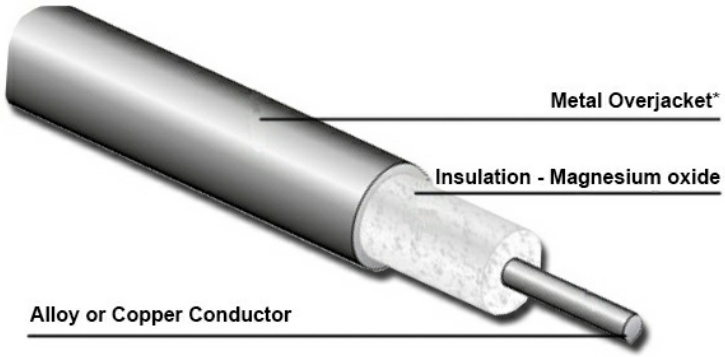
Parameter:

Code	Wire Component of the thermocouple	
	+Positive leg	- Negative Leg
N	Ni-Cr-Si(NP)	Ni-Si-magnesium (NN)
K	Ni-Cr(KP)	Ni-Al(Si) (KN)
E	Ni-Cr(EP)	Cu-Ni (EN)
J	Iron (JP)	Cu-Ni (JN)
T	Copper (TP)	Cu-Ni (TN)
B	Platinum Rhodium-30%	Platinum Rhodium -6%
R	Platinum Rhodium-13%	Platinum
S	Platinum Rhodium -10%	Platinum

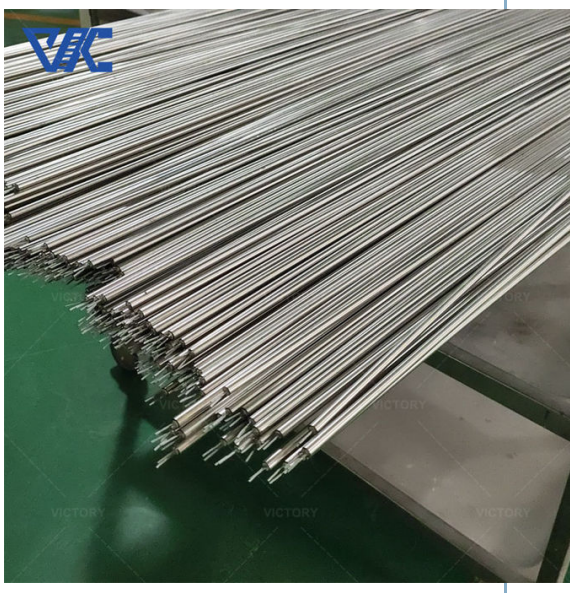
Material	Type	Grade	Working temperature (deg)		Tolerance	Standard
			Long Term	Short Term		
		1			±1.5 deg	

NiCr-NiSi	K	2	-40~1100	-40~1300	±2.5 deg	GB/T 2614-1998
NiCr-CuNi	E	1	-40~800	-40~900	±1.5 deg	GB/T 4993-1998
		2			±2.5 deg	
Fe-Constantan	J	1	-40~600	-40~800	±1.5 deg	GB/T 4994-1998
		2			±2.5 deg	
Cu-CuNi	T	1	-200~300	-200~400	±0.5 deg	GB/T 2903-1998

Outer Sheath(mm)		core wire Dia.(mm)		Outer Sheath(mm)o core wire Dia.(mm)				Length(m)
Out Dia	Wall Thickness	K,N,E,J,T Types	S,R,B Types	K,N Types	E,J,T Types	S,R Types	B Types	
0.5	0.05-0.10	0.08-0.12	...	SS304, SS321, SS316, SS310, INCL600	SS30, SS32, SS316	INCL60, INCL800	INCL60, INCL800	500
1.0	0.10-0.20	0.15-0.20	...					300
1.5	0.15-0.25	0.23-0.30	...					200
1.6	0.16-0.26	0.26-0.36	...					200
2.0	0.25-0.35	0.40-0.50	0.25-.030					180
3.0	0.38-0.48	0.50-0.60	0.30-0.40					80
3.2	0.48-0.58	0.58-0.68	0.30-0.40					75
4.0	0.52-0.62	0.60-0.70	0.35-0.40					70
4.8	0.73-0.83	0.75-0.85	0.40-0.45					40
5.0	0.78-0.88	0.80-0.90	0.40-0.45					40
6.0	0.98-1.08	0.90-1.10	0.45-0.50					30
6.4	1..05-1.15	1.02-1.12	0.45-0.50					30
8.0	1.30-1.44	1.30-1.40	0.45-0.50					20
12.7	1.75-1.90	1.95-2.05	...					10



Calibration	Tolerance		
	Special Limits (Grade I)	Standard Limits (Grade II)	Temperature Range (℃)
K (Chromel vs Alumel)	±1.5°C or ±0.4%	±2.5°C or ±0.75%	-40~1000
J (Iron vs Constantan)			-40~750
E (Chromel vs Constantan)			-40~800
T (Copper vs Constantan)		±1°C or ±0.75%	-40~350



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