K N E J T Type Thermocouple Mineral Insulated Electrical Cables (MI Cable)

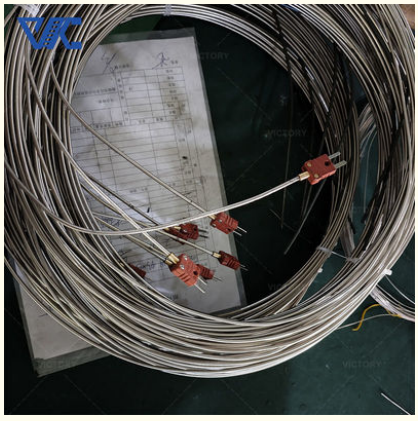
Our Product Introduction

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: 50 - 499 meters $3.00
- Packaging Details: Spool package with Carton box, Coil package with polybag
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

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(℃)
- Size: Customized Size
- Customized Support: OEM, ODM, OBM, Software Reengineering
- Application: Temperature Measuring
- Highlight: **T Type Mineral Insulated Thermocouple Cable**, **N Type Mineral Insulated Thermocouple Cable**, **J Type MI Thermocouple Cable**



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Our Product Introduction

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Product Description

Introduction:

Armored thermocouple is a sensor used for temperature measurement and control, with a wide range of applications and important functions. The basic principle of armored thermocouples is to use the thermoelectric effect of two different metal wires to measure temperature changes and convert them into corresponding voltage signals.
It has the characteristics of fast response, wide temperature range, high accuracy and stability, and plays an important role in industry, scientific research and other fields.
There are some key factors to consider when selecting an armored thermocouple. The first is the temperature range. Select the appropriate model based on specific application needs to ensure normal operation within the target temperature range. The second is the material of the protective sleeve, which needs to have properties such as high temperature resistance, corrosion resistance and mechanical strength to protect the wires of the armored thermocouple from the external environment. In addition, factors such as the size, response time, and connection method of the armored thermocouple need to be considered.
In summary, the armored thermocouple is a sensor widely used in the field of temperature measurement and control. It has the advantages of fast response, wide temperature range, high accuracy and stability, and plays an important role in industry, scientific research and various other fields. Choosing the right armored thermocouple can meet the needs of a specific application and provide an accurate and reliable temperature measurement solution.

Product Features:

Armored structure: Armored thermocouples are composed of two different metal wires. The armored structure protects and fixes the wires, improving its durability and stability.
Thermoelectric effect: Armored thermocouples use the thermoelectric effect to measure temperature. When the contact points of two different metal wires are at different temperatures, a potential difference will occur, and the temperature value will be measured.
Wide temperature range: Armored thermocouples can adapt to a wide temperature range, allowing accurate measurements from very low temperatures to extremely high temperatures.

Advantage:

High-precision measurement: Armored thermocouples can provide high temperature measurement accuracy, allowing them to provide accurate and reliable temperature data in various application scenarios.
Fast response: Armored thermocouples have fast response capabilities to temperature changes and can monitor changes in ambient temperature in real time.
Strong durability: The armored thermocouple is made of high-temperature and corrosion-resistant materials, has good durability, and can work for a long time in harsh environments.

Application areas:

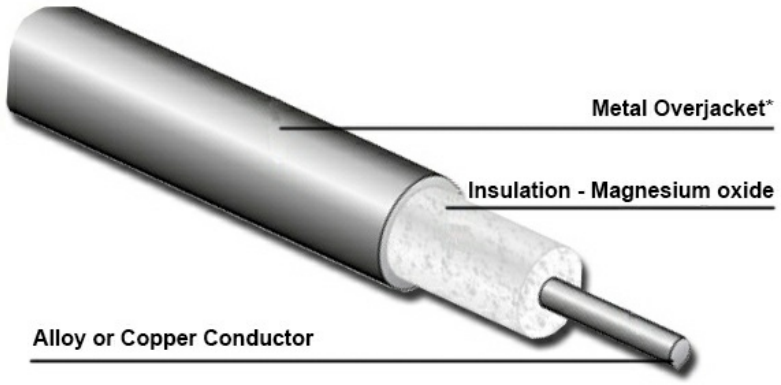
Industrial control: Armored thermocouples are widely used in industrial process control, such as chemical industry, petroleum, metallurgy and other fields, to monitor and control the temperature in the production process.
Laboratory Research: Armored thermocouples are widely used in laboratories for temperature measurement in various scientific research, experiments and tests.
HVAC systems: Armored thermocouples can be used for temperature monitoring and control in heating, ventilation and air conditioning systems to ensure comfort and energy efficiency performance in indoor environments.
Food processing: During food processing, armored thermocouples can be used to monitor and control the heating, cooling and storage temperatures of food to ensure food quality and safety.
Greenhouse planting: Armored thermocouples can be used for temperature monitoring in greenhouse environments, helping agricultural workers understand and control the temperature in the greenhouse and optimize the plant growth environment.

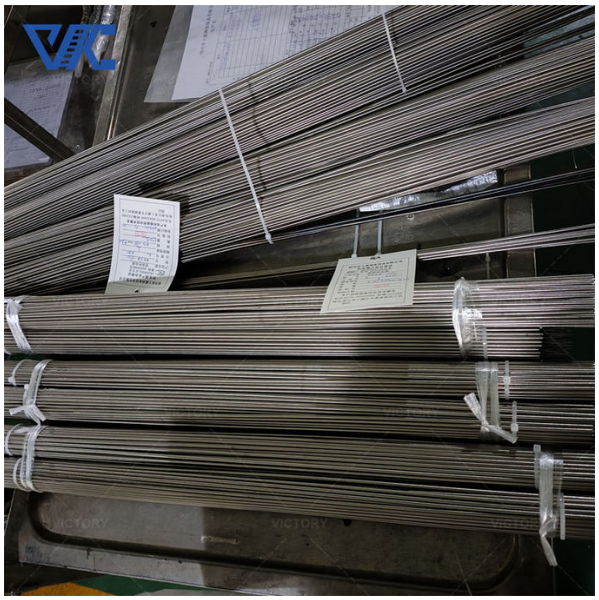
Code	Wire Component of the thermocouple	
	+Positive leg	- Negative Leg
N	Ni-Cr-Si(NP)	Ni-Si-magnesium (NN)
K	Ni-Cr(KP)	Ni-Al(Si) (KN)
E	Ni-Cr(EP)	Cu-Ni (EN)
J	Iron (JP)	Cu-Ni (JN)
T	Copper (TP)	Cu-Ni (TN)
B	Platinum Rhodium-30%	Platinum Rhodium -6%
R	Platinum Rhodium-13%	Platinum
S	Platinum Rhodium -10%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

Material	Type	Grade	Working temperature (deg)		Tolerance	Standard
			Long Term	Short Term		
NiCr-NiSi	K	1	-40~1100	-40~1300	±1.5 deg	GB/T 2614-1998
		2			±2.5 deg	
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	...					500
1.0	0.10-0.20	0.15-0.20	...					300

1.5	0.15-0.25	0.23-0.30	...	SS304, SS321, SS316, SS310, INCL600	SS30, SS32, SS316	INCL60, INCL800	INCL60, INCL800	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





Q&A:

What are the advantages of armored thermocouples over other temperature sensors?
Armored thermocouples have the advantages of fast response, high measurement accuracy and high durability. Compared to other temperature sensors, armored thermocouples provide accurate and reliable temperature measurements over a wide temperature range.

How to calibrate armored thermocouples?
Calibration of sheathed thermocouples is usually performed by exposing them to a calibration source of known temperature. Based on the calibration results, the relationship between temperature and potential difference can be established to obtain accurate temperature measurements.

What temperature ranges are armored thermocouples suitable for?
Armored thermocouples are available over a wide temperature range. Different types of armored thermocouples have different temperature range adaptability. For example, Type K thermocouple is suitable for the range of -200°C to 1,300°C, while Type J thermocouple is suitable for the range of -210°C to 760°C. . The specific selection of the appropriate type of armored thermocouple depends on the temperature range to be measured and the requirements of the application environment.

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