K-Type Thermocouple Wire Nickel Chromium Nickel Silicon Thermocouple Wire

Our Product Introduction

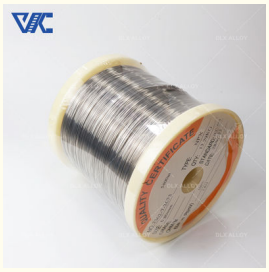
Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: K Types
- Minimum Order Quantity: 5 Kg
- Price: Negotiable
- Packaging Details: Thermocouple wire are rolled on ABS white spool and packed with plastic film,in cartoon boxes.
  Special packaging requirements can also be accommodated.
  OEM is also acceptable
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

- Product Name: Thermocouple Wire Type K
- Temperature Range: -200~1300°C
- Positive: Ni-Cr
- Negative: Ni-Al(Si)
- Diameter: 0.12-8mm
- Grade: IEC854-1/3
- Special Limits Of Error: ± 1.1C Or 0.4%
- Standard: ± 2.2C% Or ±.75%
- Color: Bright
- Application: Cable & Wire
- Highlight: **Nickel Silicon Thermocouple Wire**, **Nickel Chromium Thermocouple Wire**

More Images



Our Product Introduction

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Product Description

Introduction:

K-type thermocouple bare wire is a commonly used thermocouple type, consisting of K-type thermocouple alloy exposed wires. The alloy composition of K-type thermocouple is nickel-chromium/nickel-aluminum, and the common materials are KP and KN. Type K thermocouple bare wire has a wide operating temperature range and is typically used in temperatures ranging from -200°C to 1,370°C.

K-type thermocouple bare wire has many advantages, such as good linear characteristics, higher sensitivity and lower price. Nickel-chromium-nickel silicon thermocouple (K-type thermocouple) is currently the most widely used cheap metal thermocouple in temperature measurement areas above 500°C, and its usage is the sum of other metal thermocouples. They are widely used in industry, especially in temperature measurement and control. K-type thermocouple bare wire has a fast response speed and is suitable for applications requiring fast temperature response.

The nominal chemical composition of the positive electrode (KP) is: Ni:Cr≈90:10

The chemical composition of the negative electrode (KN) is: Ni:Si≈97:3

Characteristic:

Wide Temperature Range: Type K thermocouple bare wire is suitable for applications over a wide temperature range, typically measuring temperatures from -200°C to 1,372°C (-328°F to 2,502°F).

Good linear characteristics: K-type thermocouples have good linear characteristics within their operating temperature range and can provide relatively accurate temperature measurements.

High sensitivity: K-type thermocouple has high sensitivity and good response ability to temperature changes.

Corrosion resistance: K-type thermocouple has good corrosion resistance and can provide reliable temperature measurement in some corrosive environments.

Advantage:

Widely used: K-type thermocouple bare wire is widely used in many industries and fields, including industrial heating, chemical industry, petroleum, metallurgy, laboratory and scientific research, etc.

Lower cost: Compared with other types of thermocouples, K-type thermocouple bare wire has a lower cost and is suitable for economical and practical temperature measurement needs.

High temperature resistance: K-type thermocouple bare wire can withstand high temperature environments and provide reliable temperature measurement and control.

Relevant specific parameters:

Temperature range: -200°C to 1,372°C (-328°F to 2,502°F)

Thermoelectric potential output: approximately 39.4 μV (at standard temperature difference)

Linear characteristics: has good linear characteristics

Sensitivity: approximately 41 μV/°C

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

Standards:

ASTM	ANSI	IEC	DIN	BS	NF	JIS	GOST
(American Society for Testing and Materials) E 230	(American National Standard Institute) MC 96.1	(European Standard by the International Electrotechnical Commission 584)-1/2/3	(Deutsche Industrie Normen) EN 60584 -1/2	(British Standards) 4937.1041, EN 60584 -1/2	(Norme Française) EN 60584 -1/2 - NFC 42323 - NFC 42324	(Japanese Industrial Standards) C 1602 - C 1610	(Unification of the Russian Specifications) 3044

Working temperature:

Diameter/mm	Long time Working temperature/°C	Short period Working temperature/°C
0.2, 0.3	150	200
0.5, 0.8	200	250
1.0, 1.2	250	300
1.6, 2.0	300	350

Using Occastion of Different Thermocouple			
Thermocouple Type		Working Atmosphere	Working Temperature
Type K	KP	Oxidizing	-200 to +1200°C
	KN	Inert	
Type N	NP	Oxidizing	-200 to +1200°C
	NN	Oxidizing	

Type E	EP	Oxidizing	-200 to +900°C
	EN	Oxidizing	
Type J	JP	Oxidizing(use in high temp)	-40 to +750°C
	JN	Reducing, Inert, Vacuum	
Type T	TP	Oxidizing,Vacuum	-200 to +350°C
	TN	Reducing, Vacuum	

Specific application areas:

Industrial heating and process control: K-type thermocouple bare wire is used for temperature monitoring and control, and is widely used in industrial heating equipment, furnace temperatures, furnaces, and heat treatment processes.
Petroleum and chemical industry: K-type thermocouple bare wire can be used in the petroleum and chemical industry to monitor the temperature of chemical reactors, storage tanks, pipelines and high-temperature equipment.
Laboratory and scientific research: K-type thermocouple bare wire plays an important role in laboratory and scientific research, used to measure the temperature of experimental equipment, test devices, samples and laboratory environments.

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Q&A:

Q:What is the temperature range of K-type thermocouple bare wire?
A:Type K thermocouple bare wire typically has a temperature range between -200°C and 1,372°C.

Q:What are the advantages of K-type thermocouple bare wire?
A:K-type thermocouple bare wire has the advantages of wide application, lower cost and high temperature resistance.

Q:In what fields are K-type thermocouple bare wires commonly used?
A:K-type thermocouple bare wire is commonly used in industrial heating and process control, petroleum and chemical industries, as well as laboratories and scientific research. They are used to monitor and control temperature in applications such as industrial heating equipment, chemical reactors, petroleum storage tanks, experimental equipment, etc.

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