Tungsten Rhenium Wire/Cable WRe3-WRe25/WRe5-WRe26 Thermocouple Wire Type C

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: Type C
- 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: Tungsten-rhenium Thermocouple Wire
- Model Number: WRe3/25,WRe5/26
- Wire Gauge: 0.1mm-8mm
- Key Word: Tungsten Rhenium Wire
- Work Temperature: 0-2300℃
- Material: Tungsten+rhenium
- Chemical Composition: W75%Re25
- Condition: Annwaled
- Positive (+): 95% Tungsten, 5% Rhenium
- Negative (-): 74% Tungsten, 26% Rhenium
- Tolerance: ±0.5%~1%t
- Application: Cable & Wire
- Highlight: **Type R Thermocouple Bare Wire**, **Thermocouple Bare Wire IEC854-1/3**, **bright platinum thermocouple wire**

More Images

Our Product Introduction

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Product Description

Introduction:

Tungsten-rhenium alloy wire C-type thermocouple bare wire is a commonly used temperature measurement device, mainly used in the fields of industrial control and scientific research in high-temperature environments. It consists of two tungsten-rhenium alloy wires of different metals and measures temperature changes through the thermoelectric effect.
The structure of the C-type thermocouple bare wire is relatively simple. It consists of two tungsten-rhenium alloy wires. One end of the two wires is connected together to form a measurement point, and the other end is connected to a temperature measurement device, such as a temperature transmitter or data acquisition. system. Tungsten-rhenium alloy wire WRe5-26. Tungsten-rhenium alloy containing 5% rhenium and tungsten-rhenium alloy containing 26% rhenium. Maximum temperature range -0-2320 °C.
Tungsten-rhenium alloy wire has good high temperature resistance and mechanical strength, making the C-type thermocouple bare wire suitable for long-term use in high-temperature environments.
During the temperature measurement process, the measuring point of the C-type thermocouple bare wire is exposed to the environment to be measured, and temperature changes will cause a slight potential difference between the tungsten-rhenium alloy wires. There is a specific relationship between this potential difference and temperature, known as the thermoelectric effect. By measuring this potential difference, the temperature of the environment can be accurately calculated.
Tungsten-rhenium alloy wire C-type thermocouple bare wire has many advantages, such as a wide high temperature measurement range (usually from 0 degrees Celsius to 2300 degrees Celsius), higher accuracy and reliability, and faster response time. It also offers excellent corrosion resistance and low thermocouple resistance drift, making it suitable for applications requiring high accuracy and long-term stability.

Characteristic:

Thermocouple material: Type C thermocouple bare wire is composed of tungsten-rhenium alloy wire, usually tungsten-rhenium alloy wire (W-5%Re and W-26%Re).
High temperature range: Type C thermocouple bare wire is suitable for high temperature environments and can typically measure temperatures from 0°C to 2,300°C.
Linear characteristics: Type C thermocouple bare wire has good linear characteristics and can provide accurate temperature measurement.

Advantage:

High temperature performance: Tungsten-rhenium alloy wire has excellent high-temperature stability and corrosion resistance, allowing type C thermocouple bare wire to perform reliable temperature measurements in extreme high-temperature environments.
Fast response: C-type thermocouple bare wire has fast temperature response capability and can quickly respond to temperature changes.
Corrosion resistance: Tungsten-rhenium alloy wire has good corrosion resistance and can perform temperature measurements in some chemically corrosive environments.

Relevant specific parameters:

Temperature range: 0°C to 2,300°C
Thermoemf output: Varies based on temperature changes, usually in the microvolt (μV) level.
Linear characteristics: Has good linear characteristics.
Sensitivity: Varies based on specific model and manufacturer.

Ameter and tolerance

type	WRe 5/26
diameter(mm)	0.5
tolerance	±0.02

type	WRe 3/25		
diameter(mm)	0.08	0.1	0.5
tolerance	±0.02	±0.02	±0.02

thermo-electricity and tolerance:

type	temperature range°C	tolerance
WRe3/25	0~400	4.0°C
	400~2300	±0.25%t
WRe5/26	0~400	4.0°C
	400~2300	±0.5%t

Type Model:

Type	Positive and negative pole materials	Model	Range	Wire diameter	Accuracy	Allowable difference
K	Nickel chromium nickel silicon	WRK (WRN)	-200~1260C	0.3~3.2	I	±1.5°C or ±0.4%t

N	Nickel chromium silicon nickel silicon magnesium	WRN (WRM)	-200~1300C	0.3~3.2	I	±1.5°C or ±0.4%t
E	Nickel chrome Copper nickel	WRE	-200~900C	0.3~3.2	I	±1.5°C or ±0.4%t
J	Iron copper nickel	WRJ (WRF)	-40~750C	0.3~3.2	I	±1.5°C or ±0.4%t
T	Copper copper nickel	WRT (WRC)	-200~350C	0.2~1.6	I	±0.5°C or ±0.4%t
S	Platinum and rhodium10 Platinum	WRS (WRP)	0~1600C	0.5	I	±1°C or ±[1+0.3% (t-1100)]°C
R	Platinum and rhodium13 Platinum	WRR (WRQ)	0~1600C	0.5	I	±1°C or ±[1+0.3% (t-1100)]°C
B	Platinum and rhodium30 Platinum and rhodium6	WRB (WRR)	0~1700C	0.5	Ⅱ	±0.25%t
C	Tungsten rhenium5 Tungsten rhenium26	WRC (WRW)	0~2300C	0.5	Ⅱ	±4°C or 1.0%|t|
D	Tungsten rhenium3 Tungsten rhenium25	WRD (WRW)	0~2300C	0.5	Ⅱ	±4°C or 1.0%|t|

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Specific application areas:

High-temperature molten metal temperature measurement: C-type thermocouple bare wire is widely used in high-temperature molten metal temperature measurement, such as steel smelting, glass manufacturing, electric arc furnaces and other fields.
High-temperature heat treatment: C-type thermocouple bare wire is suitable for temperature monitoring and control of high-temperature heat treatment processes, such as kilns, heat treatment furnaces, etc.
Space and aerospace field: C-type thermocouple bare wire is widely used in temperature measurement in high-temperature environments such as spacecraft and rocket engines.

Q&A:

What is the temperature range of type C thermocouple bare wire?
A: Type C thermocouple bare wire typically has a temperature range between 0°C and 2,300°C.

What are the advantages of type C thermocouple bare wire?
Answer: Type C thermocouple bare wire has the advantages of high temperature performance, fast response and corrosion resistance.

What applications are type C thermocouple bare wire suitable for?
Answer: C-type thermocouple bare wire is suitable for high-temperature molten metal temperature measurement, high-temperature heat treatment, space and aerospace and other application fields.

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