

铠装热电偶 Sheath thermocouple

1、产品应用

通常和显示仪表、记录仪表、电子计算机等配套使用。直接测量各种生产过程中的0°C~1300°C范围内液体、蒸汽和气体介质以及固体表面温度。

2、工作原理

铠装热电偶的电极由两根不同导体材质组成。当测量端与参比端存在温差时，就会产生热电势，工作仪表便显示出热电势所对应的温度值。

3、产品特点

- 热响应时间短，减小动态误差；
- 可弯曲安装使用；
- 测量范围大；
- 机械强度高，耐压性能好。

4、主要技术参数

产品执行标准：IEC584, GB/T18404-2001。

Application

It is usually used along with display instruments, recording instruments, electronic computers and so on. It is able to directly measure the temperature of liquid, steam and gas and solid surface in a variety of production processes within the range of 0-1300°C.

Working principle

The electrode of sheath thermocouple are consisted by two different materials of conductor. When there is a temperature difference between the measuring end and the reference end, it will generate the thermal electric potential. The working instrument will show the corresponding temperature value of the thermal electric potential.

Characteristics

- Less thermal response time, which can reduce the dynamic error.
- Flexible mounting for use.
- Wide measuring scope.
- High mechanical strength and good pressure resistance.

Main technical parameters

Product implementation standard: IEC584, GB/T18404-2001.

测温范围及允差

型号 Model	分度号 Graduation	允差等级 Tolerance level			
		I		II	
		测温范围 °C Range of temperature measurement °C	允差值 Tolerance value	测温范围 °C Range of temperature measurement °C	允差值 Tolerance value
WRNK	K	-40~+375	±1.5°C	-40~+333	±2.5°C
		375~1000	±0.004 t	333~1200	±0.0075 t
WRMK	N	-40~+375	±1.5°C	-40~+333	±2.5°C
		375~1000	±0.004 t	333~1200	±0.0075 t
WREK	E	-40~+375	±1.5°C	-40~+333	±2.5°C
		375~800	±0.004 t	333~900	±0.0075 t
WRFK	J	-40~+375	±1.5°C	-40~+333	±2.5°C
		375~750	±0.004 t	333~750	±0.0075 t
WRCK	T	-40~+125	±0.5°C	-40~+133	±1.0°C
		125~350	±0.004 t	133~350	±0.0075 t
WRPK	S	0~+1100	±1.0°C	0~600	±1.5°C
		1100~1600	±[1+0.003(t-1100)]	600~1600	±0.0025 t
WRQK	R	0~+1100	±1°C	0~600	±1.5°C
		1100~1600	±[1+0.003(t-1100)]	600~1600	±0.0025 t
WRRK	B	/	/	600~1700	±0.0025 t

注：t为检验温度点绝对值，单位为°C。

Note: t is the absolute value of the temperature point, the unit is °C.

常温绝缘电阻

铠装偶在环境温度温度为20±15°C，相对湿度不大于80%，试验电压为500±50V（直流）电极与外套管之间的绝缘电阻≥1000MΩ。

即1m长的试样的绝缘电阻为1000MΩ；10m长的试样的绝缘电阻为100MΩ。

Insulation resistance for normal temperature

In terms of the sheath thermocouple, the environment temperature is 20 ± 15°C, the relative humidity is not more than 80%, the test voltage is 500 ± 50V(D.C), the insulation resistance between electrode and outer sleeve is 1000MΩ.m.

That is to say, the insulation resistance for sample of 1m is 1000MΩ; the insulation resistance for sample of 10m is 100MΩ.

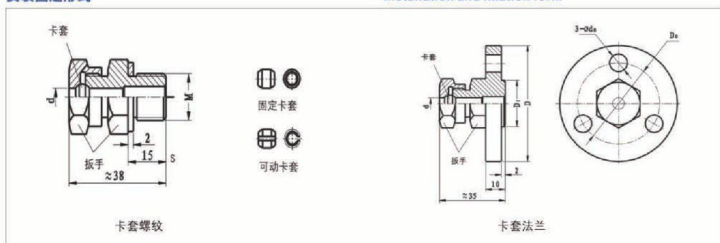
偶丝直径及材料

Diameter and material for the thermocouple wire

偶丝形式 Graduation	单支式 Single support		双支式 Double support	
	套管直径 Graduation		套管直径 Graduation	
分度号 Graduation	E, J, T		Φ2, Φ3, Φ4, Φ5, Φ6, Φ8	
	K, N		Φ3, Φ4, Φ5, Φ6, Φ8	
	S, R, B		1Cr18Ni9Ti	1Cr18Ni9Ti
		1Cr18Ni9Ti GH3030	1Cr18Ni9Ti GH3030	
		GH3030	GH3039	

安装固定形式

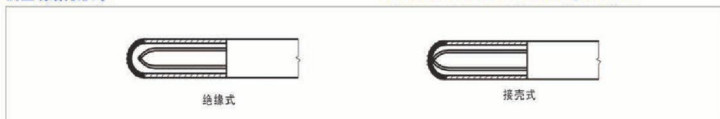
Installation and fixation form



代号和尺寸 Code and size	铠装偶外径 The outer diameter of sheathed thermocouple	
	Φ8, Φ6, Φ5	Φ4, Φ3, Φ2
M	M16×1.5	M12×1.5
S	22	19
D	Φ60	Φ50
D ₂	Φ42	Φ36
D ₁	Φ24	Φ20
S	Φ22	Φ19
d ₂	Φ9	Φ7

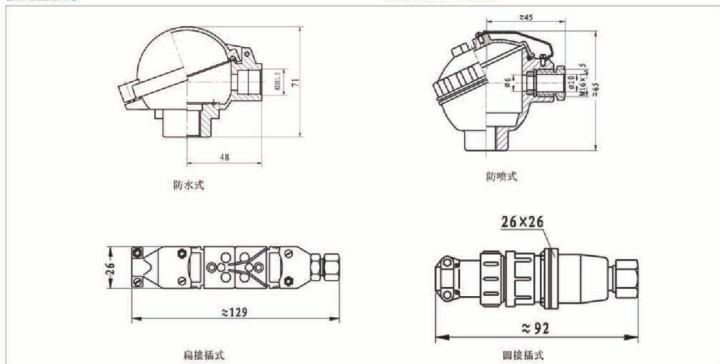
测量端结构形式

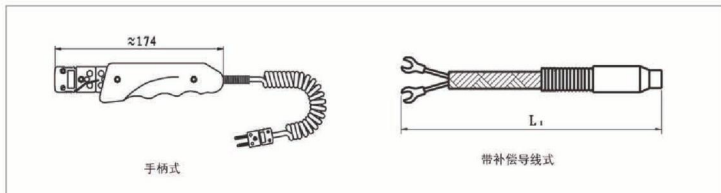
Structure form in the measuring terminal



接线盒形式

Junction box form





铠装热电偶推荐使用温度

Recommend temperature for use of sheathed thermocouple

种类 Category	套管材料 Casing material	外径 (mm) Outer diameter(mm)	使用温度 (°C) Temperature for usage (°C)	
			长期使用 Long-term use	长期使用 Short-term use
镍铬-镍硅 Nickel chromium -nickel silicon	1Cr18Ni9Ti	2.0	800	700
		3.0,4.0,5.0,6.0,8.0	800	900
		2.0,3.0	800	900
	GH3030	4.0,5.0	900	1000
		6.0,8.0	1000	1100
		2.0	800	700
镍铬硅-镍 Nichrome -nickel silicon	1Cr18Ni9Ti	3.0,4.0,5.0,6.0,8.0	800	900
		2.0,3.0	900	1000
		4.0,5.0	1000	1100
	GH3030	6.0,8.0	1100	1200
		2.0,3.0,4.0	1000	1100
		5.0,6.0,8.0	1100	1200
镍铬-铜镍 Nickel chromium -nickel copper	1Cr18Ni9Ti	2.0	500	600
		3.0,4.0,5.0	800	700
		6.0,8.0	700	800
铁-铜镍 Iron-copper nickel	1Cr18Ni9Ti	2.0	400	500
		3.0,4.0,5.0	500	600
		6.0,8.0	600	750
铜-铜镍 Copper-copper Nickel	1Cr18Ni9Ti	2.0,3.0,4.0,5.0	250	300
		6.0,8.0	300	350
		2.0,3.0,4.0	1000	1100
铂铑10-铂 Platinum10-rhodium	GH3030	5.0,6.0,8.0	1100	1200
		2.0,3.0,4.0,5.0	250	300
		6.0,8.0	300	350
铂铑13-铂 Platinum13-rhodium	1Cr18Ni9Ti	2.0,3.0,4.0	1000	1100
		5.0,6.0,8.0	1100	1200
		2.0,3.0,4.0	1000	1100
铂铑30-铂 Platinum30-rhodium	Gh3039	5.0,6.0,8.0	1100	1200

附加装置形式

Form of additional device



W 温度仪表 Temperature instrument

R 热电偶 Thermocouple

感温元件材料 Material for temperature-sensing element

- P 铂铑10-铂 Platinum10- rhodium
- Q 铂铑13-铂 Platinum10- rhodium
- M 镍铬硅-镍硅 Nichrome-nickel silicon
- N 镍铬-镍硅 Nickel chromium-nickel silicon
- E 镍铬-铜镍 Nickel chromium-copper nickel
- C 铜-铜镍 Copper-copper nickel
- F 铁-铜镍 Iron-copper nickel

K 铠装式 Sheathed type

偶丝对数 Number of thermal wire couple

- 无 单支 Non, single support
- 2 双支 2 double support

安装固定装置 Installation and fixation mode

- 1 无固定装置 Non-fixing device
- 2 固定卡套螺纹 Fixed-sleeve screw thread
- 3 活动卡套螺纹 Active-sleeve screw thread
- 4 固定卡套法兰 Fixed-sleeve flange
- 5 活动卡套法兰 Active-sleeve flange

接线盒形式 Junction box form

- 2 防喷式 Anti-spray type
- 3 防水式 Water-proof type
- 6 圆接插式 Circular interpolation type
- 7 扁接插式 Flat socket type
- 8 手柄式 Handle type
- 9 补偿导线式 Compensating wire type
- 0 感温元件 Temperature-sensing element

工作端形式 Form in the working terminal

- 1 绝缘式 Upper and lower limitation
- 2 接壳式 Double upper limitations
- 附加装置形式 Double lower limitations

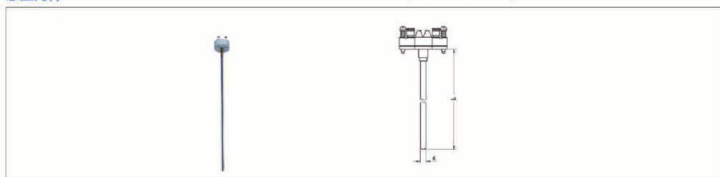
附加装置形式 Additional device form

- M 接触块式 Upper and lower limitation
- G 包箱式 Double upper limitations

W R N K ₂ - 2 3 1 M 典型型号示例 Examples of typical model

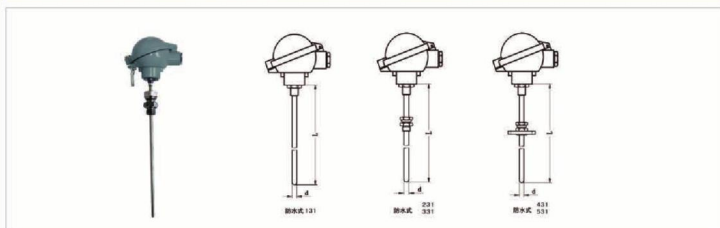
感温元件

Temperature-sensing element



名称 Name	型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	规格 Specification	
				d	L
镍铬硅-镍硅 Nichrome-nickel silicon	WRM-101	N	0~1000	Φ3	310
	WRM2-101				360
镍铬-镍硅 Nickel chromium nickel silicon	WRN-101	K	0~800	Φ4	410
	WRN2-101				460
镍铬-铜镍 Nickel chromium-nickel copper	WRE-101	E	0~800	Φ5	510
	WRE2-101				560
铜-铜镍 Copper-copper Nickel	WRC-101	T	0~350	Φ6	660
	WRC2-101				910
铁-铜镍 Iron-copper nickel	WRF-101	J	0~800	Φ8	910
	WRF2-101				1160

防水式铠装热电偶 Sheath thermocouple of waterproof type



型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	保护管材质 Material for protective tube	安装固定装置 Installation and fixation device
WRPK-131	S	0~1300	GH3039	无固定装置 No fixation device
WRMK-131	N	0~1100	GH3030	
		0~800	Cr18Ni9Ti	
WRNK-131	K	0~1100	GH3030	
		0~800	Cr18Ni9Ti	
WREK-131	E	0~800	1Cr18Ni9Ti	
WRCK-131	T	0~350		
WRFK-131	J	0~600		

型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	保护管材质 Material for protective tube	安装固定装置 Installation and fixation device
WRPK-231	S	0~1300	GH3039	固定卡套螺纹 Fixed-sleeve screw thread
WRMK-231	N	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WRNK-231	K	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WREK-231	E	0~800	1Cr18Ni9Ti	
WRCK-231	T	0~350		
WRFK-231	J	0~600		
WRPK-331	S	0~1300	GH3039	可动卡套螺纹 Movable-sleeve screw thread
WRMK-331	N	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WRNK-331	K	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WREK-331	E	0~800	1Cr18Ni9Ti	
WRCK-331	T	0~350		
WRFK-331	J	0~600		
WRPK-431	S	0~1300	GH3039	固定卡套法兰 Fixed-sleeve screw flange
WRMK-431	N	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WRNK-431	K	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WREK-431	E	0~800	1Cr18Ni9Ti	
WRCK-431	T	0~350		
WRFK-431	J	0~600		
WRPK-531	S	0~1300	GH3039	可动卡套法兰 Movable-sleeve screw flange
WRMK-531	N	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WRNK-531	K	0~1100	GH3030	
		0~800	1Cr18Ni9Ti	
WREK-531	E	0~600	1Cr18Ni9Ti	
WRCK-531	T	0~350		
WRFK-531	J	0~600		

1) 型号121、221、321防护等级IP65, 其他参数同131、231、331;

2) 热电偶按协议订货;

3) 未注明测温范围及保护管材质, 保护管材质一律视为1Cr18Ni9Ti.

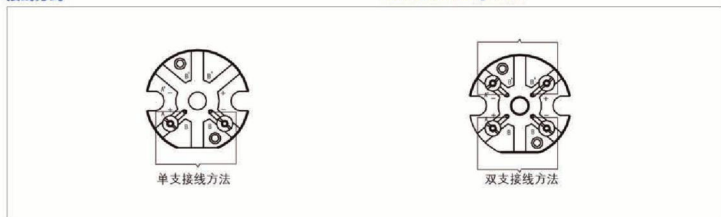
1) The protective grade of model 121, 221, 321 is IP65 and other parameter is the same as 131, 231, 331.

2) Thermocouple is ordered according to the agreement.

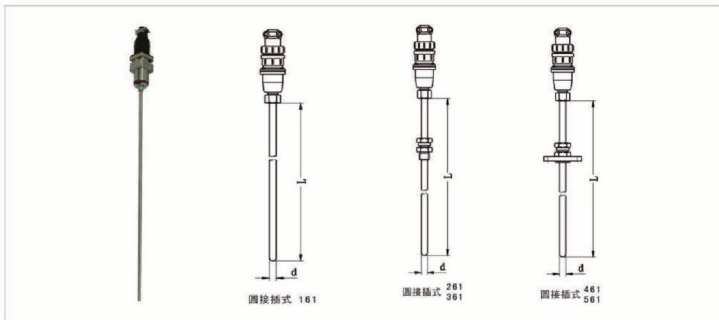
3) The material of protective tube is 1Cr18Ni9Ti is the temperature scope and material are noted.

接线方式

Wire-connecting mode



圆接插式铠装热电偶 Sheath thermocouple of circular interpolation



名称 Name	型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	安装固定装置 Installation and fixation device
铂铑10-铂 Platinum10-rhodium	WRPK-161 WRPK2-161	S	0~1300	无固定装置 No fixation device
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-161 WRMK2-161	N	0~1100	
镍铬-镍硅 Nickel chromium-nickel silicon	WRNK-161 WRNK2-161	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-161 WREK2-161	E	0~800	
铜-铜镍 Copper-copper Nickel	WRCK-161 WRCK2-161	T	0~350	
铁-铜镍 Iron-copper nickel	WRFK-161 WRFK2-161	J	0~600	固定卡套法兰 Fixed-sleeve screw flange
铂铑10-铂 Platinum10-rhodium	WRPK-261 WRPK2-261	S	0~1300	
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-261 WRMK2-261	N	0~1100	
镍铬-镍硅 Nickel chromium-nickel silicon	WRNK-261 WRNK2-261	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-261 WREK2-261	E	0~800	
铜-铜镍 Copper-copper Nickel	WRCK-261 WRCK2-261	T	0~350	
铁-铜镍 Iron-copper nickel	WRFK-261 WRFK2-261	J	0~500	
铂铑10-铂 Platinum10-rhodium	WRPK-361 WRPK2-361	S	0~1300	
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-361 WRMK2-361	N	0~1100	
镍铬-镍硅 Nickel chromium-nickel silicon	WRNK-361 WRNK2-361	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-361 WREK2-361	E	0~800	
铜-铜镍 Copper-copper Nickel	WRCK-361 WRCK2-361	T	0~350	
铁-铜镍 Iron-copper nickel	WRFK-361 WRFK2-361	J	0~800	

名称 Name	型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	安装固定装置 Installation and fixation device
铂铑10-铂 Platinum10-rhodium	WRPK-461 WRPK2-461	S	0-1300	固定卡套法兰 Fixed-sleeve screw flange
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-461 WRMK2-461	N	0-1100	
镍铬-镍硅 Nickel chromium-nickel silicon	WRNK-461 WRNK2-461	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-461 WREK2-461	E	0-800	
铜-铜镍 Copper-copper Nickel	WRCK-461 WRCK2-461	T	0-350	
铁-铜镍 Iron-copper nickel	WRFK-461 WRFK2-461	J	0-600	
铂铑10-铂 Platinum10- rhodium	WRPK-561 WRPK2-561	S	0-1300	
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-561 WRMK2-561	N	0-1100	
镍铬-镍硅 Nickel chromium-nickel silicon	WRNK-561 WRNK2-561	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-561 WREK2-561	E	0-800	
铜-铜镍 Copper-copper Nickel	WRCK-561 WRCK2-561	T	0-350	
铁-铜镍 Iron-copper nickel	WRFK-561 WRFK2-561	J	0-600	

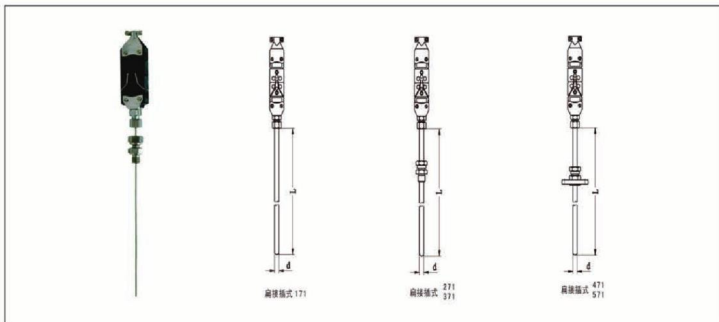
1) 热电偶按协议订货;

2) 未注明测温范围及保护管材质, 保护管材质一律视为1Cr18Ni9Ti.

1) Thermocouple I is ordered according to the agreement.

2) The material of protective tube is 1Cr18Ni9Ti is the temperature scope and material are noted.

扁插插式铠装热电偶 Sheath thermocouple of flat socket type



名称 Name	型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	安装固定装置 Installation and fixation device
铂铑10-铂 Platinum10-rhodium	WRPK-171	S	0-1300	无固定装置 No fixation device
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-171	N	0-1100	
镍铬-镍硅 Nickel chromium nickel silicon	WRNK-171	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-171	E	0-800	
铜-铜镍 Copper-copper Nickel	WRCK-171	T	0-350	
铁-铜镍 Iron-copper nickel	WRFK-171	J	0-600	
铂铑10-铂 Platinum10-rhodium	WRPK-271	S	0-1300	固定卡套螺纹 Fixed-sleeve screw thread
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-271	N	0-1100	
镍铬-镍硅 Nickel chromium nickel silicon	WRNK-271	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-271	E	0-800	
铜-铜镍 Copper-copper Nickel	WRCK-271	T	0-350	
铁-铜镍 Iron-copper nickel	WRFK-271	J	0-600	
铂铑10-铂 Platinum10-rhodium	WRPK-371	S	0-1300	可动卡套法兰 Movable-sleeve screw flange
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-371	N	0-1100	
镍铬-镍硅 Nickel chromium nickel silicon	WRNK-371	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-371	E	0-800	
铜-铜镍 Copper-copper Nickel	WRCK-371	T	0-350	
铁-铜镍 Iron-copper nickel	WRFK-371	J	0-600	
铂铑10-铂 Platinum10-rhodium	WRPK-471	S	0-1300	固定卡套螺纹 Fixed-sleeve screw thread
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-471	N	0-1100	
镍铬-镍硅 Nickel chromium nickel silicon	WRNK-471	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-471	E	0-800	
铜-铜镍 Copper-copper Nickel	WRCK-471	T	0-350	
铁-铜镍 Iron-copper nickel	WRFK-471	J	0-600	
铂铑10-铂 Platinum10-rhodium	WRPK-571	S	0-1300	可动卡套法兰 Movable-sleeve screw flange
镍铬硅-镍硅 Nichrome-nickel silicon	WRMK-571	N	0-1100	
镍铬-镍硅 Nickel chromium nickel silicon	WRNK-571	K		
镍铬-铜镍 Nickel chromium-nickel copper	WREK-571	E	0-800	
铜-铜镍 Copper-copper Nickel	WRCK-571	T	0-350	
铁-铜镍 Iron-copper nickel	WRFK-571	J	0-600	

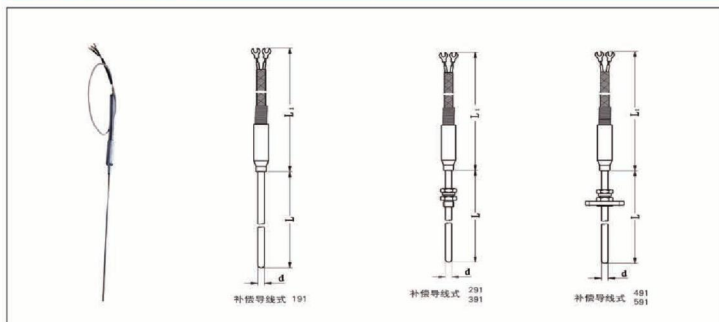
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2) 未注明测温范围及保护管材质, 保护管材质一律视为1Cr18Ni9Ti;

1) Thermocouple is ordered according to the agreement.

2) The material of protective tube is 1Cr18Ni9Ti if the temperature scope and material are noted.

补偿导线式铠装热电偶 Armored thermocouple with compensation wire



型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	长度 Length		安装固定装置 Installation and fixation device						
			L	L1							
WRPK-191 WRPK _c -191	S	0~1300	100 200 300 400 500 750 1000 1500 2000 3000 4000 5000 7500 10000 15000 25000	500 750 1000 1500 2000 3000	无固定装置 No fixation device						
WRMK-191 WRMK _c -191	N	0~1100				500 750 1000 1500 2000 3000 4000 5000 7500 10000 15000 25000	1000 1500	固定卡套螺纹 Fixed-sleeve screw thread			
WRNK-191 WRNK _c -191	K								2000 3000		
WREK-191 WREK _c -191	E	0~800					4000 5000			可动卡套螺纹 Movable-sleeve screw thread	
WRCK-191 WRCK _c -191	T	0~350							7500 10000 15000		
WRFK-191 WRFK _c -191	J	0~600					25000				
WRPK-291 WRPK _c -291	S	0~1300		10000 15000 25000	500 750 1000 1500 2000 3000				无固定装置 No fixation device		
WRMK-291 WRMK _c -291	N	0~1100				500 750 1000 1500 2000 3000 4000 5000 7500 10000 15000 25000	1000 1500	固定卡套螺纹 Fixed-sleeve screw thread			
WRNK-291 WRNK _c -291	K										2000 3000
WREK-291 WREK _c -291	E	0~800					4000 5000			可动卡套螺纹 Movable-sleeve screw thread	
WRCK-291 WRCK _c -291	T	0~350									7500 10000 15000
WRFK-291 WRFK _c -291	J	0~500					25000				
WRPK-391 WRPK _c -391	S	0~1300			10000 15000 25000				500 750 1000 1500 2000 3000		无固定装置 No fixation device
WRMK-391 WRMK _c -391	N	0~1100				500 750 1000 1500 2000 3000 4000 5000 7500 10000 15000 25000	1000 1500	固定卡套螺纹 Fixed-sleeve screw thread			
WRNK-391 WRNK _c -391	K										
WREK-391 WREK _c -391	E	0~800					4000 5000			可动卡套螺纹 Movable-sleeve screw thread	
WRCK-391 WRCK _c -391	T	0~350	7500 10000 15000								
WRFK-391 WRFK _c -391	J	0~800					25000				

型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	长度 Length		安装固定装置 Installation and fixation device		
			L	L1			
WRPK-491 WRPK ₁ -491	S	0~1300	100 200 300 400 500 750 1000 1500 2000 3000 4000 5000 7500 10000 15000 25000	500 750 1000 1500 2000 3000 4000 5000 7500 10000 15000 26000	固定卡套螺纹 Fixed-sleeve screw thread		
WRMK-491 WRMK ₁ -491	N	0~1100					
WRNK-491 WRNK ₁ -491	K						
WREK-491 WREK ₁ -491	E	0~800					
WRCK-491 WRCK ₁ -491	T	0~350					
WRFK-491 WRFK ₁ -491	J	0~600					
WRPK-591 WRPK ₁ -591	S	0~1300				4000 5000 7500 10000 15000 25000	7500 10000 15000 26000
WRMK-591 WRMK ₁ -591	N	0~1100					
WRNK-591 WRNK ₁ -591	K						
WREK-591 WREK ₁ -591	E	0~800					
WRCK-591 WRCK ₁ -591	T	0~350					
WRFK-591 WRFK ₁ -591	J	0~600					

铠装热电阻 Sheathed thermal resistance

1、产品应用

通常和显示仪表、记录仪、电子计算机等配套使用。直接测量各种生产过程中的-200℃~500℃范围内液体、蒸汽和气体介质以及固体表面温度。

2、工作原理

铠装热电阻是利用物质在温度变化时，其电阻也随着发生变化的特征来测量温度的。当阻值变化时，工作仪表便显示出阻值所对应的温度值。

3、产品特点

- 热响应时间少，减小动态误差；
- 直径小，长度不受限制；
- 测量精确度高；
- 进口薄膜电阻元件，性能可靠稳定。

4、主要技术参数

产品执行标准：IEC60751，GB/T30121-2013。

偶丝直径材料

偶丝形式 Thermocouple wire type	单支式 Single support	双支式 Double support
套管直径 Casing diameter	φ3, φ4, φ5, φ6, φ8	φ4, φ5, φ6, φ8
套管材质 Casing material	1Cr18Ni9Ti	1Cr18Ni9Ti

测量范围及允差

Range for temperature measurement and error-tolerance

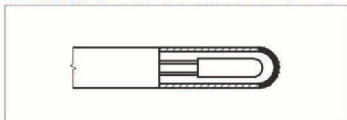
分度号 Graduation	允差等级 Tolerance level	有效温度范围 (°C) Range of Effective temperaturerange		允差范围 (°C) Tolerance range
		线绕元件 Wire wound element	膜式元件 Membrane element	
Pt100	AA	-50~260	0~150	± (0.1+0.0017 t)
	A	-100~450	-30~300	± (0.15+0.002 t)
	B	-196~600	-50~500	± (0.3+0.005 t)
	C	-196~600	-50~600	± (0.6+0.01 t)

|t| = 温度绝对值，单位为°C t=temperature Absolute value, units for °C

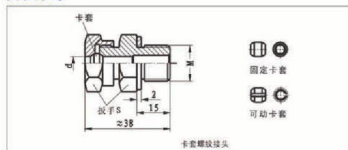
热响应时间 Thermal response time

套管直径 Casing diameter	热响应时间 (s) Thermal response time
φ3	≤3
φ4	≤5
φ5	≤8
φ6	≤12
φ8	≤15

测量端结构形式 Structure form of the measuring terminal

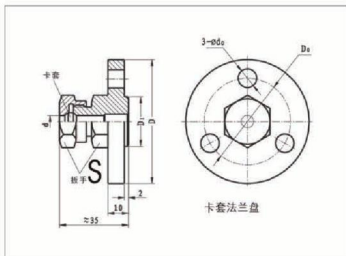


安装方式



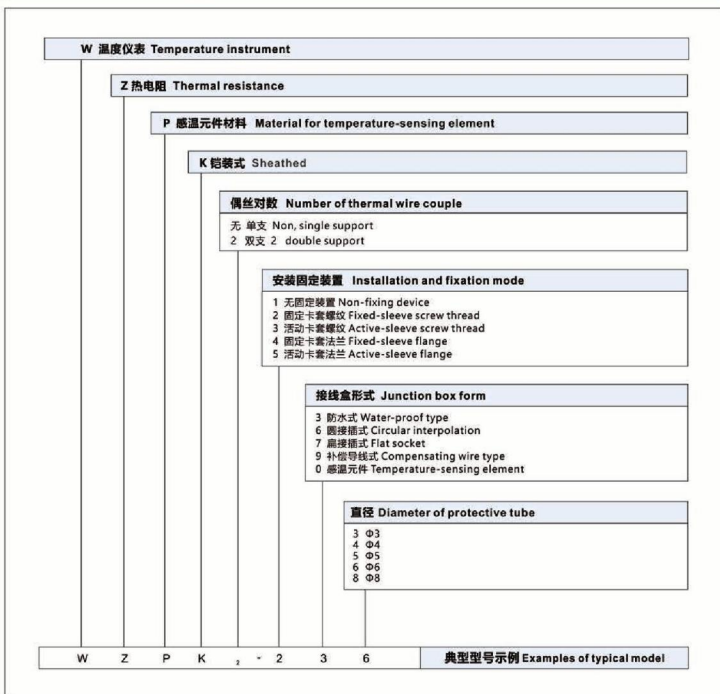
Installation method

套管直径 Casing diameter	铠装阻外径 The outer diameter of sheathed resistance	
	φ8, φ6, φ5	φ4, φ3
M	M16×1.5	M12×1.5
S	22	19



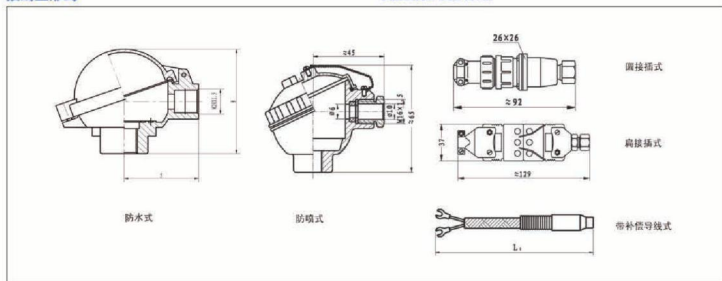
代号和尺寸 Code and size	铠装阻外径 The outer diameter of sheathed resistance	
	φ8, φ6, φ5	φ4, φ3
D	φ60	φ50
D ₀	φ42	φ36
D ₁	φ24	φ20
S	φ22	φ19
d ₀	φ9	φ7

型号命名方法 Naming method for model



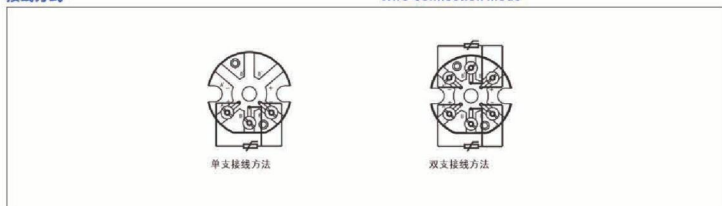
接线盒形式

Junction box form



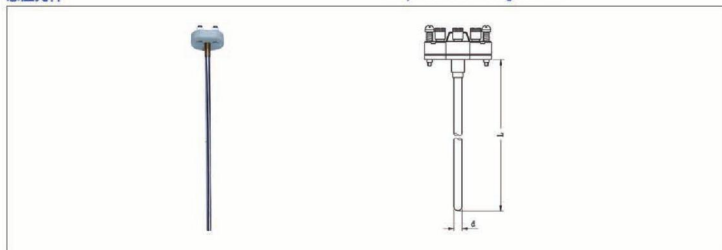
接线方式

Wire-connection mode



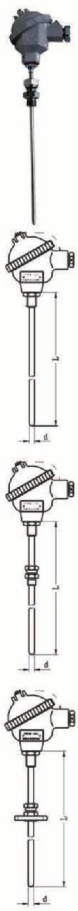
感温元件

Temperature-sensing element



名称 Name	型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	规格 Specification	
				d	L
单支铂热电阻 Single platinum thermal resistance	WZP-101	Pt100	A级 -30-300	$\varnothing 3$	310
				$\varnothing 4$	360
				$\varnothing 5$	410
双支铂热电阻 Double platinum thermal resistance	WZP ₂ -101	Pt100	B级 -50-500	$\varnothing 5$	460
				$\varnothing 6$	510
					560

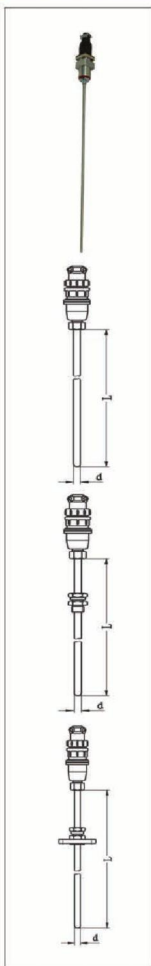
防水式铠装热电阻 Waterproof type sheathed thermal resistance

	型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	等级 Grade	安装固定装置 Installation and fixation device
	WZPK-133	PI100	A级 -30-300 B级 -50-500	A级或B级 A or B	无固定装置 No fixation device
	WZPK-134				
	WZPK-135				
	WZPK-136				
	WZPK-138				
	WZPK ₁ -134				
	WZPK ₁ -135				
	WZPK ₁ -136				
	WZPK ₁ -138				
	WZPK-233				
	WZPK-234				
	WZPK-235				
	WZPK-236				
	WZPK-238				
	WZPK ₁ -234				
	WZPK ₁ -235				
	WZPK ₁ -236				
	WZPK ₁ -238				
	WZPK-333				
	WZPK-334				
	WZPK-335				
	WZPK-336				
	WZPK-338				
	WZPK ₁ -334				
	WZPK ₁ -335				
	WZPK ₁ -336				
	WZPK ₁ -338				
	WZPK-433				
	WZPK-434				
	WZPK-435				
	WZPK-436				
	WZPK ₁ -438				
	WZPK-434				
	WZPK-435				
	WZPK-436				
	WZPK ₁ -438				
	WZPK-533				
	WZPK-534				
	WZPK-535				
	WZPK-536				
	WZPK-538				
	WZPK ₁ -534				
	WZPK ₁ -535				
	WZPK ₁ -536				
	WZPK ₁ -538				

- 1) 铠装防护等级IP55;
- 2) 热电阻A级按协议订货;
- 3) 未注明测量范围及保护管材质, 保护管材质一律视为1Cr18Ni9Ti.

- 1) Protection grade of sheathed resistance Ip55.
- 2) Thermocouple i is ordered according to the agreement.
- 3) The material of protective tube is 1Cr18Ni9Ti if the temperature scope and material are noted.

圆接插式铠装热电阻 Sheath thermal resistance of circular interpolation type



型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	等级 Grade	安装固定装置 Installation and fixation device
WZPK-163	Pt100	A级 -30-300 B级 -50-500	A级或B级 A or B	无固定装置 No fixation device
WZPK-164				
WZPK-165				
WZPK-166				
WZPK-168				
WZPK ₁ -164				
WZPK ₁ -165				
WZPK ₁ -166				
WZPK ₁ -168				
WZPK-263				固定卡套螺纹 Fixed-sleeve screw thread
WZPK-264				
WZPK-265				
WZPK-266				
WZPK-288				
WZPK ₁ -264				
WZPK ₁ -265				
WZPK ₁ -266				
WZPK ₁ -288				
WZPK-363				可动卡套螺纹 Movable-sleeve screw thread
WZPK-364				
WZPK-365				
WZPK-366				
WZPK-388				
WZPK-384				
WZPK-365				
WZPK-366				
WZPK-368				固定卡套法兰 Fixed-sleeve screw flange
WZPK ₁ -463				
WZPK ₁ -464				
WZPK ₁ -465				
WZPK ₁ -466				
WZPK-468				
WZPK-464				
WZPK-465				
WZPK-466	可动卡套法兰 Movable-sleeve screw flange			
WZPK ₁ -468				
WZPK-563				
WZPK-564				
WZPK-565				
WZPK ₁ -566				
WZPK-568				
WZPK-564				
WZPK-565				
WZPK-566				
WZPK-568				

- 1) 铠装防护等级IP55;
- 2) 热电阻A级按协议订货;
- 3) 未注明测温范围及保护管材质, 保护管材质一律视为1Cr18Ni9Ti.

- 1) Protection grade of sheathed resistance Ip55.
- 2) Thermocouple i is ordered according to the agreement.
- 3) The material of protective tube is 1Cr18Ni9Ti if the temperature scope and material are noted.

扁接插式铠装热电阻 Sheath thermal resistance of flat socket type

	型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	等级 Grade	安装固定装置 Installation and fixation device
	WZPK-173	P1100		A级 -30-300 B级 -50-500	A级或B级 A or B
WZPK-174					
WZPK-175					
WZPK-176					
WZPK-178					
WZPK-273	固定卡套螺纹 Fixed-sleeve screw thread				
WZPK-274					
WZPK-275					
WZPK-276					
WZPK-278					
WZPK-373	可动卡套螺纹 Movable-sleeve screw thread				
WZPK-374					
WZPK-375					
WZPK-376					
WZPK ₁ -378					
WZPK ₂ -473	固定卡套法兰 Fixed-sleeve screw flange				
WZPK ₂ -474					
WZPK ₂ -475					
WZPK-476					
WZPK-478					
WZPK-573	可动卡套法兰 Movable-sleeve screw flange				
WZPK-574					
WZPK-575					
WZPK-576					
WZPK-578					

1) 铠装防护等级:IP55;

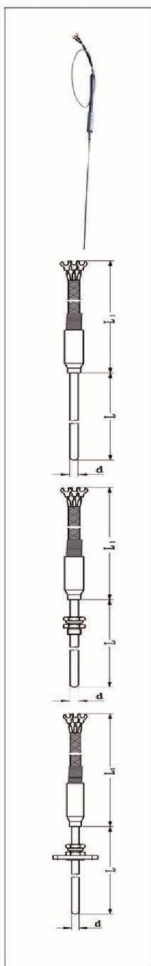
2) 热电阻A级按协议订货;

3) 未注明测温范围及保护管材质, 保护管材质一律视为1Cr18Ni9Ti.

1) Protection grade of sheathed resistance Ip55.

2) Thermocouple I is ordered according to the agreement.

3) The material of protective tube is 1Cr18Ni9Ti if the temperature scope and material are noted.



型号 Model	分度号 Graduation	测量范围 (°C) Range of temperature measurement °C	等级 Grade	安装固定装置 Installation and fixation device
WZPK-193	Pt100	A级 -30-300 B级 -50-500	A级或B级 A or B	无固定装置 No fixation device
WZPK-194				
WZPK-195				
WZPK-196				
WZPK-198				
WZPK ₁ -194				
WZPK ₁ -195				
WZPK ₁ -196				
WZPK ₁ -198				
WZPK-293				
WZPK-294				
WZPK-295				
WZPK-296				
WZPK-298				
WZPK ₁ -294				
WZPK ₁ -295				
WZPK ₁ -296				
WZPK ₁ -298				
WZPK-393				
WZPK-394				
WZPK-395				
WZPK-396				
WZPK-398				
WZPK-398				
WZPK-394				
WZPK-395				
WZPK-396				
WZPK-398				
WZPK ₁ -494				
WZPK ₁ -495				
WZPK ₁ -496				
WZPK-498				
WZPK-494				
WZPK-495				
WZPK-496				
WZPK ₁ -498				
WZPK-593				
WZPK-594				
WZPK-595				
WZPK ₁ -596				
WZPK-598				
WZPK-574				
WZPK-585				
WZPK-596				
WZPK-598				

- 1) 铠装防护等级IP55;
- 2) 热电阻A级按协议订货;
- 3) 未注明测温范围及保护管材质, 保护管材质一律视为1Cr18Ni9Ti.

- 1) Protection grade of sheathed resistance Ip55.
- 2) Thermocouple i is ordered according to the agreement.
- 3) The material of protective tube is 1Cr18Ni9Ti if the temperature scope and material are noted.