

# 装配式系列热电偶

## 选型样本



# 装配式系列热电偶

## 装配热电偶

### 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 $0^{\circ}\text{C}\sim 1300^{\circ}\text{C}$ 范围内液体、蒸汽和气体介质以及固体表面温度。

### 特点

1. 装配简单, 更换方便;
2. 压簧式感温元件, 抗振性能好;
3. 测量范围大;
4. 机械强度高, 耐压性能好;

### 工作原理

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。

### 主要技术参数

#### 产品执行标准

IEC584

JB/T9238-1999

#### 常温绝缘电阻

热电偶在环境温度为 $20\pm 15^{\circ}\text{C}$ , 相对湿度不大于80%, 试验电压为 $500\pm 50\text{V}$  (直流) 电极与外套管之间的绝缘电阻 $\geq 1000\text{M}\Omega\cdot\text{m}$

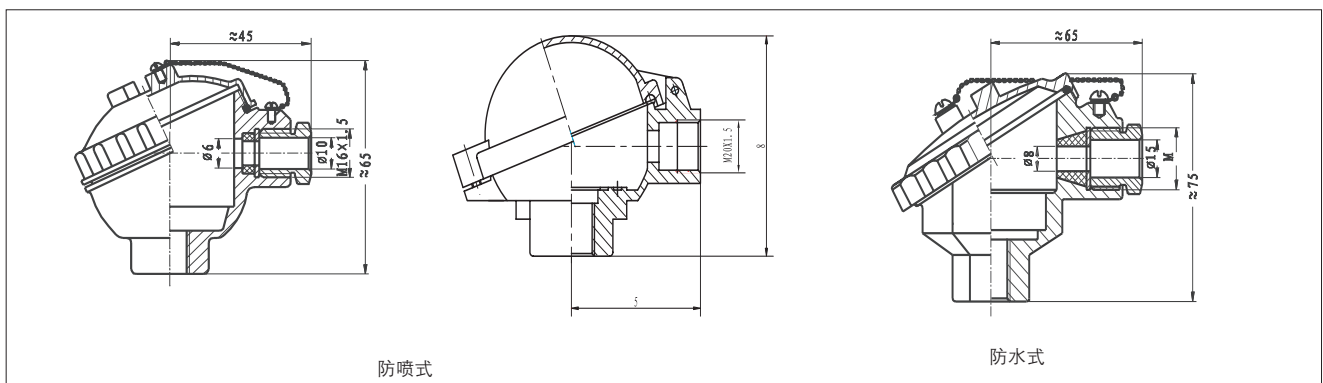
即1m长的试样的绝缘电阻为 $1000\text{M}\Omega$ ;

10m长的试样的绝缘电阻为 $100\text{M}\Omega$ ;

### 测温范围及允差

| 型号  | 分度号 | 允差等级                      |                         |                           |                         |
|-----|-----|---------------------------|-------------------------|---------------------------|-------------------------|
|     |     | I                         |                         | II                        |                         |
|     |     | 允差值                       | 测温范围 $^{\circ}\text{C}$ | 允差值                       | 测温范围 $^{\circ}\text{C}$ |
| WRN | K   | $\pm 1.5^{\circ}\text{C}$ | $-40\sim +375$          | $\pm 2.5^{\circ}\text{C}$ | $-40\sim +333$          |
|     |     | $\pm 0.004\text{tI}$      | $375\sim 1000$          | $\pm 0.0075\text{tII}$    | $333\sim 1200$          |
| WRM | N   | $\pm 1.5^{\circ}\text{C}$ | $-40\sim +375$          | $\pm 2.5^{\circ}\text{C}$ | $-40\sim +333$          |
|     |     | $\pm 0.004\text{tI}$      | $375\sim 1000$          | $\pm 0.0075\text{tII}$    | $333\sim 1200$          |
| WRE | E   | $\pm 1.5^{\circ}\text{C}$ | $-40\sim +375$          | $\pm 2.5^{\circ}\text{C}$ | $-40\sim +333$          |
|     |     | $\pm 0.004\text{tI}$      | $375\sim 800$           | $\pm 0.0075\text{tII}$    | $333\sim 900$           |
| WRF | J   | $\pm 1.5^{\circ}\text{C}$ | $-40\sim +375$          | $\pm 2.5^{\circ}\text{C}$ | $-40\sim +333$          |
|     |     | $\pm 0.004\text{tI}$      | $375\sim 750$           | $\pm 0.0075\text{tII}$    | $333\sim 750$           |
| WRC | T   | $\pm 0.5^{\circ}\text{C}$ | $-40\sim +125$          | $\pm 1.0^{\circ}\text{C}$ | $-40\sim +133$          |
|     |     | $\pm 0.004\text{tI}$      | $125\sim 350$           | $\pm 0.0075\text{tII}$    | $133\sim 350$           |

### 接线盒形式

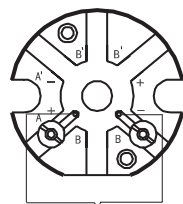


# 装配式系列热电偶

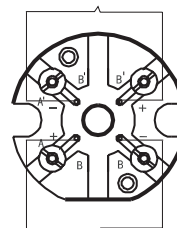
## 型号及规格

|   |      |        |        |        |         |          |   |   |        |  |
|---|------|--------|--------|--------|---------|----------|---|---|--------|--|
| W | 温度仪表 |        |        |        |         |          |   |   |        |  |
|   | R    | 热电偶    |        |        |         |          |   |   |        |  |
|   |      | 感温元件材料 |        |        |         |          |   |   |        |  |
|   |      | N      | 镍铬-镍硅  |        |         |          |   |   |        |  |
|   |      | M      | 镍铬硅-镍硅 |        |         |          |   |   |        |  |
|   |      | E      | 镍铬-铜硅  |        |         |          |   |   |        |  |
|   |      | C      | 铜-铜镍   |        |         |          |   |   |        |  |
|   |      | F      | 铁-铜镍   |        |         |          |   |   |        |  |
|   |      |        | 偶丝对数   |        |         |          |   |   |        |  |
|   |      |        | 无      | 单支     |         |          |   |   |        |  |
|   |      |        | 2      | 双支     |         |          |   |   |        |  |
|   |      |        |        | 安装固定形式 |         |          |   |   |        |  |
|   |      |        |        | 1      | 无固定装置   |          |   |   |        |  |
|   |      |        |        | 2      | 固定螺纹    |          |   |   |        |  |
|   |      |        |        | 3      | 活动法兰    |          |   |   |        |  |
|   |      |        |        | 4      | 固定法兰    |          |   |   |        |  |
|   |      |        |        | 5      | 活络管接头式  |          |   |   |        |  |
|   |      |        |        | 6      | 固定螺纹锥形式 |          |   |   |        |  |
|   |      |        |        | 7      | 直形管接头式  |          |   |   |        |  |
|   |      |        |        |        | 接线盒形式   |          |   |   |        |  |
|   |      |        |        |        | 2       | 防喷式      |   |   |        |  |
|   |      |        |        |        | 3       | 防水式      |   |   |        |  |
|   |      |        |        |        |         | 保护管直径    |   |   |        |  |
|   |      |        |        |        | 0       | Φ16      |   |   |        |  |
|   |      |        |        |        | 1       | Φ20      |   |   |        |  |
|   |      |        |        |        | 2       | Φ16 高铝质管 |   |   |        |  |
|   |      |        |        |        | 3       | Φ20 高铝质管 |   |   |        |  |
|   |      |        |        |        |         | 附加形式     |   |   |        |  |
|   |      |        |        |        | G       | 变截面      |   |   |        |  |
|   |      |        |        |        | B       | 带温度变送器   |   |   |        |  |
| W | R    | N      | 2      | -      | 2       | 3        | 1 | G | 典型型号示例 |  |

## 接线方式



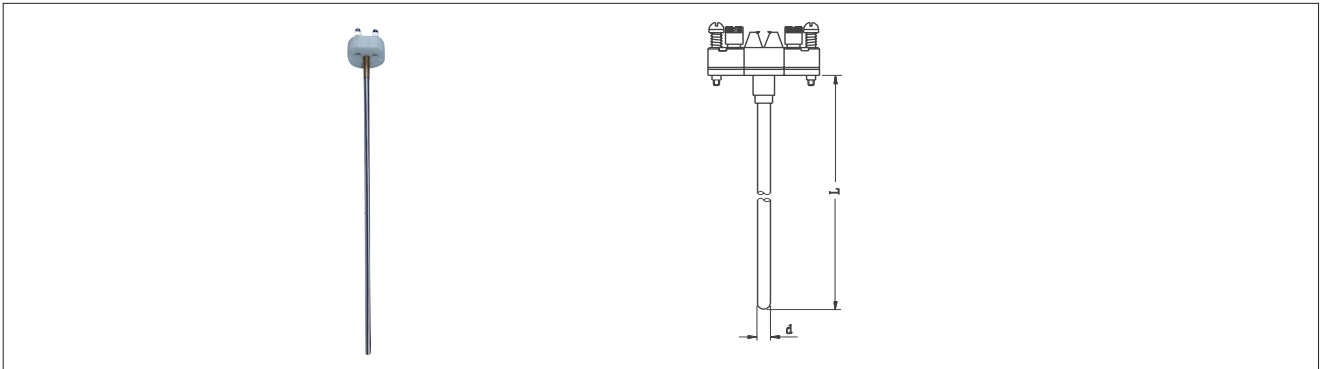
单支接线方法



双支接线方法

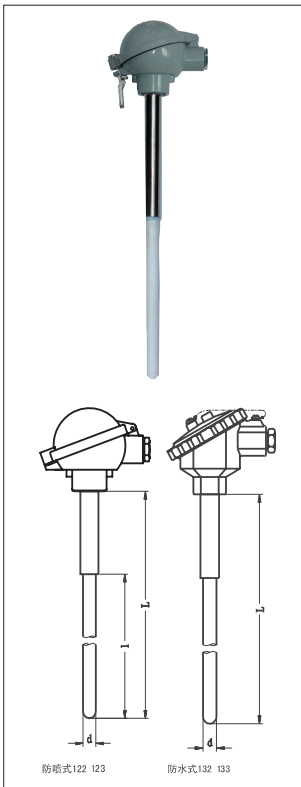
## 装配式系列热电偶

### 感温元件



| 名称     | 型号                    | 分度号 | 测温范围 °C | 规格                         |     |
|--------|-----------------------|-----|---------|----------------------------|-----|
|        |                       |     |         | d                          | L   |
| 镍铬硅—镍铬 | WRM-101               | N   | 0~1000  | Φ3<br>Φ4<br>Φ5<br>Φ6<br>Φ8 | 310 |
|        | WRM <sub>2</sub> -101 |     |         |                            | 360 |
| 镍铬—镍硅  | WRN-101               | K   | 0~800   |                            | 410 |
|        | WRN <sub>2</sub> -101 |     |         |                            | 460 |
| 镍铬—铜镍  | WRE-101               | E   | 0~350   |                            | 510 |
|        | WRE <sub>2</sub> -101 |     |         |                            | 560 |
| 铜—铜镍   | WRC-101               | T   | 0~600   | 660                        |     |
|        | WRC <sub>2</sub> -101 |     |         | 910                        |     |
| 铁—铜镍   | WRF-101               | J   | 0~600   | 1160                       |     |
|        | WRF <sub>2</sub> -101 |     |         |                            |     |

### 无固定装置热电偶

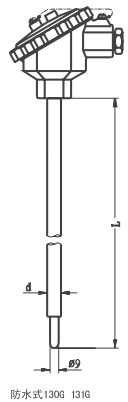
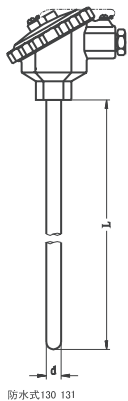


| 型号                    | 分度号     | 测温范围 °C | 热响应时间 | 保护管材料 | 规格  |           |
|-----------------------|---------|---------|-------|-------|-----|-----------|
|                       |         |         |       |       | d   | L         |
| WRM-122               | N       | 0~1200  | <240s | 高铝质   | Φ16 | 300×150   |
| WRM <sub>2</sub> -122 |         |         |       |       |     | 350×200   |
| WRN-122               | 400×250 |         |       |       |     |           |
| WRN <sub>2</sub> -122 | K       |         |       |       | Φ20 | 450×300   |
| WRM-123               |         |         |       |       |     | 500×350   |
| WRM <sub>2</sub> -123 |         |         |       |       |     | 550×400   |
| WRN-123               | N       |         |       |       | Φ16 | 650×500   |
| WRN <sub>2</sub> -123 |         |         |       |       |     | 900×750   |
| WRM-132               |         |         |       |       |     | 1150×1000 |
| WRM <sub>2</sub> -132 | K       |         |       |       | Φ20 | 1650×1500 |
| WRN-132               |         |         |       |       |     | 2150×2000 |
| WRN <sub>2</sub> -132 |         |         |       |       |     |           |
| WRM-133               | N       | Φ16     |       |       |     |           |
| WRM <sub>2</sub> -133 |         |         |       |       |     |           |
| WRN-133               | K       | Φ20     |       |       |     |           |
| WRN <sub>2</sub> -133 |         |         |       |       |     |           |

1)型号122为防喷式,防护等级IP65; 型号132为防水式,防护等级IP55;  
2)保护管其余材质根据协议订货。

## 装配式系列热电偶

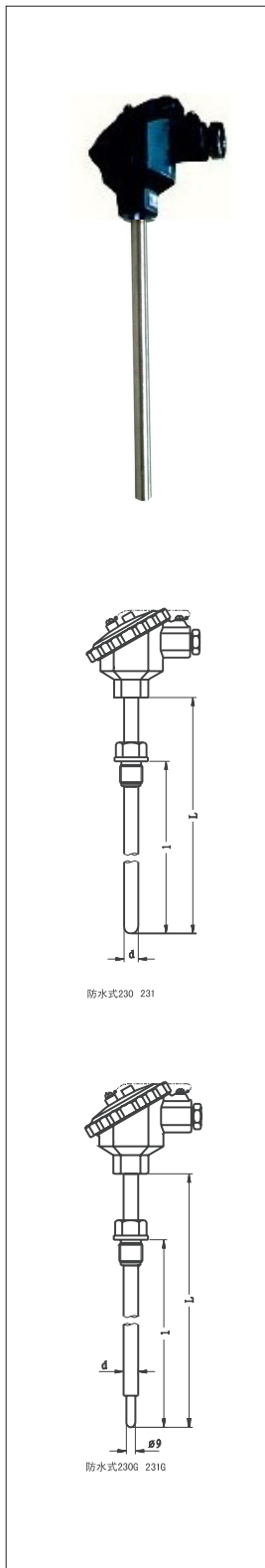
| 型号                                 | 分度号 | 测温范围 °C | 热响应时间 | 保护管材料      | 规格   |  |
|------------------------------------|-----|---------|-------|------------|------|--|
|                                    |     |         |       |            | d    | L  |
| WRM-130<br>WRM <sub>2</sub> -130   | N   | 0~800   | <90s  | 1Cr18Ni9Ti | Φ 16 | 150<br>200<br>250<br>300<br>350<br>400<br>500<br>750<br>1000<br>1500<br>2000<br>2150 |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRM-130G<br>WRM <sub>2</sub> -130G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-130<br>WRN <sub>2</sub> -130   | K   | 0~800   | <90s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-130G<br>WRN <sub>2</sub> -130G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRE-130<br>WRE <sub>2</sub> -130   | E   | 0~700   | <90s  | 1Cr18Ni9Ti |      |  |
| WRE-130G<br>WRE <sub>2</sub> -130G |     |         | <24s  |            |      |  |
| WRC-130<br>WRC <sub>2</sub> -130   | T   | 0~350   | <90s  | 1Cr18Ni9Ti |      |  |
| WRC-130G<br>WRC <sub>2</sub> -130G |     |         | <24s  |            |      |  |
| WRF-130<br>WRF <sub>2</sub> -130   | J   | 0~600   | <90s  | 1Cr18Ni9Ti |      |  |
| WRF-130G<br>WRF <sub>2</sub> -130G |     |         | <24s  |            |      |  |
| WRM-131<br>WRM <sub>2</sub> -131   | N   | 0~800   | <90s  | 1Cr18Ni9Ti | Φ 20 |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRM-131G<br>WRM <sub>2</sub> -131G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-131<br>WRN <sub>2</sub> -131   | K   | 0~800   | <120s | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-131G<br>WRN <sub>2</sub> -131G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRE-131<br>WRE <sub>2</sub> -131   | E   | 0~700   | <120s | 1Cr18Ni9Ti |      |  |
| WRE-131G<br>WRE <sub>2</sub> -131G |     |         | <24s  |            |      |  |
| WRC-131<br>WRC <sub>2</sub> -131   | T   | 0~350   | <120s | 1Cr18Ni9Ti |      |  |
| WRC-131G<br>WRC <sub>2</sub> -131G |     |         | <24s  |            |      |  |
| WRF-131<br>WRF <sub>2</sub> -131   | J   | 0~600   | <120s | 1Cr18Ni9Ti |      |  |
| WRF-131G<br>WRF <sub>2</sub> -131G |     |         | <24s  |            |      |  |



- 1) 型号130、131为防水式，防护等级IP55;
- 2) 型号120、121为防喷式，防护等级IP65，其它参数同130、131
- 3) 保护管其余材质根据协议订货

## 装配式系列热电偶

### 固定螺纹式热电偶

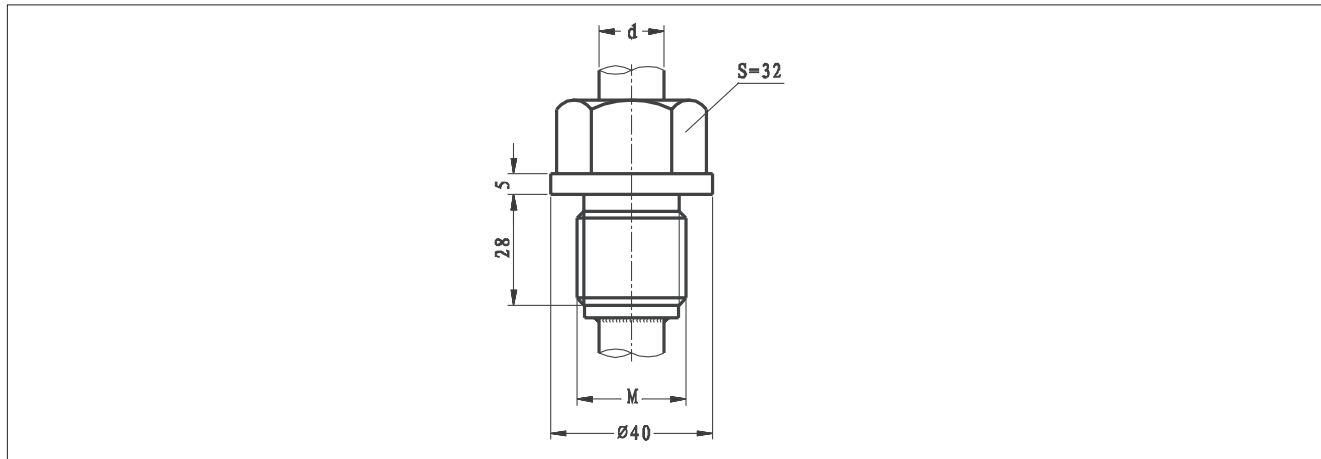


| 型号                                 | 分度号 | 测温范围 °C | 热响应时间 | 保护管材料      | 规格   |   |
|------------------------------------|-----|---------|-------|------------|------|---|
|                                    |     |         |       |            | d    | L   |
| WRM-230<br>WRM <sub>2</sub> -230   | N   | 0~800   | <90s  | 1Cr18Ni9Ti | Φ 16 | 300×150<br>350×200<br>400×250<br>450×300<br>500×350<br>550×400<br>650×500<br>900×750<br>1150×1000<br>1650×1500<br>2150×2000 |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRM-230G<br>WRM <sub>2</sub> -230G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRN-230<br>WRN <sub>2</sub> -230   | K   | 0~800   | <90s  | 1Cr18Ni9Ti |      |   |
|                                    |     |         |       | 0~1000     |      |   |
| WRN-230G<br>WRN <sub>2</sub> -230G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRE-230<br>WRE <sub>2</sub> -230   | E   | 0~700   | <90s  | 1Cr18Ni9Ti |      |   |
| WRE-230G<br>WRE <sub>2</sub> -230G |     |         | <24s  |            |      |   |
| WRC-230<br>WRC <sub>2</sub> -230   | T   | 0~350   | <90s  | 1Cr18Ni9Ti |      |   |
| WRC-230G<br>WRC <sub>2</sub> -230G |     |         | <24s  |            |      |   |
| WRF-230<br>WRF <sub>2</sub> -230   | J   | 0~600   | <90s  | 1Cr18Ni9Ti |      |   |
| WRF-230G<br>WRF <sub>2</sub> -230G |     |         | <24s  |            |      |   |
| WRM-231<br>WRM <sub>2</sub> -231   | N   | 0~800   | <120s | 1Cr18Ni9Ti | Φ 20 |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRM-231G<br>WRM <sub>2</sub> -231G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRN-231<br>WRN <sub>2</sub> -231   | K   | 0~800   | <120s | 1Cr18Ni9Ti |      |   |
|                                    |     |         |       | 0~1000     |      | 0Cr25Ni20   |
| WRN-231G<br>WRN <sub>2</sub> -231G |     | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRE-231<br>WRE <sub>2</sub> -231   | E   | 0~700   | <120s | 1Cr18Ni9Ti |      |   |
| WRE-231G<br>WRE <sub>2</sub> -231G |     |         | <24s  |            |      |   |
| WRC-231<br>WRC <sub>2</sub> -231   | T   | 0~350   | <120s | 1Cr18Ni9Ti |      |   |
| WRC-231G<br>WRC <sub>2</sub> -231G |     |         | <24s  |            |      |   |
| WRF-231<br>WRF <sub>2</sub> -231   | J   | 0~600   | <120s | 1Cr18Ni9Ti |      |   |
| WRF-231G<br>WRF <sub>2</sub> -231G |     |         | <24s  |            |      |   |

- 1) 型号230、231为防水式，防护等级IP55；型号220、221为防喷式，防护等级IP65，其它参数同230、231
- 2) 保护管其余材质根据协议订货；
- 3) 公称压力为10MPa

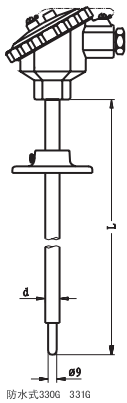
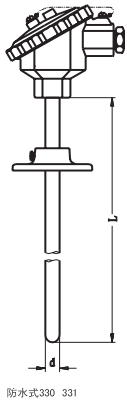
## 装配式系列热电偶

| 型号示例      | 螺纹规格 |        | d   |
|-----------|------|--------|-----|
|           | 代号   | M      |     |
| WRN-230   |      | M27×2  | Φ16 |
| WRN-230A  | A    | G3/4   |     |
| WRN-230C  | C    | NPT3/4 |     |
| WRN-231G  |      | M27×2  | Φ20 |
| WRN-231GA | A    | G3/4   |     |
| WRN-231GC | C    | NPT3/4 |     |

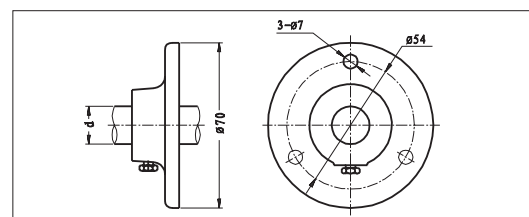


## 装配式系列热电偶

| 型号                                 | 分度号 | 测温范围 °C | 热响应时间 | 保护管材料      | 规格   |  |
|------------------------------------|-----|---------|-------|------------|------|--|
|                                    |     |         |       |            | d    | L  |
| WRM-330<br>WRM <sub>2</sub> -330   | N   | 0~800   | <90s  | 1Cr18Ni9Ti | Φ 16 | 150<br>200<br>250<br>300<br>350<br>400<br>500<br>750<br>1000<br>1500<br>2000<br>2150 |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRM-330G<br>WRM <sub>2</sub> -330G | N   | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-330<br>WRN <sub>2</sub> -330   | K   | 0~800   | <90s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-330G<br>WRN <sub>2</sub> -330G | K   | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRE-330<br>WRE <sub>2</sub> -330   | E   | 0~700   | <90s  | 1Cr18Ni9Ti |      |  |
| WRE-330G<br>WRE <sub>2</sub> -330G |     |         | <24s  |            |      |  |
| WRC-330<br>WRC <sub>2</sub> -330   | T   | 0~350   | <90s  | 1Cr18Ni9Ti |      |  |
| WRC-330G<br>WRC <sub>2</sub> -330G |     |         | <24s  |            |      |  |
| WRF-330<br>WRF <sub>2</sub> -330   | J   | 0~600   | <90s  | 1Cr18Ni9Ti |      |  |
| WRF-330G<br>WRF <sub>2</sub> -330G |     |         | <24s  |            |      |  |
| WRM-331<br>WRM <sub>2</sub> -331   | N   | 0~800   | <120s | 1Cr18Ni9Ti | Φ 20 |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRM-331G<br>WRM <sub>2</sub> -331G | N   | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-331<br>WRN <sub>2</sub> -331   | K   | 0~800   | <120s | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRN-331G<br>WRN <sub>2</sub> -331G | K   | 0~800   | <24s  | 1Cr18Ni9Ti |      |  |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |  |
| WRE-331<br>WRE <sub>2</sub> -331   | E   | 0~700   | <120s | 1Cr18Ni9Ti |      |  |
| WRE-331G<br>WRE <sub>2</sub> -331G |     |         | <24s  |            |      |  |
| WRC-331<br>WRC <sub>2</sub> -331   | T   | 0~350   | <120s | 1Cr18Ni9Ti |      |  |
| WRC-331G<br>WRC <sub>2</sub> -331G |     |         | <24s  |            |      |  |
| WRF-331<br>WRF <sub>2</sub> -331   | J   | 0~600   | <120s | 1Cr18Ni9Ti |      |  |
| WRF-331G<br>WRF <sub>2</sub> -331G |     |         | <24s  |            |      |  |



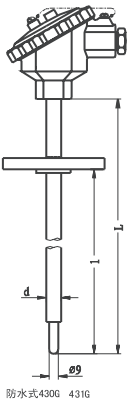
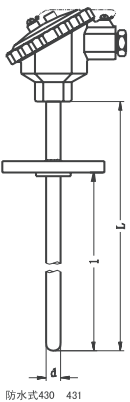
- 1) 型号330、331为防水式，防护等级IP55;
- 2) 型号320、321为防喷式，防护等级IP65，其它参数同330、331
- 3) 保护管其余材质根据协议订货





## 装配式系列热电偶

| 型号                                 | 分度号 | 测温范围 °C | 热响应时间 | 保护管材料      | 规格   |   |
|------------------------------------|-----|---------|-------|------------|------|---|
|                                    |     |         |       |            | d    | L   |
| WRM-430<br>WRM <sub>2</sub> -430   | N   | 0~800   | <90s  | 1Cr18Ni9Ti | Φ 16 | 300×150<br>350×200<br>400×250<br>450×300<br>500×350<br>550×400<br>650×500<br>900×750<br>1150×1000<br>1650×1500<br>2150×2000 |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRM-430G<br>WRM <sub>2</sub> -430G | N   | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRN-430<br>WRN <sub>2</sub> -430   | K   | 0~800   | <90s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRN-430G<br>WRN <sub>2</sub> -430G | K   | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRE-430<br>WRE <sub>2</sub> -430   | E   | 0~700   | <90s  | 1Cr18Ni9Ti |      |   |
| WRE-430G<br>WRE <sub>2</sub> -430G |     |         | <24s  |            |      |   |
| WRC-430<br>WRC <sub>2</sub> -430   | T   | 0~350   | <90s  | 1Cr18Ni9Ti |      |   |
| WRC-430G<br>WRC <sub>2</sub> -430G |     |         | <24s  |            |      |   |
| WRF-430<br>WRF <sub>2</sub> -430   | J   | 0~600   | <90s  | 1Cr18Ni9Ti |      |   |
| WRF-430G<br>WRF <sub>2</sub> -430G |     |         | <24s  |            |      |   |
| WRM-431<br>WRM <sub>2</sub> -431   | N   | 0~800   | <120s | 1Cr18Ni9Ti | Φ 20 |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRM-431G<br>WRM <sub>2</sub> -431G | N   | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRN-431<br>WRN <sub>2</sub> -431   | K   | 0~800   | <120s | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRN-431G<br>WRN <sub>2</sub> -431G | K   | 0~800   | <24s  | 1Cr18Ni9Ti |      |   |
|                                    |     | 0~1000  |       | 0Cr25Ni20  |      |   |
| WRE-431<br>WRE <sub>2</sub> -431   | E   | 0~700   | <120s | 1Cr18Ni9Ti |      |   |
| WRE-431G<br>WRE <sub>2</sub> -431G |     |         | <24s  |            |      |   |
| WRC-431<br>WRC <sub>2</sub> -431   | T   | 0~350   | <120s | 1Cr18Ni9Ti |      |   |
| WRC-431G<br>WRC <sub>2</sub> -431G |     |         | <24s  |            |      |   |
| WRF-431<br>WRF <sub>2</sub> -431   | J   | 0~600   | <120s | 1Cr18Ni9Ti |      |   |
| WRF-431G<br>WRF <sub>2</sub> -431G |     |         | <24s  |            |      |   |

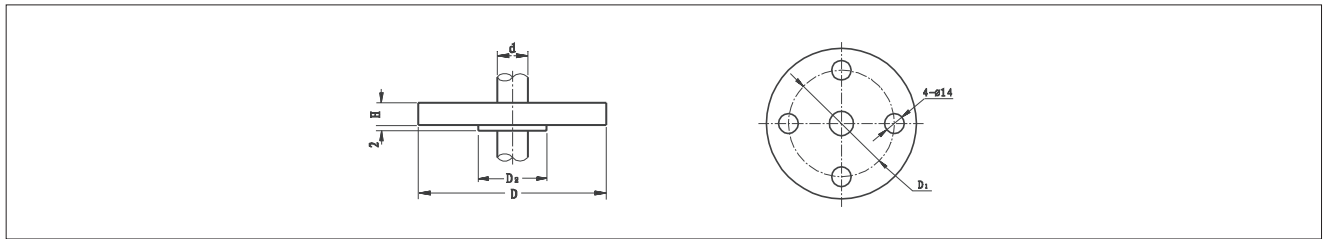


- 1) 型号430、431为防水式，防护等级IP55;
- 2) 型号420、421为防喷式，防护等级IP65，其它参数同430、431
- 3) 公称压力为2.50MPa

## 装配式系列热电偶

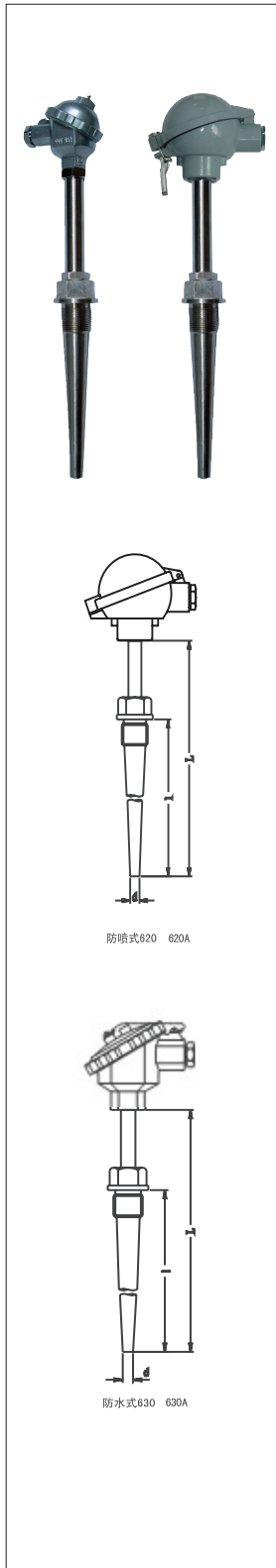
| 型号示例     | 法兰规格(mm) |                |                |    |      |
|----------|----------|----------------|----------------|----|------|
|          | D        | D <sub>1</sub> | D <sub>2</sub> | H  | d    |
| WRN-430  | Φ 105    | Φ 75           | Φ 55           | 16 | Φ 16 |
| WRN-430G | Φ 105    | Φ 75           | Φ 55           |    |      |
| WRN-431  | Φ 115    | Φ 85           | Φ 65           | 16 | Φ 20 |
| WRN-431G | Φ 115    | Φ 85           | Φ 65           |    |      |
| WRN-430  | Φ 95     | Φ 65           | Φ 46           | 14 | Φ 16 |
| WRN-430G | Φ 95     | Φ 65           | Φ 46           |    |      |

可按用户约定要求提供法兰：详见 P 84



## 装配式系列热电偶

### 固定螺纹锥式热电偶

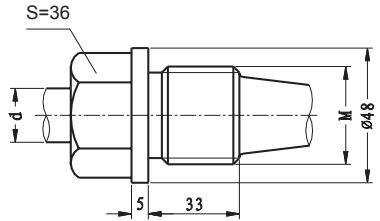


| 型号                                 | 分度号 | 测温范围 °C | 热响应时间      | 保护管材料      | 规格   |   |
|------------------------------------|-----|---------|------------|------------|------|---|
|                                    |     |         |            |            | d    | L   |
| WRM-620<br>WRM <sub>2</sub> -620   | N   | 0~800   | <90s       | 1Cr18Ni9Ti | Φ 15 | 300×150<br>350×200<br>400×250<br>450×300<br>500×350<br>550×400<br>650×500 |
| WRM-620G<br>WRM <sub>2</sub> -620G |     | 0~1000  |            | 0Cr25Ni20  |      |   |
| WRN-620<br>WRN <sub>2</sub> -620   | K   | 0~800   |            | 1Cr18Ni9Ti |      |   |
| WRN-620G<br>WRN <sub>2</sub> -620G |     | 0~1000  |            | 0Cr25Ni20  |      |   |
| WRE-620<br>WRE <sub>2</sub> -620   | E   | 0~700   |            | 1Cr18Ni9Ti |      |   |
| WRE-620G<br>WRE <sub>2</sub> -620G |     |         |            |            |      |   |
| WRC-620<br>WRC <sub>2</sub> -620   | T   | 0~350   |            | 1Cr18Ni9Ti |      |   |
| WRC-620G<br>WRC <sub>2</sub> -620G |     |         |            |            |      |   |
| WRF-620<br>WRF <sub>2</sub> -620   | J   | 0~600   |            | 1Cr18Ni9Ti |      |   |
| WRF-620G<br>WRF <sub>2</sub> -620G |     |         |            |            |      |   |
| WRM-630<br>WRM <sub>2</sub> -630   | N   | 0~800   |            | 1Cr18Ni9Ti |      |   |
| WRM-630G<br>WRM <sub>2</sub> -630G |     | 0~1000  |            | 0Cr25Ni20  |      |   |
| WRN-630<br>WRN <sub>2</sub> -630   | K   | 0~800   |            | 1Cr18Ni9Ti |      |   |
| WRN-630G<br>WRN <sub>2</sub> -630G |     | 0~1000  |            | 0Cr25Ni20  |      |   |
| WRE-630<br>WRE <sub>2</sub> -630   | E   | 0~700   |            | 1Cr18Ni9Ti |      |   |
| WRE-630G<br>WRE <sub>2</sub> -630G |     |         |            |            |      |   |
| WRC-630<br>WRC <sub>2</sub> -630   | T   | 0~350   |            | 1Cr18Ni9Ti |      |   |
| WRC-630G<br>WRC <sub>2</sub> -630G |     |         |            |            |      |   |
| WRF-630<br>WRF <sub>2</sub> -630   | J   | 0~600   | 1Cr18Ni9Ti |            |      |   |
| WRF-630G<br>WRF <sub>2</sub> -630G |     |         |            |            |      |   |

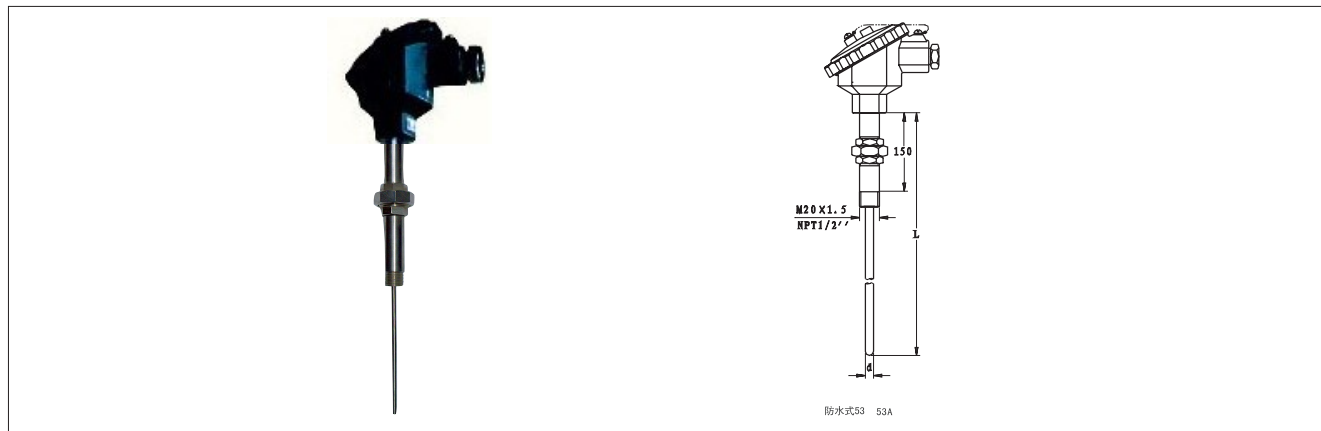
- 1) 型号620、620G为防喷式，防护等级IP65；型号630、630G为防水式，防护等级IP55；
- 2) 保护管其余材质根据协议订货；
- 3) 公称压力为≤30MPa

## 装配式系列热电偶

| 型号示例     | 螺纹规格 |       |
|----------|------|-------|
|          | 代号   | M     |
| WRN-620  |      | M33×2 |
| WRN-620A | A    | NPT1  |
| WRN-630  |      | M33×2 |
| WRN-630A | A    | NPT1  |



### 活络管接头式热电偶

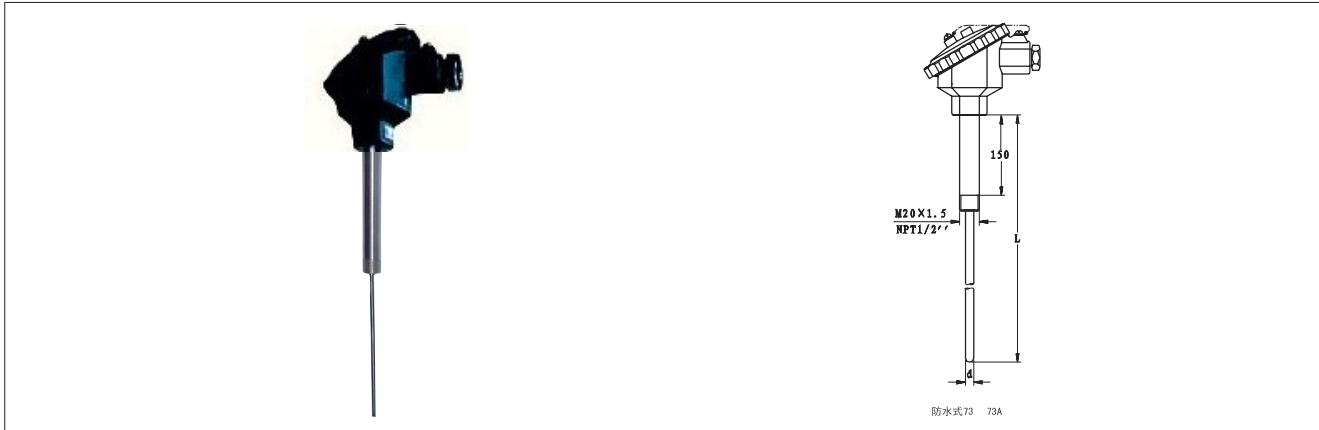


| 型号                               | 分度号 | 测温范围 °C | 连接尺寸    | 保护管材料      | 规格  |     |      |     |
|----------------------------------|-----|---------|---------|------------|-----|-----|------|-----|
|                                  |     |         |         |            | d   | L   |      |     |
| WRM-53<br>WRM <sub>2</sub> -53   | N   | 0~1000  | M20×1.5 | 1Cr18Ni9Ti | Φ3  | 245 |      |     |
| WRM-53A<br>WRM <sub>2</sub> -53A |     |         | NPT1/2  |            |     |     |      |     |
| WRN-53<br>WRN <sub>2</sub> -53   | K   |         | M20×1.5 |            |     |     | Φ4   | 270 |
| WRN-53A<br>WRN <sub>2</sub> -53A |     |         | NPT1/2  |            |     |     | 295  |     |
| WRE-53<br>WRE <sub>2</sub> -53   | E   |         | M20×1.5 |            |     |     | Φ4   | 345 |
| WRE-53A<br>WRE <sub>2</sub> -53A |     |         | NPT1/2  |            |     |     | Φ5   | 395 |
| WRC-53<br>WRC <sub>2</sub> -53   | T   | M20×1.5 | Φ5      |            | 445 |     |      |     |
| WRC-53A<br>WRC <sub>2</sub> -53A |     | NPT1/2  | Φ6      |            | 545 |     |      |     |
| WRF-53<br>WRF <sub>2</sub> -53   | J   | M20×1.5 | Φ6      |            | 645 |     |      |     |
| WRF-53A<br>WRF <sub>2</sub> -53A |     | NPT1/2  | Φ8      |            | 745 |     |      |     |
|                                  |     |         |         |            |     | 899 | 1149 |     |

- 1) 型号53、53A为防水式，防护等级IP55；
- 2) 型号52、52A为防喷式，防护等级IP65，其它参数同53、53A
- 3) 如无特殊之约定，L 仅为参考尺寸，热电偶插入深度应为热安装套管U尺寸；
- 4) 热安装套管形式详见P117

## 装配式系列热电偶

### 直形管接头式热电偶

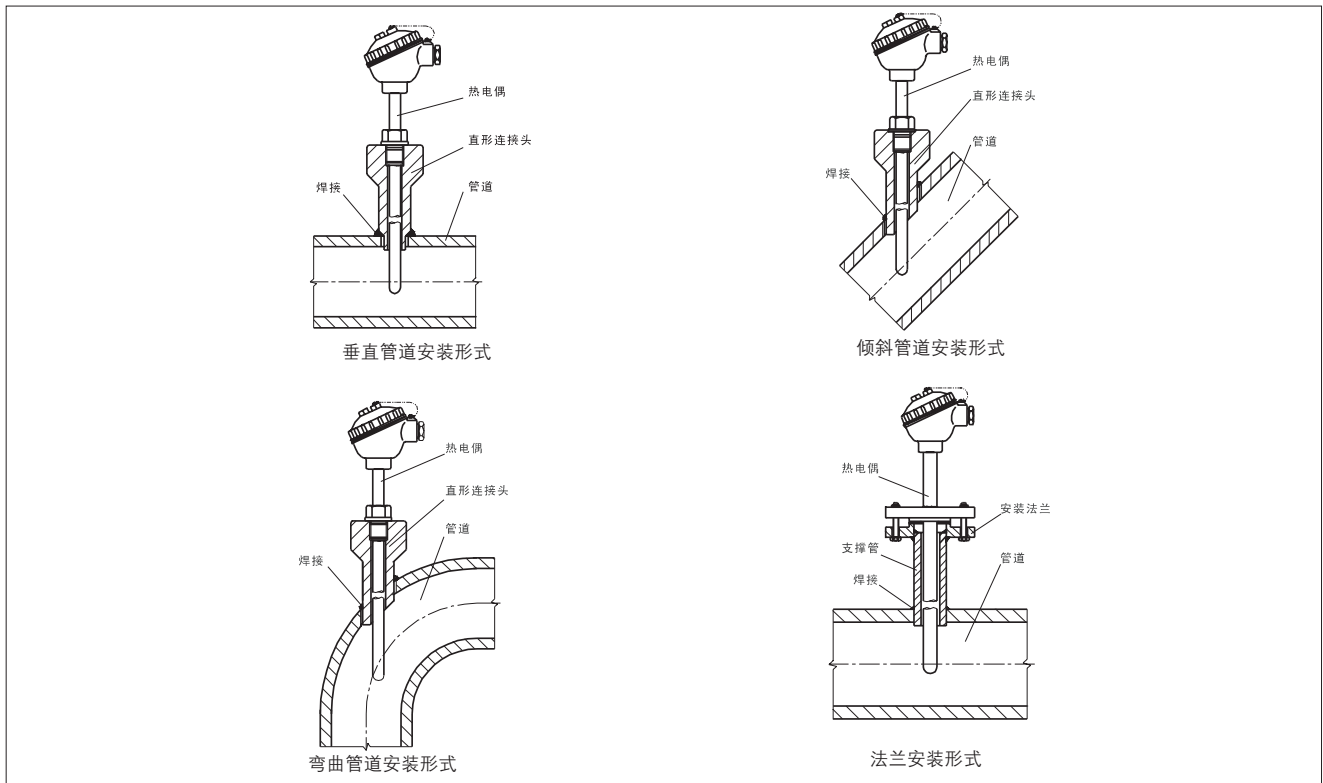


| 型号                               | 分度号 | 测温范围 °C | 连接尺寸    | 保护管材料      | 规格 |     |    |      |
|----------------------------------|-----|---------|---------|------------|----|-----|----|------|
|                                  |     |         |         |            | d  | L   |    |      |
| WRM-73<br>WRM <sub>2</sub> -73   | N   | 0~1000  | M20×1.5 | 1Cr18Ni9Ti | Φ3 | 245 |    |      |
| WRM-73A<br>WRM <sub>2</sub> -73A |     |         | NPT1/2  |            |    |     |    |      |
| WRN-73<br>WRN <sub>2</sub> -73   | K   |         | M20×1.5 |            |    |     |    |      |
| WRN-73A<br>WRN <sub>2</sub> -73A |     |         | NPT1/2  |            |    |     |    |      |
| WRE-73<br>WRE <sub>2</sub> -73   | E   | 0~700   | M20×1.5 |            |    |     | Φ5 | 395  |
| WRE-73A<br>WRE <sub>2</sub> -73A |     |         | NPT1/2  |            |    |     | Φ6 | 445  |
| WRC-73<br>WRC <sub>2</sub> -73   | T   | 0~350   | M20×1.5 |            |    |     | Φ8 | 645  |
| WRC-73A<br>WRC <sub>2</sub> -73A |     |         | NPT1/2  |            |    |     |    | 745  |
| WRF-73<br>WRF <sub>2</sub> -73   | J   | 0~600   | M20×1.5 |            |    |     | Φ8 | 899  |
| WRF-73A<br>WRF <sub>2</sub> -73A |     |         | NPT1/2  |            |    |     |    | 1149 |

- 1) 型号73、73A为防水式，防护等级IP55；
- 2) 型号72、72A为防喷式，防护等级IP65，其它参数同73、73A
- 3) 如无特殊之约定，L 仅为参考尺寸，热电偶插入深度应为热安装套管U尺寸；
- 4) 热安装套管形式详见P117

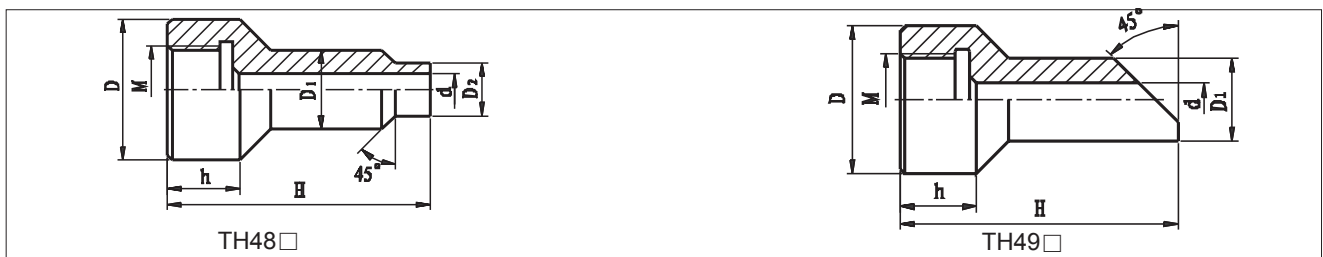
## 装配式系列热电偶

### 安装形式



### 直形接头

| 代号    | M       | D   | D <sub>1</sub> | D <sub>2</sub> | d   | h  | H      |
|-------|---------|-----|----------------|----------------|-----|----|--------|
| TH48A | M12×1.5 | Φ32 | Φ18            | Φ12            | Φ7  | 27 | 60,120 |
| TH48B | M16×1.5 | Φ36 | Φ18            | Φ14            | Φ7  | 27 | 80     |
| TH48C | M20×1.5 | Φ40 | Φ18            | Φ14            | Φ7  | 27 | 60     |
| TH48D | M27×2   | Φ47 | Φ28            | Φ22            | Φ17 | 32 | 60     |
| TH48E | M33×2   | Φ55 | Φ36            | Φ30            | Φ21 | 34 | 120    |
| TH48F | NPT1/2  | Φ39 | Φ27            | Φ21            | Φ16 | 35 | 60     |
| TH48G | NPT3/4  | Φ47 | Φ31            | Φ25            | Φ20 | 40 | 120    |
| TH48H | NPT1    | Φ47 | Φ41            | Φ35            | Φ30 | 45 |        |



| 代号    | M      | D   | D <sub>1</sub> | d   | h  | H   |
|-------|--------|-----|----------------|-----|----|-----|
| TH49A | M27×2  | Φ47 | Φ28            | Φ18 | 30 | 90  |
| TH49B | M33×2  | Φ55 | Φ36            | Φ24 | 30 | 150 |
| TH49C | NPT1/2 | Φ39 | Φ27            | Φ16 | 30 | 90  |
| TH49D | NPT3/4 | Φ47 | Φ31            | Φ20 | 35 | 90  |
| TH49E | NPT1   | Φ47 | Φ41            | Φ30 | 40 | 150 |