

Model WE series

Self Supporting Probes



Surface temperature measurement of hot plate

测量热板的温度分布

Model WE series is a self-standing probe that can measure temperature simply by placing the probe on the object to be measured.

WE系列产品头部内装有砝码，无需手持按压，可自立于被测物表面测量。减少姿势误差，更准确的测量表面温度。带握柄型的握柄也可拆卸，便于在狭小空间内使用。

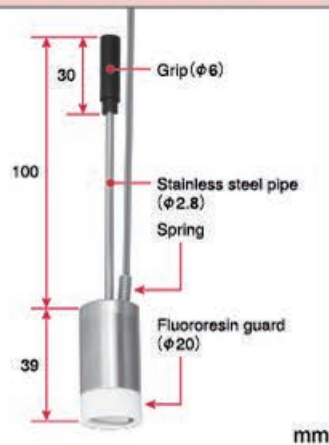
Typical probes of WE series 典型产品

Type K Model **WE-11K-TS1-ANP**
Type E Model **WE-11E-TS1-ANP**



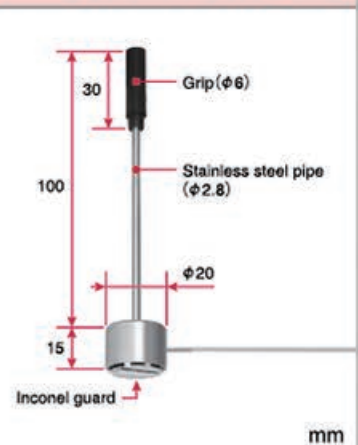
Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	1 s	A

Type K Model **WE-13K-TS1-ANP**
Type E Model **WE-13E-TS1-ANP**



Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	1 s	A

Type K Model **WE-33K-TA1-ANP**
Type E Model **WE-33E-TA1-ANP**



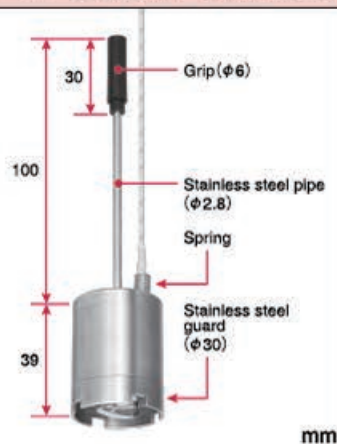
Temp. range	Tolerance	Response time	Durability
-50~200°C	±2.5°C (at 100°C surface)	2 s	A

Type K Model **WE-22K-GW1-ANP**
Type E Model **WE-22E-GW1-ANP**



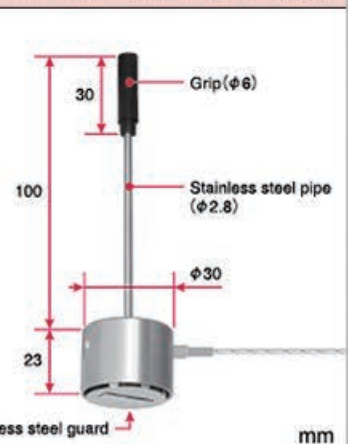
Temp. range	Tolerance	Response time	Durability
-50~500°C	±2.5°C (at 100°C surface)	1 s	A

Type K Model **WE-24K-GW1-ANP**
Type E Model **WE-24E-GW1-ANP**



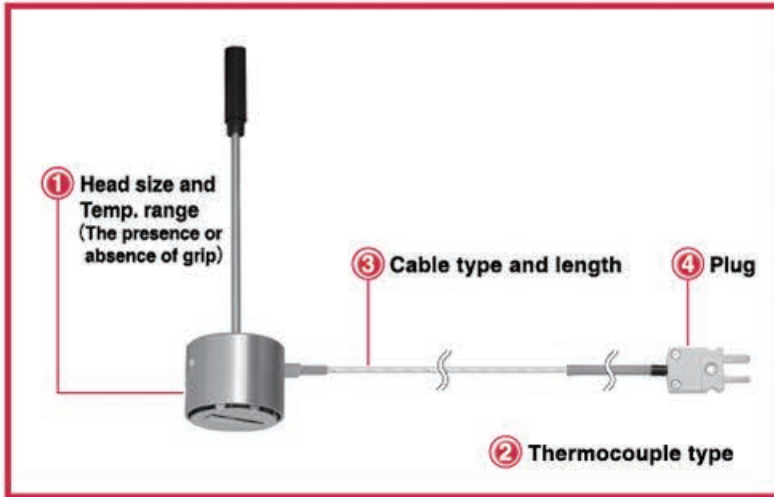
Temp. range	Tolerance	Response time	Durability
-50~500°C	±2.5°C (at 100°C surface)	1 s	A

Type K Model **WE-44K-GW1-ANP**
Type E Model **WE-44E-GW1-ANP**



Temp. range	Tolerance	Response time	Durability
-50~500°C	±2.5°C (at 100°C surface)	2.5 s	A

How to order of WE series 选型



WE-44K-GW1-ANP

① ② ③ ④

① Head size and Temp. range 头部大小和温度范围	<p>No grip type</p> <p>11 : $\phi 20\text{mm} \times 34\text{mm}$ $-50 \sim 250^\circ\text{C}$ 12 : $\phi 20\text{mm} \times 34\text{mm}$ $-50 \sim 500^\circ\text{C}$ 21 : $\phi 30\text{mm} \times 34\text{mm}$ $-50 \sim 250^\circ\text{C}$ 22 : $\phi 30\text{mm} \times 34\text{mm}$ $-50 \sim 500^\circ\text{C}$ 31 : $\phi 20\text{mm} \times 15\text{mm}$ $-50 \sim 200^\circ\text{C}$ 42 : $\phi 30\text{mm} \times 23\text{mm}$ $-50 \sim 500^\circ\text{C}$</p> <p>Grip type</p> <p>13 : $\phi 20\text{mm} \times 39\text{mm}$ $-50 \sim 250^\circ\text{C}$ 14 : $\phi 20\text{mm} \times 39\text{mm}$ $-50 \sim 500^\circ\text{C}$ 23 : $\phi 30\text{mm} \times 39\text{mm}$ $-50 \sim 250^\circ\text{C}$ 24 : $\phi 30\text{mm} \times 39\text{mm}$ $-50 \sim 500^\circ\text{C}$ 33 : $\phi 20\text{mm} \times 15\text{mm}$ $-50 \sim 200^\circ\text{C}$ 44 : $\phi 30\text{mm} \times 23\text{mm}$ $-50 \sim 500^\circ\text{C}$</p>
② Thermocouple type 热电偶种类	<p>K : Chromel-Alumel E : Chromel-Constantan</p>
③ Cable type and length 导线种类和长度 (See page 9)	<p>TS1 : For WE-11, WE-13, WE-21, WE-23 GW1 : For WE-12, WE-14, WE-22, WE-24, WE-42, WE-44 TA1[*] : For WE-31, WE-33 Standard specifications : 1m The cable length can be specified each 0.5m.</p>
④ Plug 插头 (See page 8)	<p>ANP (For AM-9***, HR-1*5*, AP-450, AR-650*) ASP (For HR-1*0*, AP-400) W (Without plug)</p>

※ Fluororesin insulated thermocouple ($\phi 0.9\text{mm}$)

The resistance value of the TA cable is $160\Omega/\text{m}$.

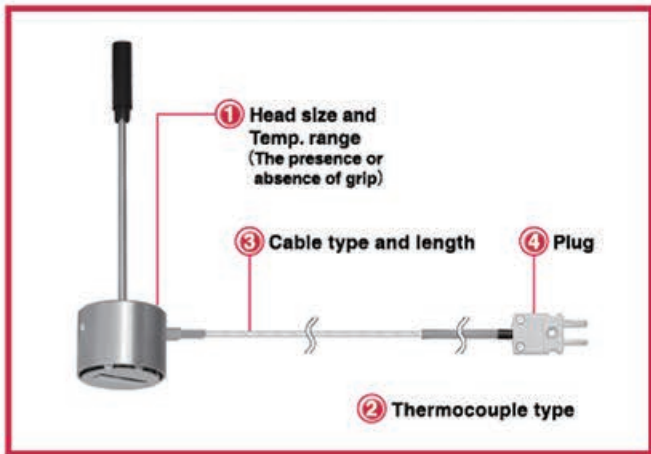
Please be careful about source resistance of the thermometer.

① Head size and Temp. range 头部大小和温度范围

No grip type 无握柄

(mm)

<p>WE-11 Temp. range: $-50 \sim 250^\circ\text{C}$</p> <p>Weight : 60g</p>	<p>WE-12 Temp. range: $-50 \sim 500^\circ\text{C}$</p> <p>Weight : 70g</p>
<p>WE-21 Temp. range: $-50 \sim 250^\circ\text{C}$</p> <p>Weight : 145g</p>	<p>WE-22 Temp. range: $-50 \sim 500^\circ\text{C}$</p> <p>Weight : 150g</p>
<p>WE-31 Temp. range: $-50 \sim 200^\circ\text{C}$</p> <p>Weight : 25g</p>	<p>WE-42 Temp. range: $-50 \sim 500^\circ\text{C}$</p> <p>Weight : 70g</p>



WE-44K-GW1-ANP

① ② ③ ④

① Head size and Temp. range

头部大小和温度范围

Grip type 有握柄 ※ The grip is detachable. 握柄可拆卸 (mm)

<p>WE-13 Temp. range : -50~250°C</p> <p>Weight : 70g</p>	<p>WE-14 Temp. range : -50~500°C</p> <p>Weight : 80g</p>
<p>WE-23 Temp. range : -50~250°C</p> <p>Weight : 165g</p>	<p>WE-24 Temp. range : -50~500°C</p> <p>Weight : 170g</p>
<p>WE-33 Temp. range : -50~200°C</p> <p>Weight : 25g</p>	<p>WE-44 Temp. range : -50~500°C</p> <p>Weight : 70g</p>

② Thermocouple type

热电偶种类

※ Select the same type of thermocouple as thermometer.

K Type K	E Type E
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③ Cable type and length

导线种类和长度

Standard	Outer diameter	Heat resistant
TS1 [※] For WE-11, WE-13, WE-21, WE-23	φ2.3mm	240°C
GW1 [※] For WE-12, WE-14, WE-22, WE-24, WE-42, WE-44	1.2mm×1.7mm	300°C
TA1 [※] For WE-31, WE-33	φ0.9mm	200°C

※ Standard specifications : 1m

The cable length can be specified each 0.5m.

④ Plug

插头

<p>ANP</p> <p>For AM-9*** HR-1*5* AP-450 AR-650*</p>
<p>ASP</p> <p>For HR-1*0* AP-400</p>
<p>W</p> <p>Without plug</p>

Specifications of WE series 规格

Model number ^{※1}	WE-11 WE-13 WE-21 WE-23	WE-12 WE-14 WE-22 WE-24	WE-31 WE-33	WE-42 WE-44
Thermocouple type	Type K or E			
Temp. range ^{※2}	-50~250°C	-50~500°C	-50~200°C	-50~500°C
Tolerance ^{※3}	-50°C	±2.5°C	±2.5°C	±2.5°C
	0°C	±2.5°C	±2.5°C	±2.5°C
	100°C	±2.5°C	±2.5°C	±2.5°C
	200°C	±2.5°C	±2.5°C	±2.5°C
	300°C	—	±2.5°C	—
	400°C	—	±3.0°C	—
	500°C	—	±3.8°C	—
	Tolerance calculation method t: Temperature (°C)	At within temperature range -50°C ≤ t ≤ 500°C : ±2.5°C or ±(0.0075× t)°C, whichever is greater		
Response time ^{※4}	1s	1s	2s	2.5s
Durability ^{※5}	A (More than 50,000 contacts)			
Guard materials	Fluororesin	Stainless (SUS303)	Inconel	Stainless (SUS304)
Body material	Stainless (SUS303)			

※1 The model number after thermocouple type is omitted.

※2 The operating temperature limit is determined by the allowable temperature limit of the sensor head contacts the measurement target.
Note that the operating temperature limit is not the same as the allowable temperature limits of the grip, cable, and plug.

※3 Tolerance is available at -50°C or above within the operating temperature on a stationary flat and smooth metal surface.
For tolerance at temperature not listed in the above table, please refer to calculation method of tolerance.

※4 The response time is the time required to detect 99% of the true value on a flat and smooth metal surface.

※5 Number of contacts enabling measurement within the tolerance range on a flat and smooth metal surface at a temperature of 300°C
(or at the operating temperature limit if the operating temperature limit is below 300°C)