

# Model U series

General Moving / Rotating Surface Probes

## U模式系列

U模式系列产品是将感应器与测试面的摩擦系数降至最小极限的温度感应器，适用于移动或旋转表面的温度测试。

通过组合各个规格的组件，可以按照客户的用途进行个性选配。

Model U series probes offer minimal coefficient of friction between the sensor and measuring surface, making them ideal for measuring the temperatures of moving or rotating surfaces.

Specific components may be combined to customize products for the needs of a customer's specific application.

モデルUシリーズは、センサと測定面との摩擦係数を極限まで小さくした、移動または回転する表面の温度測定に適した温度センサです。

各パーツの仕様を組み合わせる事により、お客様の用途に合わせてカスタマイズする事が出来ます。

## Typical probes of U series

**Type K Model U-111K-00-D0-1-TC1-ANP**  
**Type E Model U-111E-00-D0-1-TC1-ANP**

Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	2.0 s	A

**Type K Model U-211K-00-D0-1-TC1-ANP**  
**Type E Model U-211E-00-D0-1-TC1-ANP**

Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	3.5 s	A

**Type K Model U-114K-00-D0-1-TC1-ANP**  
**Type E Model U-114E-00-D0-1-TC1-ANP**

Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	2.0 s	A

**Type K Model U-221K-00-D0-1-TC1-ANP**  
**Type E Model U-221E-00-D0-1-TC1-ANP**

Temp. range	Tolerance	Response time	Durability
-50~200°C	±2.5°C (at 100°C surface)	3.5 s	A

**Type K Model U-118K-01-D0-1-TC1-ANP**  
**Type E Model U-118E-01-D0-1-TC1-ANP**

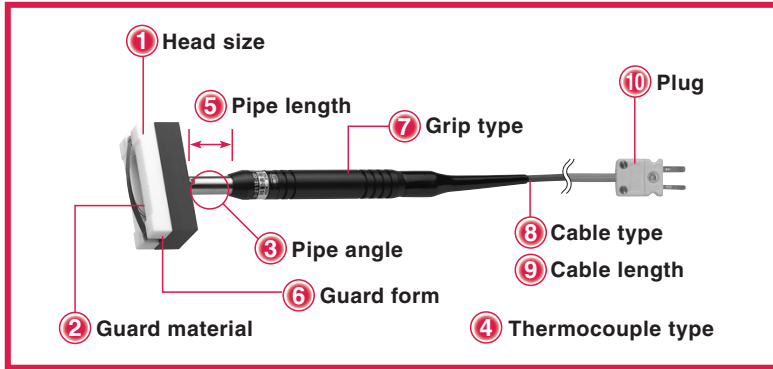
Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	2.0 s	A

**Type K Model U-211K-01-D0-0-TC1-ANP**  
**Type E Model U-211E-01-D0-0-TC1-ANP**

**No grip probe type**

Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	3.5 s	A

# How to order of U series



## U-211K-00-D0-1-TC1-ANP



<b>① Head size</b>	<b>1</b> : 25×32mm (Guard:U-*1*) 37×36mm (Wheel:U-*2*,U-*3*) <b>2</b> : 29×60mm (Guard:U-*1*) 40×66mm (Wheel:U-*2*,U-*3*)
<b>② Guard material</b> (Max. temp.)	<b>1</b> : Teflon guard (250°C) <b>2</b> : Bearing wheel (200°C) <b>3</b> : Teflon wheel (250°C) 1~3 : Contact section is polyimide-coated. <b>4</b> : Teflon guard (200°C) <b>5</b> : Bearing wheel (200°C) <b>6</b> : Teflon wheel (200°C) 4~6 : Contact section is teflon-coated. <b>7</b> : Teflon guard (250°C) <b>8</b> : Bearing wheel (200°C) <b>9</b> : Teflon wheel (250°C) 7~9 : Contact section has no coating.
<b>③ Pipe angle</b>	<b>1</b> : Straight <b>2</b> : 45 degrees <b>3</b> : 90 degrees <b>4</b> : 90 degrees (elbow) <b>5</b> : 45 degrees* <b>6</b> : 90 degrees* <b>7</b> : 90 degrees (elbow) * <b>8</b> : Direct <b>9</b> : Direct* *Element direction of right angle
<b>④ Thermocouple type</b>	<b>K</b> : Chromel-Alumel <b>E</b> : Chromel-Constantan
<b>⑤ Pipe length</b>	<b>00</b> : 30mm <b>01</b> : 100mm <b>02</b> : 200mm <b>03</b> : 300mm <b>04</b> : 400mm <b>05</b> : 500mm
<b>⑥ Guard form</b>	<b>D0~D4</b> : See right
<b>⑦ Grip type</b>	<b>0</b> : No grip <b>1</b> : Standard grip
<b>⑧ Cable type</b> (See page 5)	<b>TC</b>
<b>⑨ Cable length</b>	<b>1</b> : 1m <b>1.5</b> : 1.5m <b>2</b> : 2m <b>2.5</b> : 2.5m .....
<b>⑩ Plug</b> (See page 4)	<b>ANP</b> <b>ASP</b> <b>W</b>

### ① Head size ② Guard material

You can choose head size as below.

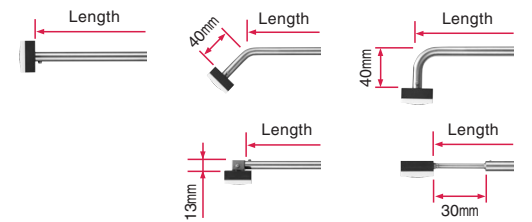
U-11* U-21* U-14* U-24* U-17* U-27*	U-12* U-22* U-15* U-25* U-18* U-28*	U-13* U-23* U-16* U-26* U-19* U-29*

### ③ Pipe angle

You can choose pipe angle as below.

	<b>1</b>	<b>5</b>
	<b>2</b>	<b>6</b>
	<b>3</b>	<b>7</b>
	<b>4</b>	<b>9</b>
	<b>8</b>	<b>9</b>

### ⑤ Pipe length



### ⑥ Guard form

	U-11* U-14* U-17*	U-21* U-24* U-27*	U-*2*, U-*3* U-*5*, U-*6* U-*8*, U-*9*
<b>D0</b>	φ 300~flat	φ 400~flat	flat only*
<b>D1</b>	—	φ 300~420	—
<b>D2</b>	φ 160~320	φ 160~320	—
<b>D3</b>	φ 100~200	φ 100~200	—
<b>D4</b>	φ 60~120	φ 60~120	—

\*U-1\*\* can be used for diameters of up to φ300mm in case of the D0 model.

\*U-2\*\* can be used for diameters of up to φ400mm in case of the D0 model.

### ⑦ Grip type

No grip	For device, system, auto-machines, mechanical system etc
Standard grip	For handheld measurement

## Specifications

Tolerance	±2.5°C (at 100°C surface)
Response time	U-1** : 2.0 s U-2** : 3.5 s
Durability rank	A
Speed limit	U-1** : 400m / min U-2** : 600m / min