

Model **BT** series

Needle Type Probes



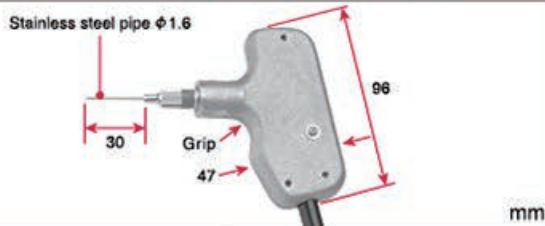
Internal temperature measurement of rubber
测量橡胶材预热温度

Model BT series is a temperature sensor that can pierce a semi-solid object with a needle on the tip. For models with a replaceable needle, it is also possible to purchase only the needle.

BT系列产品的感温点溶接于探针头部，适于测量半固体的刺入型温度传感器。
并且备有探针，可自行更换。

Typical probes of BT series 典型产品

Type K Model **BT-31K-TC1-ANP**
Type E Model **BT-31E-TC1-ANP**



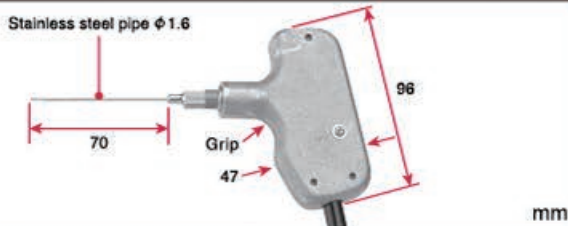
Temp. range	Tolerance	Response time	Durability
-200~300°C	±2.5°C (at 100°C)	1.5 s	S

Type K Model **BT-92K-TC1-ANP**
Type E Model **BT-92E-TC1-ANP**



Temp. range	Tolerance	Response time	Durability
-200~500°C	±2.5°C (at 100°C)	3 s	B

Type K Model **BT-72K-TC1-ANP**
Type E Model **BT-72E-TC1-ANP**



Temp. range	Tolerance	Response time	Durability
-200~300°C	±2.5°C (at 100°C)	1.5 s	S

Type K Model **BT-22K-TC1-ANP**
Type E Model **BT-22E-TC1-ANP**



Temp. range	Tolerance	Response time	Durability
-200~300°C	±2.5°C (at 100°C)	1.5 s	C

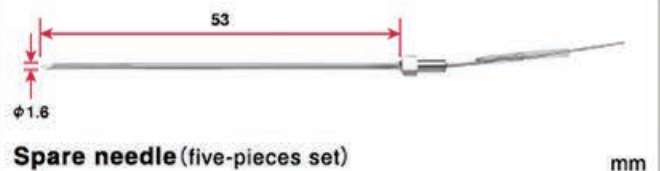
Type K Model **BT-11K-TC1-ANP**
Type E Model **BT-11E-TC1-ANP**



Temp. range	Tolerance	Response time	Durability
-200~210°C	±2.5°C (at 100°C)	0.5 s	C

Type K Model **BTN-41K**
Type E Model **BTN-41E**

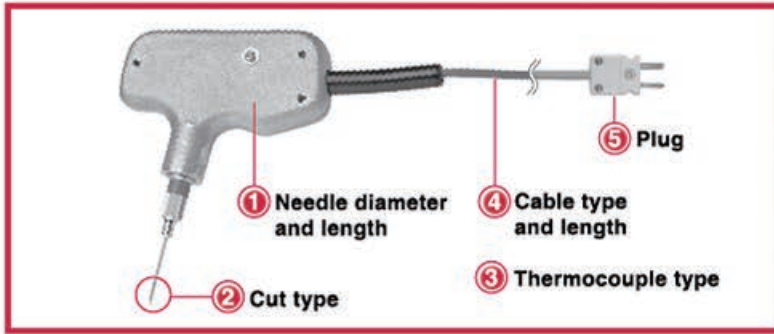
For BT-41



Spare needle (five-pieces set) mm

Temp. range	Tolerance	Response time	Durability
-200~300°C	±2.5°C (at 100°C)	1.5 s	S

How to order of BT series 选型



BT-31K-TC1-ANP

① ② ③ ④ ⑤

① Needle diameter and length 钢针的外径与外观形状 (Max. temp.)	1 : $\phi 0.9\text{mm}$: 15mm(210°C) 6 : $\phi 1.6\text{mm}$: 60mm [*] (300°C) 2 : $\phi 1.5\text{mm}$: 30mm(300°C) 7 : $\phi 1.6\text{mm}$: 70mm [*] (300°C) 3 : $\phi 1.6\text{mm}$: 30mm [*] (300°C) 8 : $\phi 5.0\text{mm}$: 75mm [*] (500°C) 4 : $\phi 1.6\text{mm}$: 40mm [*] (300°C) 9 : $\phi 5.0\text{mm}$: 100mm(500°C) 5 : $\phi 1.6\text{mm}$: 50mm [*] (300°C) (Top is $\phi 3\text{mm}$) ※The length of the needle after installation.
② Cut type 探针形状	1 : Cut 2 : Sharp
③ Thermocouple type 热电偶种类	K : Chromel-Alumel E : Chromel-Constantan
④ Cable type and length 导线种类和长度 (See page 9)	TC1 Standard specifications : 1m The cable length can be specified each 0.5m.
⑤ Plug 插头 (See page 8)	ANP (For AM-9***, HR-1*5*, AP-450) ASP (For HR-1*0*, AP-400) W (Without plug)

① Needle diameter and length 钢针的外径与外观形状

You can choose grip form as below.

	Form
BT-1* BT-2*	90mm
BT-3* BT-4* BT-5* BT-6* BT-7* BT-8*	96mm With replaceable tips
BT-9*	120mm

② Cut type 探针形状

You can choose cut type as below.

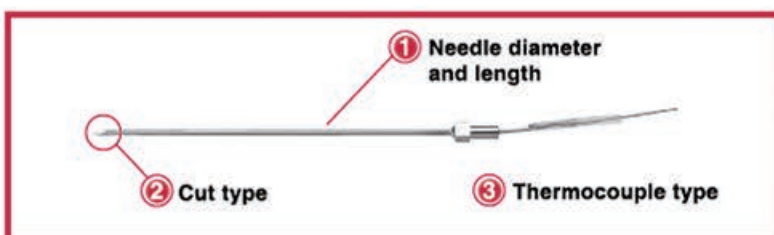


Specifications of BT series 规格

Model number		BT-1*	BT-2*	BT-3*~BT-7*	BT-8*	BT-9*
Temp. range		-200~210°C	-200~300°C	-200~300°C	-200~500°C	-200~500°C
Tolerance	$-200^\circ\text{C} \leq t < 167^\circ\text{C}$	$\pm 7.0^\circ\text{C}$	$\pm 7.0^\circ\text{C}$	$\pm 7.0^\circ\text{C}$	$\pm 7.0^\circ\text{C}$	$\pm 7.0^\circ\text{C}$
	$-167^\circ\text{C} \leq t < -40^\circ\text{C}$	$\pm 3.5^\circ\text{C}$	$\pm 3.5^\circ\text{C}$	$\pm 3.5^\circ\text{C}$	$\pm 3.5^\circ\text{C}$	$\pm 3.5^\circ\text{C}$
	$-40^\circ\text{C} \leq t \leq 333^\circ\text{C}$	$\pm 2.5^\circ\text{C} (\sim 210^\circ\text{C})$	$\pm 2.5^\circ\text{C} (\sim 300^\circ\text{C})$	$\pm 2.5^\circ\text{C} (\sim 300^\circ\text{C})$	$\pm 2.5^\circ\text{C}$	$\pm 2.5^\circ\text{C}$
	$333^\circ\text{C} < t \leq 500^\circ\text{C}$	—	—	—	$\pm (0.0075 \times t)^\circ\text{C}$	
Response time		0.5s	1.5s	1.5s	3s	3s
Durability		C	C	S	S	B

※ Please see website specifications of BT series.

How to order of Spare needle 选型



Spare needle is a five-pieces set

BTN-41K

① ② ③

① Needle diameter and length 钢针的外径与外观形状	3 : $\phi 1.6\text{mm}$: 43mm (30mm) 4 : $\phi 1.6\text{mm}$: 53mm (40mm) 5 : $\phi 1.6\text{mm}$: 63mm (50mm) 6 : $\phi 1.6\text{mm}$: 73mm (60mm) 7 : $\phi 1.6\text{mm}$: 83mm (70mm) 8 : $\phi 5.0\text{mm}$: 88mm (75mm)
② Cut type 探针形状	1 : Cut 2 : Sharp
③ Thermocouple type 热电偶种类	K : Chromel-Alumel E : Chromel-Constantan

※ () is the length of the needle after installation.