

Model **BS** series

General Internal Probes



Center temperature measurement of various objects

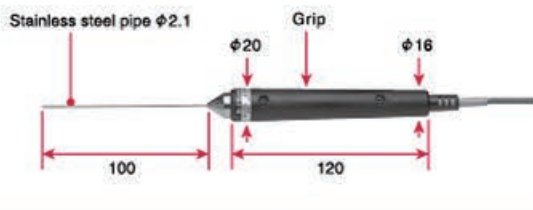
测量各种内部温度

Model BS series probes are internal temperature sensors designed to measure the temperatures of liquid or semi-solid materials.

BS系列产品的感温点焊接在钢针内部，适合测量液体·半固体等内部温度。钢针的外径/长度·钢针镀膜等可自由选择。传感器应速度快，精准度高。

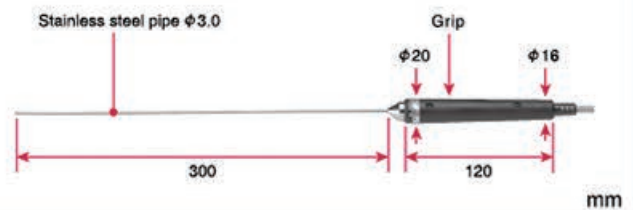
Typical probes of BS series 典型产品

Type K Model BS-21K-010-TC1-ANP
Type E Model BS-21E-010-TC1-ANP



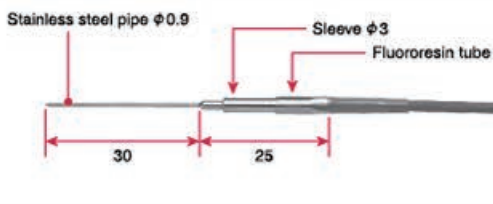
Temp. range	Tolerance	Response time	Durability
-200~500°C	±2.5°C (at 100°C)	2.5 s	B

Type K Model BS-31K-030-TC1-ANP
Type E Model BS-31E-030-TC1-ANP



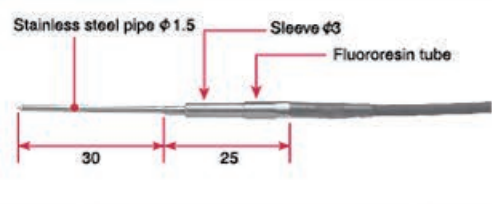
Temp. range	Tolerance	Response time	Durability
-200~500°C	±2.5°C (at 100°C)	3 s	B

Type K Model BS-91K-003-TS1-ANP
Type E Model BS-91E-003-TS1-ANP



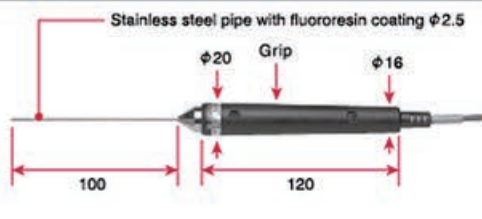
Temp. range	Tolerance	Response time	Durability
-200~300°C	±2.5°C (at 100°C)	0.5 s	C

Type K Model BS-11K-003-TS1-ANP
Type E Model BS-11E-003-TS1-ANP



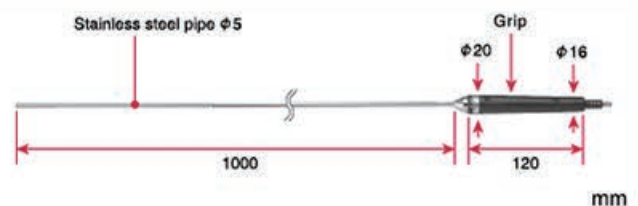
Temp. range	Tolerance	Response time	Durability
-200~300°C	±2.5°C (at 100°C)	1.5 s	C

Type K Model BS-22K-010-TC1-ANP
Type E Model BS-22E-010-TC1-ANP



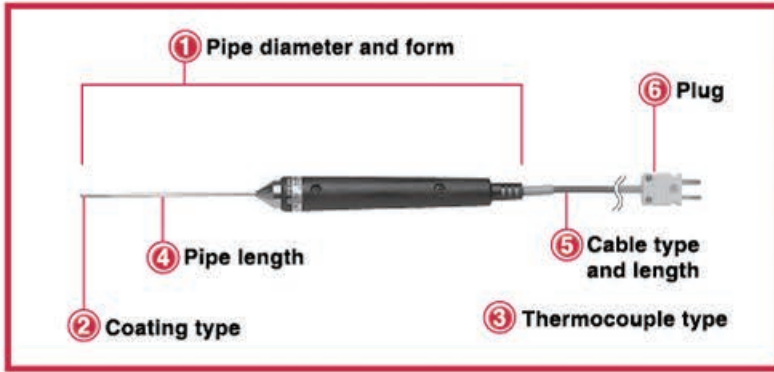
Temp. range	Tolerance	Response time	Durability
-200~200°C	±2.5°C (at 100°C)	20 s	B

Type K Model BS-51K-100-TC1-ANP
Type E Model BS-51E-100-TC1-ANP



Temp. range	Tolerance	Response time	Durability
-200~500°C	±2.5°C (at 100°C)	5 s	B

How to order of BS series 选型



BS-21K-010-TC1-ANP

① ② ③ ④ ⑤ ⑥

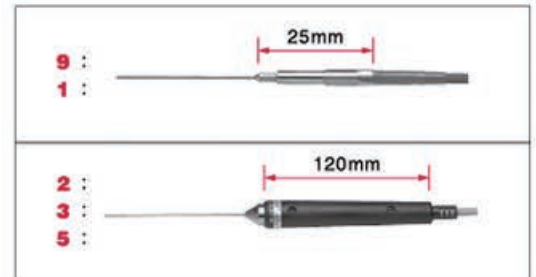
① Pipe diameter and form 钢针的外径与外观形状 (Max. temp.)	9 : $\phi 0.9\text{mm}$ ($\phi 1.3\text{mm}$) [*] : Sleeve type (300°C) 1 : $\phi 1.5\text{mm}$ ($\phi 1.9\text{mm}$) [*] : Sleeve type (300°C) 2 : $\phi 2.1\text{mm}$ ($\phi 2.5\text{mm}$) [*] : Grip type (500°C) 3 : $\phi 3.0\text{mm}$ ($\phi 3.4\text{mm}$) [*] : Grip type (500°C) 5 : $\phi 5.0\text{mm}$: Grip type (500°C)
② Coating type 探针镀膜	1 : No coating 2 : Fluororesin coating (BS-5* cannot be manufactured.)
③ Thermocouple type 热电偶种类	K : Chromel-Alumel E : Chromel-Constantan
④ Pipe length 探针的长度	003 : 30mm 005 : 50mm 008 : 80mm 010 : 100mm 015 : 150mm 020 : 200mm 030 : 300mm 050 : 500mm 100 : 1000mm The pipe length is fixed for certain pipe diameters. For more information, see the table to the right.
⑤ Cable type and length 导线种类和长度 (See page 9)	TS1 : For BS-9*, BS-1* (Sleeve type) TC1 : For BS-2*, BS-3*, BS-5* (Grip type) Standard specifications : 1m The cable length can be specified each 0.5m.
⑥ 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)

* Fluororesin coating diameter

① Pipe diameter and form

钢针的外径与外观形状

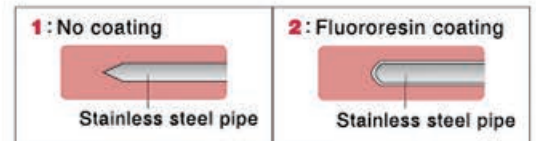
You can choose pipe diameter and form as below.



② Coating type

探针镀膜

You can choose coating type as below.



The operating temperature limit of fluororesin-coated probes is 200°C, regardless of pipe diameter.

④ Pipe length

探针的长度

	BS-9* ($\phi 0.9$)	BS-1* ($\phi 1.5$)	BS-2* ($\phi 2.1$)	BS-3* ($\phi 3.0$)	BS-5* ($\phi 5.0$)
003 :	●	●			
005 :	●	●	●		
008 :	●	●			
010 :	●	●	●	●	
015 :		●	●	●	
020 :			●	●	
030 :				●	
050 :				●	●
100 :					●

Specifications of BS series 规格

Model number	BS-9*	BS-1*	BS-2*	BS-3*	BS-51
Temp. range ^{*1}	-200~300°C	-200~300°C	-200~500°C	-200~500°C	-200~500°C
Tolerance	-200°C ≤ t < 167°C	±7.0°C	±7.0°C	±7.0°C	±7.0°C
	-167°C ≤ t < -40°C	±3.5°C	±3.5°C	±3.5°C	±3.5°C
	-40°C ≤ t ≤ 333°C	±2.5°C (~300°C)		±2.5°C	±2.5°C
	333°C < t ≤ 500°C	±(0.0075× t)°C			
Response time ^{*2}	0.5s	1.5s	2.5s	3s	5s
Durability	C			B	

*1 The fluororesin-coated type has an operating temperature limit of up to 200°C.

*2 The fluororesin-coated type is 20 seconds.

*Please see website specifications of BS series.