

# Model **BS** series

## General Internal Probes

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

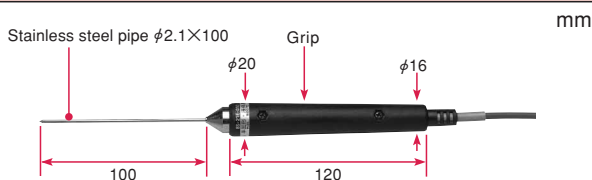
Specific components may be combined to customize products for the needs of a customer's specific application.



### Typical Probes of BS series

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

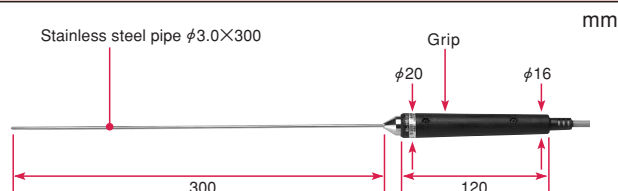
**Type E Model BS-21E-010-TC1-ANP**



Temp. Range	Accuracy	Response time	Durability
-200~500°C	$\pm 1.3^\circ\text{C}$ (at 100°C)	2.5 s	B

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

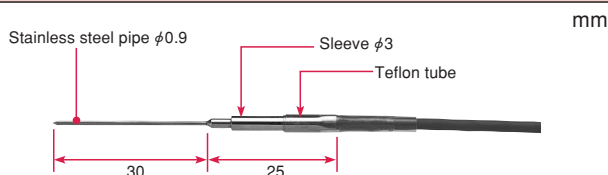
**Type E Model BS-31E-030-TC1-ANP**



Temp. Range	Accuracy	Response time	Durability
-50~500°C	$\pm 1.3^\circ\text{C}$ (at 100°C)	3.0 s	B

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

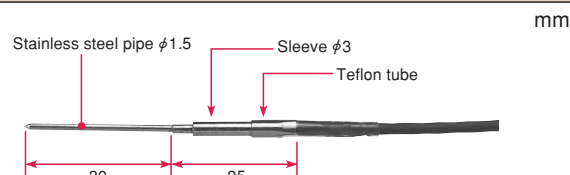
**Type E Model BS-91E-003-TS1-ANP**



Temp. Range	Accuracy	Response time	Durability
-200~300°C	$\pm 1.2^\circ\text{C}$ (at 100°C)	0.5 s	C

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

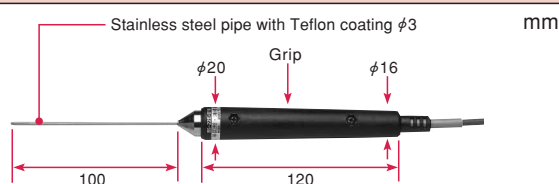
**Type E Model BS-11E-003-TS1-ANP**



Temp. Range	Accuracy	Response time	Durability
-200~300°C	$\pm 1.3^\circ\text{C}$ (at 100°C)	1.5 s	C

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

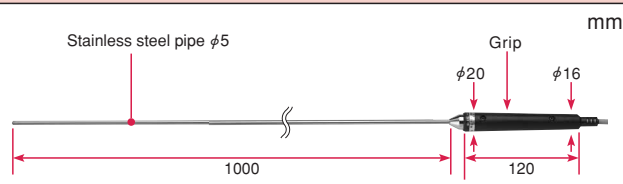
**Type E Model BS-22E-010-TC1-ANP**



Temp. Range	Accuracy	Response time	Durability
-200~200°C	$\pm 1.4^\circ\text{C}$ (at 100°C)	20 s	B

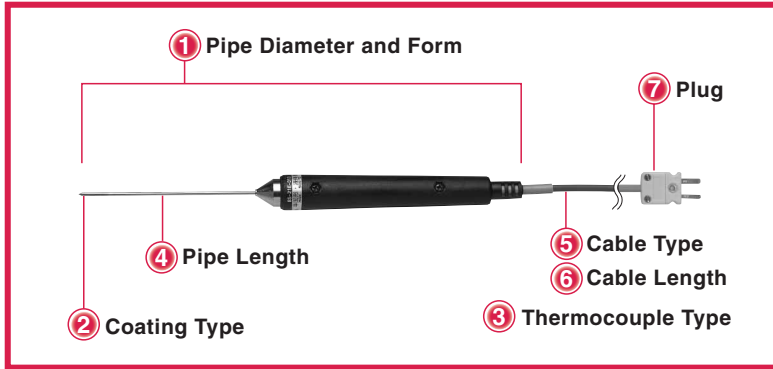
**Type K Model BS-51K-100-TC1-ANP**

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



Temp. Range	Accuracy	Response time	Durability
-200~500°C	$\pm 1.4^\circ\text{C}$ (at 100°C)	5 s	B

# How to order of BS series

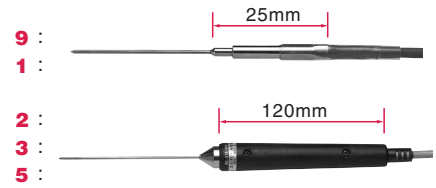


## BS-21K-010-TC1-ANP



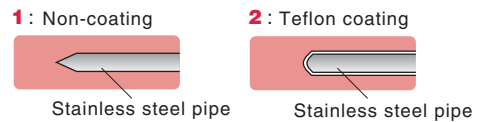
### ① Pipe Diameter and Form

You can choose Pipe Diameter and Form as below.



### ② Coating Type

You can choose Coating Type as below.



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

### ④ Pipe Length

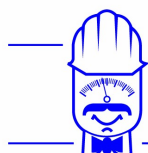
	Pipe Diameter (mm)				
	BS-9* (φ0.9)	BS-1* (φ1.5)	BS-2* (φ2.1)	BS-3* (φ3.0)	BS-5* (φ5.0)
<b>003</b> :	●	●			
<b>005</b> :	●	●	●		
<b>008</b> :	●	●			
<b>010</b> :	●	●	●	●	
<b>015</b> :		●	●	●	
<b>020</b> :			●	●	
<b>030</b> :				●	
<b>050</b> :				●	●
<b>100</b> :					●

### Specifications

Pipe Diameter	Response time	Accuracy	Durability Rank
BS-9*	0.5s	±1.2°C	C
BS-1*	1.5s	±1.3°C	C
BS-2*	2.5s	±1.3°C	B
BS-3*	3.0s	±1.3°C	B
BS-5*	5.0s	±1.4°C	B
Teflon coating	20s	±1.4°C	—*

\*Varies with Pipe Diameter.

① Pipe Diameter and Form (Max.Temp.)	<b>9</b> : φ0.9mm: Sleeve type (300°C) <b>1</b> : φ1.5mm: Sleeve type (300°C) <b>2</b> : φ2.1mm: Grip type (500°C) <b>3</b> : φ3.0mm: Grip type (500°C) <b>5</b> : φ5.0mm: Grip type (500°C)	
② Coating Type	<b>1</b> : Non-coating <b>2</b> : Teflon coating (BS-5* cannot be manufactured.)	
③ Thermocouple Type	<b>K</b> : Chromel-Alumel <b>E</b> : Chromel-Constantan	
④ Pipe Length	<b>003</b> : 30mm <b>005</b> : 50mm <b>008</b> : 80mm <b>010</b> : 100mm <b>015</b> : 150mm <b>020</b> : 200mm <b>030</b> : 300mm <b>040</b> : 400mm <b>050</b> : 500mm <b>100</b> : 1000mm	The Pipe length is fixed for certain pipe diameters. For more information, see the table to the right.
⑤ Cable Type (See page 5)	<b>TS</b> : For BS-9*, BS-1* (Sleeve type) <b>TC</b> : For BS-2*, BS-3*, BS-5* (Grip type)	
⑥ Cable Length	<b>1</b> : 1m <b>1.5</b> : 1.5m <b>2</b> : 2m <b>2.5</b> : 2.5m .....	
⑦ Plug (See page 4)	<b>ANP</b> : P plug <b>ASP</b> : S plug <b>W</b> : Without plug	



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