

# Model SHEATH series

## Bendable Wiry Probes

Model SHEATH series probes are internal temperature sensors designed to measure the temperature of liquids, air, and gases.

The sheathed section can be bent to a radius five times the outer diameter of the sheath. Specific components may be combined to customize products for the needs of a customer's specific application.

### 鞘状模式系列

鞘状模式系列产品是适用于液体或空气温度测试的内部温度感应器。

鞘状部分的鞘状外形可弯曲至其半径的5倍。

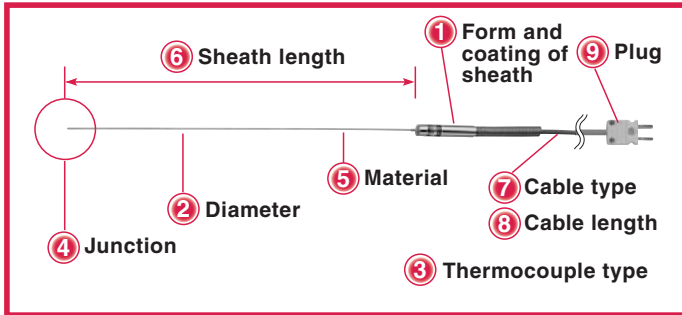
通过对各个规格的组件进行重新组合的方式，可以按照客户的使用需求进行选配。

シース形センサは、液体や空気温度測定に適した内部用温度センサです。

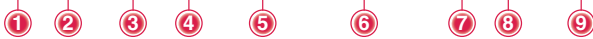
シース部分は、シース外形の5倍の半径まで曲げる事が可能です。

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。

## How to order of SHEATH series



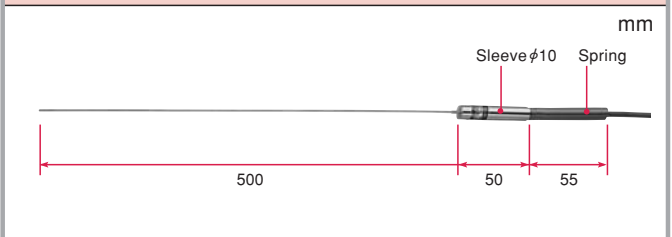
## B3.2-K-J1-M1-L500-TC1-ANP



## Typical probes of SHEATH series

Type K Model **B3.2-K-J1-M1-L500-TC1-ANP**

Type E Model **B3.2-E-J1-M1-L500-TC1-ANP**

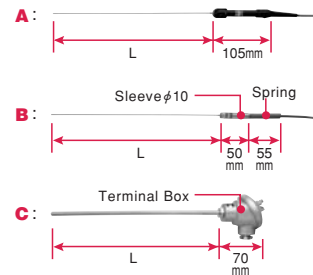


Temp. range	Tolerance	Response time	Durability
-40~750°C	±2.5°C (at 100°C)	5.0 s	S

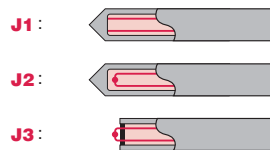
① Form and coating of sheath	<b>A</b> : Grip type <b>B</b> : Sleeve type <b>C</b> : Terminal box type <b>AH</b> : Grip type / Teflon coating <b>BH</b> : Sleeve type / Teflon coating <b>CH</b> : Terminal box type / Teflon coating
② Diameter	<b>0.25</b> : φ 0.25mm <b>0.5</b> : φ 0.5mm <b>1.0</b> : φ 1.0mm <b>1.6</b> : φ 1.6mm <b>3.2</b> : φ 3.2mm <b>4.8</b> : φ 4.8mm <b>6.4</b> : φ 6.4mm <b>8.0</b> : φ 8.0mm
③ Thermocouple type	<b>K</b> : Chromel-Alumel <b>E</b> : Chromel-Constantan
④ Junction	<b>J1</b> : Grounded junction <b>J2</b> : Ungrounded junction <b>J3</b> : Exposed junction
⑤ Material	<b>M1</b> : SUS 316 <b>M2</b> : SUS 310S (Only Type K) <b>M3</b> : Inconel (Only Type K)
⑥ Sheath length	<b>L100</b> : 100mm <b>L200</b> : 200mm .....
⑦ Cable type (See page 5)	<b>TC</b> :
⑧ Cable length	<b>1</b> : 1m <b>1.5</b> : 1.5m <b>2</b> : 2m .....
⑨ Plug (See page 4)	<b>ANP</b> : P plug <b>ASP</b> : S plug <b>W</b> : Without plug

### ① Form

You can choose form as below.



### ④ Junction



### [Supplementary information]

The sheath tube can be coated with teflon.

Teflon coating will improve resistance against chemicals and enable the use of the probe for measuring the temperatures of acids, alkalis, food, etc.

Applicable sheath diameter : φ1.0, φ1.6, φ3.2

Maximum length : 1m

Operating temperature limit : 200°C

Minimum bending radius : Approx. 10mm

## Specifications

Outside diameter (mm)		0.25	0.5	1.0	1.6	3.2	4.8	6.4	8.0
Type : K (Max.temp.)	SUS 316 (M1)	—	—	650°C	650°C	750°C	800°C	800°C	900°C
	SUS 310S (M2)	—	—	650°C	650°C	750°C	800°C	800°C	900°C
	Inconel (M3)	500°C	500°C	650°C	650°C	750°C	900°C	1000°C	1050°C
Type : E (Max.temp.)	SUS 316 (M1)	—	—	650°C	650°C	750°C	800°C	800°C	800°C
Response time		0.4s	0.9s	2s	3s	5s	10s	15s	20s
Standard resistance (Ω/m)	Type K	570	124	32	13	4	2.2	1.0	0.7
	Type E	—	—	38	15	5	2.6	1.2	0.9
Max. length (m)	J1, J3	5	10	50	50	50	50	30	20
	J2	2	2	2	5	15	30	30	20
Tolerance	Type K	-40~333°C : ±2.5°C, 333~1200°C : ±(measuring × 0.75%) °C							
	Type E	-40~333°C : ±2.5°C, 333~ 900°C : ±(measuring × 0.75%) °C							

※ Avoid immersing these probes in molten metal. Doing so may result in corrosion of the sheathed sensor.