

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。

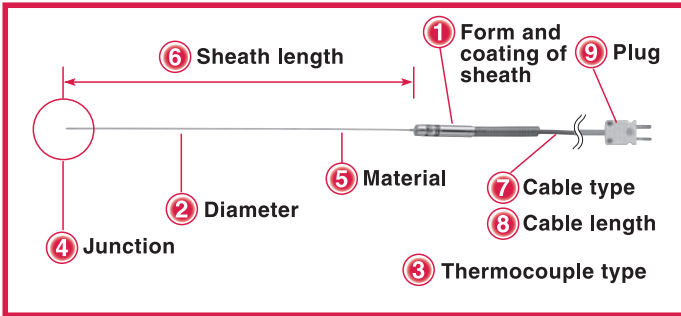
通过组合各个规格的组件，可以按照客户的用途进行个性选配。

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

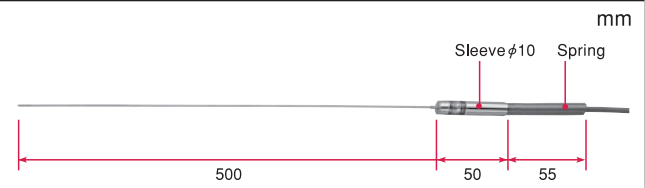


① Form and coating of sheath	A : Grip type B : Sleeve type C : Terminal box type AH : Grip type / Teflon coating BH : Sleeve type / Teflon coating CH : Terminal box type / Teflon coating
② Diameter	0.25 : ϕ 0.25mm 0.5 : ϕ 0.5mm 1.0 : ϕ 1.0mm 1.6 : ϕ 1.6mm 3.2 : ϕ 3.2mm 4.8 : ϕ 4.8mm 6.4 : ϕ 6.4mm
③ Thermocouple type	K : Chromel-Alumel E : Chromel-Constantan
④ Junction	J1 : Grounded junction J2 : Ungrounded junction J3 : Exposed junction
⑤ Material	M1 : SUS 316 M2 : SUS 310S (Only Type K) M3 : Inconel (Only Type K)
⑥ Sheath length	L100 : 100mm L200 : 200mm
⑦ Cable type (See page 5)	TC : More than ϕ 1mm TS : ϕ 0.25mm, ϕ 0.5mm
⑧ Cable length	1 : 1m 1.5 : 1.5m 2 : 2m
⑨ Plug (See page 4)	ANP ASP W

Typical probes of SHEATH series

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

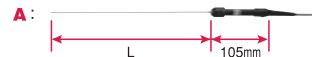
Type E Model **B3.2-E-J1-M1-L500-TC1-ANP**



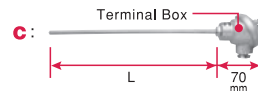
Temp. range	Tolerance	Response time	Durability
-40~750°C	\pm 2.5°C (at 100°C)	5.0 s	S

① Form

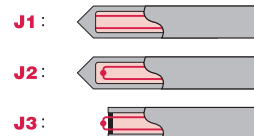
You can choose form as below.



※Models with an outer sheath diameter of ϕ 0.25mm / 0.5mm have sleeve dimensions of ϕ 5mm \times 30mm and no spring.



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 : ϕ 1.0mm, ϕ 1.6mm, ϕ 3.2mm

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 : \pm 2.5°C, 333~1200°C : \pm (measuring \times 0.75%) °C							
	Type E	-40~333°C : \pm 2.5°C, 333~ 900°C : \pm (measuring \times 0.75%) °C							

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

※Make sure that the sum of the sheath and code resistance values does not exceed the value of the signal source resistance of the instrument body.