



SCT103-Exi

- temperature range $-40 \div 1100^{\circ}\text{C}$
- operating temperature of connection heads max. 150°C
- stainless steel sheath
- threaded process connection
- optional: sensor with a replaceable measuring insert
- possibility of mounting a 4...20 mA temperature transmitter

The thermocouple SCT103-Exi consists of an exchangeable measuring insert, outer protective tube (thermowell) with neck and aluminum connection head. Mounting a temperature transmitter with 4...20 mA output signal is possible. The measuring insert represents the replaceable element of the complete sensor, which reduces the time and costs of maintenance of the measuring apparatus installed in the object. Spring fixation of the measuring insert provides perfect pressure to the bottom of the protecting tube, reduces the time of reaction to changes of temperature and increases the accuracy of measurement as well as reduces natural vibration thus mechanical, and electrical defects can be avoided.

Application areas

- fine chemical industry,
- light energy industry,
- general industrial services.

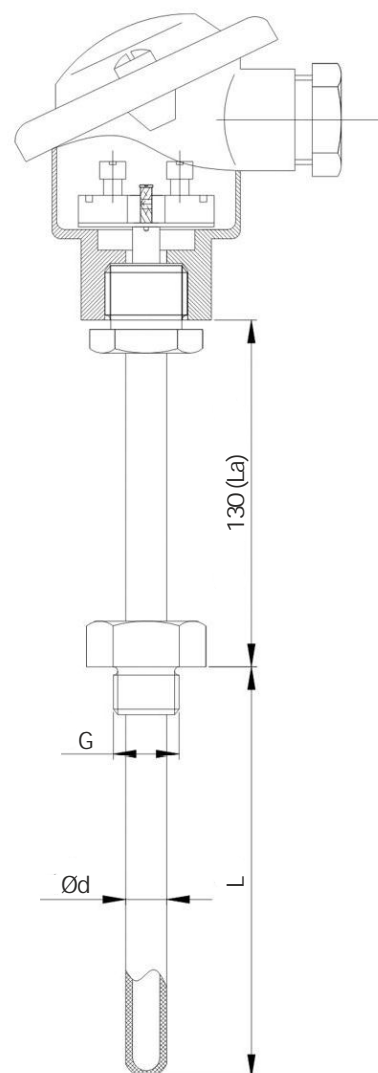
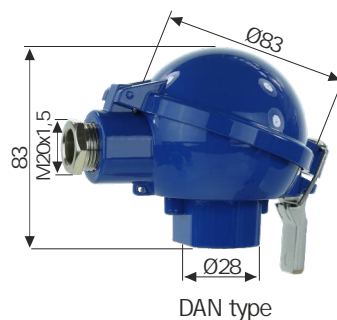
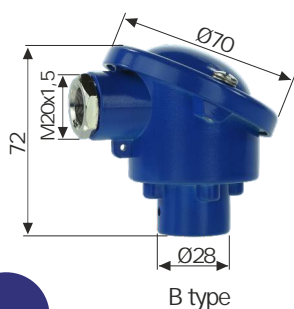
TECHNICAL DATA

Sensing element	J, K, N, R, S, B, E, T thermocouple (single, double)
Measuring range	depending on thermocouple and material: $-40 \div 450^{\circ}\text{C}$ (with non-replaceable insert), $-40 \div 1100^{\circ}\text{C}$ (with replaceable insert)
Connection head	B, NA or other, operating temperature $-40 \div 150^{\circ}\text{C}$
Class	1 or 2
Sheath	material: stainless steel 1.4541 or other length (La): 130 mm (standard) diameter: 3, 4, 4.5, 5, 6, 7, 8, 9, 10, 11, 12, 15 mm (with non-replaceable insert); 8, 9, 10, 11, 12, 15 mm (with replaceable insert)
Process connection	G1/2", M20x1,5 or other
ATEX approval	II 1G Ex ia IIC T6-T1 Ga; II 1D Ex ia IIIC T85°C÷450°C Da

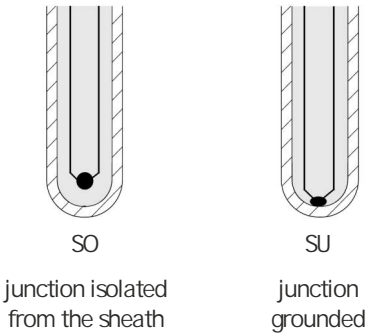
THERMOCOUPLES TOLERANCE ACC. TO PN-EN 60584

Thermocouple	Class 1		Class 2	
	Temperature range	Tolerance	Temperature range	Tolerance
J (Fe-CuNi)	$-40 \div 750^{\circ}\text{C}$	$\pm 1,5^{\circ}\text{C}$	$-40 \div 750^{\circ}\text{C}$	$\pm 2,5^{\circ}\text{C}$
K (NiCr-Ni)	$-40 \div 1000^{\circ}\text{C}$	$\pm 0,0040^{\circ}\text{C} \times t $	$-40 \div 1200^{\circ}\text{C}$	$\pm 0,0075^{\circ}\text{C} \times t $
N (NiCrSi-NiSi)	$-40 \div 1000^{\circ}\text{C}$		$-40 \div 1200^{\circ}\text{C}$	
B (PtRh30-PtRh6)	-	-	$600 \div 1700^{\circ}\text{C}$	$\pm 0,0025^{\circ}\text{C} \times t $
R (PtRh13-Pt)	$0 \div 1100^{\circ}\text{C}$	$\pm 1,0^{\circ}\text{C}$	$0 \div 600^{\circ}\text{C}$	$\pm 1,5^{\circ}\text{C}$
S (PtRh10-Pt)	$1100 \div 1600^{\circ}\text{C}$	$\pm [1+0,003(t-1100)]^{\circ}\text{C}$	$600 \div 1600^{\circ}\text{C}$	$\pm 0,0025^{\circ}\text{C} \times t $

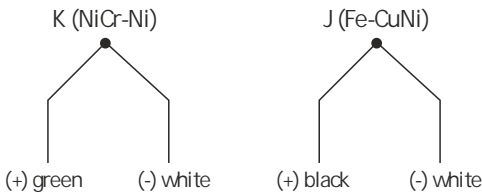
CONNECTION HEAD TYPES



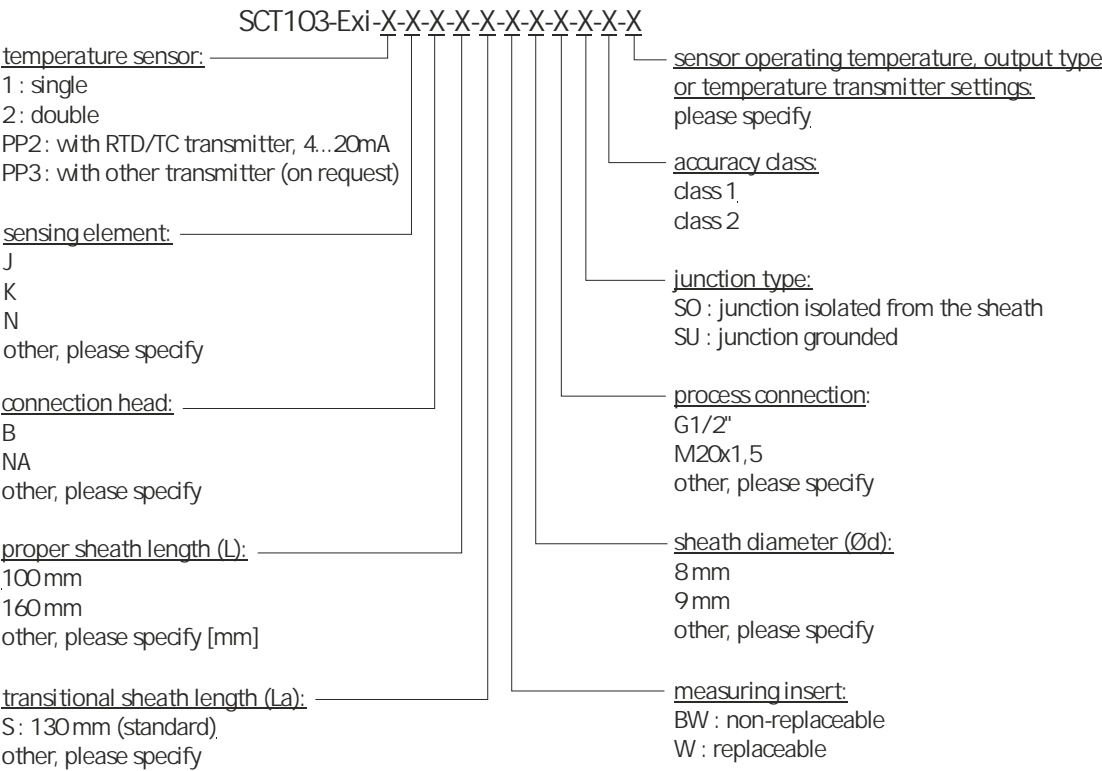
TYPES OF MEASURING HOT JUNCTION



ELECTRICAL CONNECTION



ORDERING



Ordering example:
SCT103-Exi-1-K-B-100-S-W-9-G1/2"-SO-2-250
Single TC intrinsically safe temperature sensor, K thermocouple, 2 tolerance class, measuring insert replaceable, B head type, process connection G1/2", sheath diameter 9 mm and length 100 mm, hot junction isolated from the sheath, max. operating temperature 250°C.

