

## SCT121



- temperature range  $-40 \div 1200^{\circ}\text{C}$  depending on thermocouple
- operating temperature of connection heads max.  $150^{\circ}\text{C}$
- stainless steel sheath
- drilled pressure sheath
- sensor with a replaceable measuring insert
- possibility of mounting a 4...20mA or 0...10V temperature transmitter
- connection head DANW with local display

The thermocouple SCT121 consists of an exchangeable measuring insert, outer protective tube (thermowell), drilled pressure sheath, and aluminum connection head. Intended for measuring the temperature of pipelines, tanks, boilers in difficult conditions. Mounting a temperature transmitter with 4...20mA or 0...10V 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 of temperature changes, and increases the accuracy. It also reduces natural vibration. Thus, mechanical and electrical defects can be avoided.

### Application areas

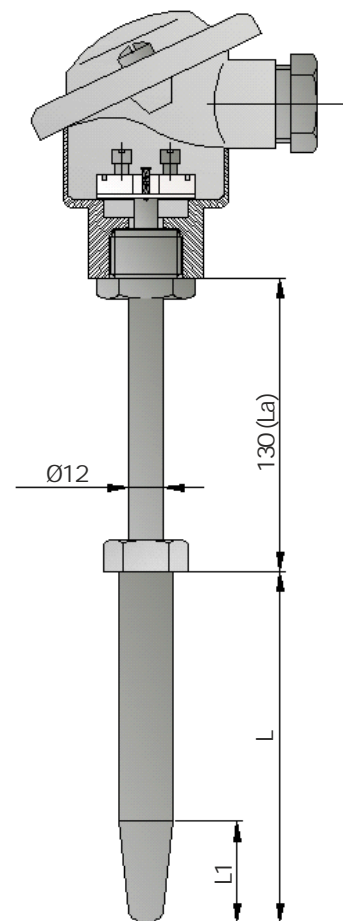
- technological installations in various industries,
- temperature measurement of pipelines, tanks, boilers,
- measurement of all media (gases, liquids, solids).

### TECHNICAL DATA

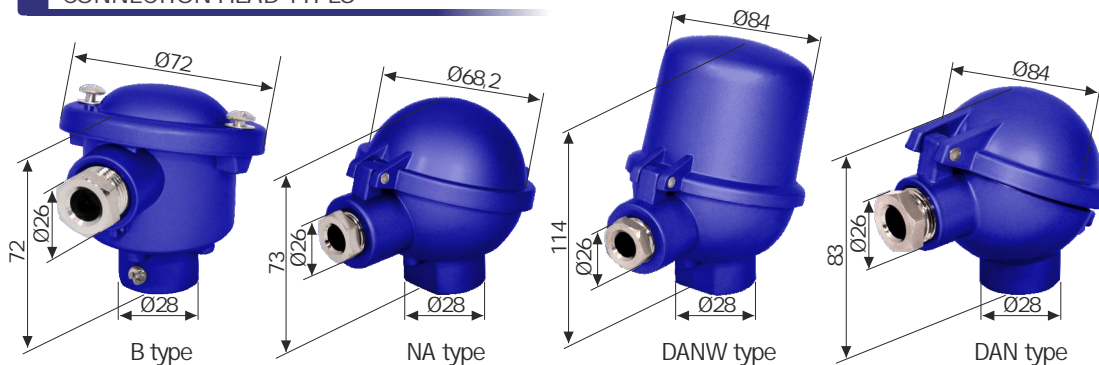
Sensing element	J, K, N, R, S, B thermocouple or other (single, double)
Measuring range	$-40 \div 1200^{\circ}\text{C}$ (depending on thermocouple and material)
Connection head	B, NA or other, operating temperature $-40 \div 150^{\circ}\text{C}$
Class	1 or 2
Sheath	material: heat-resistant steel H25N20S2 (1.4841 / AISI314) or other any nominal length (specified when ordering) diameter: from 15 to 26 mm

### THERMOCOUPLES TOLERANCE ACC. TO PN-EN 60584

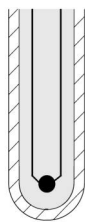
Thermocouple	Class 1		Class 2	
	Temperature range	Tolerance	Temperature range	Tolerance
J (Fe-CuNi)	$-40 \div 750^{\circ}\text{C}$	$\pm 1,5^{\circ}\text{C}$	$-40 \div 750^{\circ}\text{C}$	$\pm 2,5^{\circ}\text{C}$
K (NiCr-Ni)	$-40 \div 1000^{\circ}\text{C}$	$\pm 0,0040^{\circ}\text{C} \times  t $	$-40 \div 1200^{\circ}\text{C}$	$\pm 0,0075^{\circ}\text{C} \times  t $
N (NiCr-Si-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

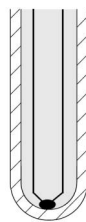


TYPES OF MEASURING HOT JUNCTION



SO

junction isolated from the sheath

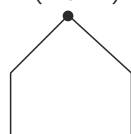


SU

junction grounded

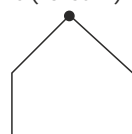
ELECTRICAL CONNECTION

K (NiCr-Ni)



(+) green (-) white

J (Fe-CuNi)



(+) black (-) white

ORDERING

SCT121-X-X-X-X-X-X-X-X-X-X

<p><u>temperature sensor:</u></p> <p>1 : single 2 : double PP1 : without ceramic block PP2 : with RTD/TC transmitter, 4...20mA PP3 : with other transmitter (on request)</p> <p><u>sensing element:</u></p> <p>J K N other, please specify</p> <p><u>connection head:</u></p> <p>B NA other, please specify</p> <p><u>transitional sheath length (La):</u></p> <p>S : 130 mm (standard) other, please specify</p> <p><u>pressure sheath diameter (Ød):</u></p> <p>18 : 18H7 24 : 24H7 26 : 26H7</p> <p><u>pressure sheath length (L):</u></p> <p>100 mm 200 mm other, please specify [mm]</p>	<p><u>sensor measuring range, output type or temperature transmitter settings:</u> please specify.</p> <p><u>accuracy class:</u> class 1 class 2</p> <p><u>junction type:</u> SO : junction isolated from the sheath SU : junction grounded</p> <p><u>insert diameter:</u> 3 : 3 mm 6 : 6 mm other, please specify</p> <p><u>sheath material:</u> 1.7335 : 1.7335/A182 F11 1.7380 : 1.7380/A182 F22 1.4903 : 1.4903/A182 F91 1.4541 : 1.4541/SS321</p> <p><u>length of the sheath cone (L1):</u> 50 : 50 mm 85 : 85 mm other, please specify</p>
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Ordering example:

SCT121-1-K-B-S-18-140-30-1.4541-6-SO-2-(-10-900)

Single TC temperature sensor, K thermocouple, 2 tolerance class, with replaceable measuring insert diameter 6 mm, B head type, pressure sheath diameter 18 mm, length 140 mm, sheath from stainless steel 1.4541, sheath cone 30 mm, hot junction isolated from the sheath, sensor measuring range -10 to 900°C.

