



SCT108

- mineral insulated thermoelectric sensor
- temperature range $-40 \div 1200^{\circ}\text{C}$ depending on thermocouple
- connection head
- short response time for temperature change
- small dimensions for operation in hard-to-reach places
- resistance to vibrations and the possibility of bending
- thermowell made of nickel alloy (Inconel 600)

The mineral insulated thermocouple **SCT108** contains the flexible part of the probe. The probe consists of a stainless steel outer sheath, in which the inner conductors are insulated with compressed into a highly compacted ceramic mass. The outer sheath is made of stainless steel or Ni alloy. The inner conductors are welded together at the measuring end of the sheathed cable to form the 'thermocouple' junction. In designs, where the measuring element is not insulated, the sheath is also welded with the thermocouple junction. Connector cables are connected to the other end of the sheathed cable and hermetically sealed with a sealing compound. The connector wires are the basis of the electrical interface with cable, a connector, or a terminal block. Due to their flexibility and the small diameters in which they are available, sheathed thermocouples can be used in locations that are not easily accessible.

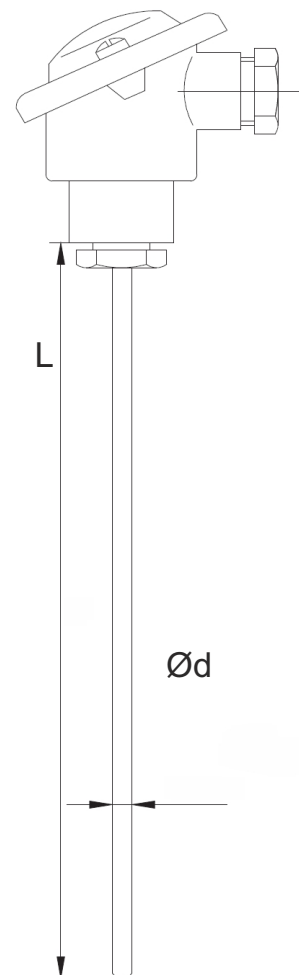
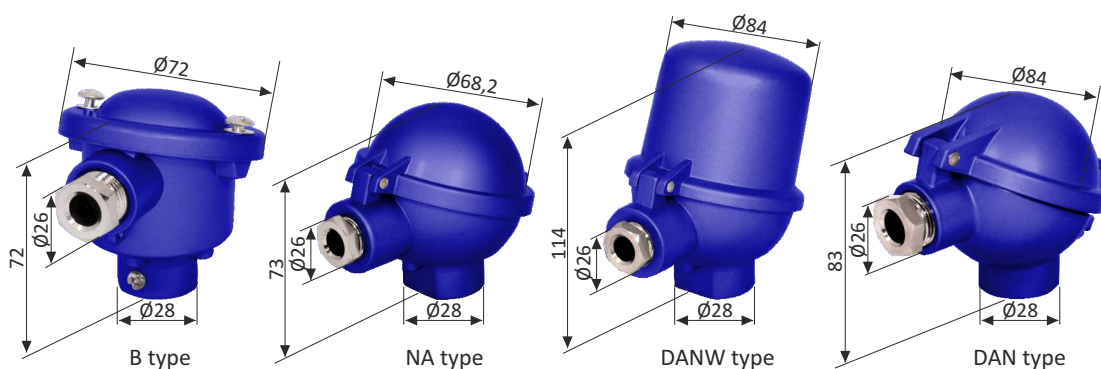
Application areas:

- general machinery and equipment design,
- measuring temperature of liquids, gases and solid bodies,
- all branches of industry,
- measurement laboratories.

TECHNICAL DATA

Sensing element	J, K or N thermocouple (single, double)
Measuring range	$-40 \div 1200^{\circ}\text{C}$ (depending on thermocouple and material)
Connection head	B, NA, MA, DAN or other, operating temperature $-40 \div 150^{\circ}\text{C}$
Class	1 or 2
Sheath	material: nickel alloy 2.4816 (Inconel 600) or other any nominal length (specified when ordering) diameter: 3 mm, 4,5 mm, 6 mm
Measuring junction	isolated, grounded or exposed

CONNECTION HEAD TYPES



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)	$-40 \div 1000^{\circ}\text{C}$		$-40 \div 1200^{\circ}\text{C}$	



TYPES OF MEASURING HOT JUNCTION



junction isolated from the sheath (SO)



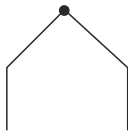
grounded junction (SU)



exposed junction (SZ)

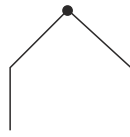
ELECTRICAL CONNECTION

K (NiCr-Ni)



(+) green (-) white

J (Fe-CuNi)



(+) black (-) white

ORDERING

SCT108-X-X-X-X-X-X

temperature sensor:

- 1 : single
- 2 : double
- PP : with transmitter

sensing element:

- J
- K
- N
- other, please specify

thermowell diameter (d):

- 3 : 3 mm
- 4,5 : 4,5 mm
- 6 : 6 mm

thermowell length (L):

please specify [mm]

accuracy class:

- class 1
- class 2

junction type:

- SO : junction isolated from the sheath
- SU : junction grounded
- SSO : junction isolated from itself and from the sheath (for double sensor)
- SZ : junction exposed

connection head:

- MA
- NA
- DAN
- B
- other, please specify

Ordering example:

SCT108-1-K-3-500-B-SO-2

Mineral insulated single TC temperature sensor, K thermocouple, 2 tolerance class, sheath diameter 3.0 mm, length L=500 mm, connection head B type

