



SCT600-Exi

- thermoelectric sensor with ceramic protection tube
- temperature range $-40 \div 1600^{\circ}\text{C}$
- operating temperature of connection heads max. 150°C
- possibility of mounting a 4...20 mA temperature transmitter
- tube made of C610, C799 or C530
- mounting by threaded fittings and brackets

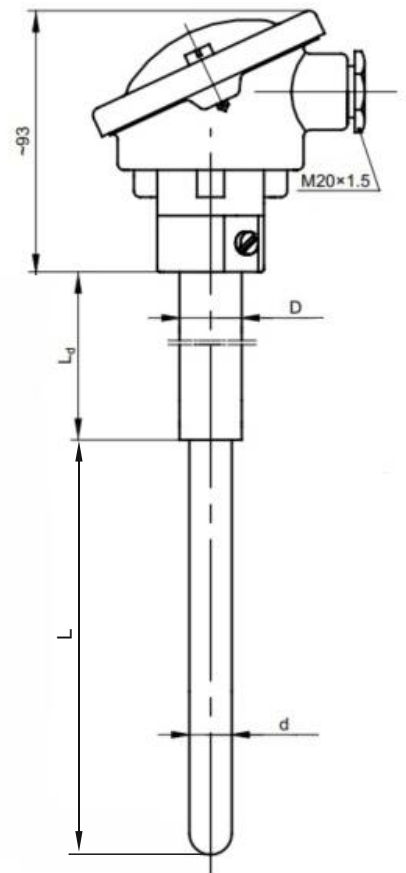
Thermocouple SCT600-Exi with a ceramic protection tube is designed for industrial furnaces, the glass industry, etc. The sensor consists of a replaceable insert, a ceramic protective tube (thermowell) and an aluminum connection head, where a programmable temperature transmitter with 4...20 mA output signal can be installed. Sensors with the ceramic protective tube can be mounted with a flanged mounting bracket or threaded compression fitting. Sensor immersion length, compression fitting size (optional), the material of the protection tube, and connection head can be selected depending on the requirements of the application.

Application areas

- glass and ceramics industry,
- heat-treating furnaces,
- boiler houses,
- air and gas ducts.

TECHNICAL DATA

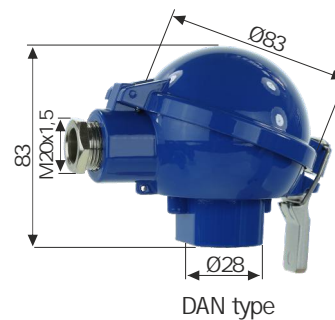
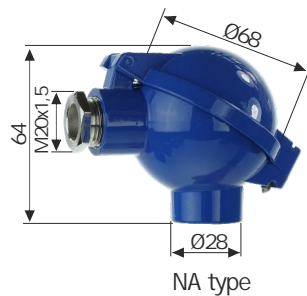
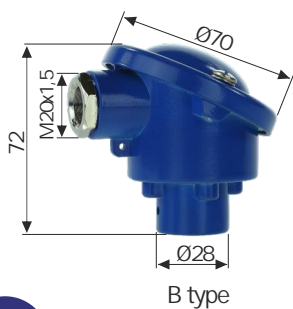
Sensing element	J, K, N, R, S, B, E, T thermocouple (single, double)
Measuring range	depending on thermocouple and material: $-40 \div 1600^{\circ}\text{C}$
Connection head	B, NA or other, operating temperature $-40 \div 150^{\circ}\text{C}$
Class	1 or 2
Sheath	material: C610 (60% Al_2O_3), C799 (99,7% Al_2O_3) or C530 (75% Al_2O_3) any nominal length (acc. to order) diameter d: $6 \div 26$ mm (typical 6, 8, 10, 12, 15, 20, 24 mm)
Process connection	mounting brackets, threaded compression fittings
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
K (NiCr-Ni)	$-40 \div 1000^{\circ}\text{C}$	$\pm 1.5^{\circ}\text{C}$	$-40 \div 1200^{\circ}\text{C}$	$\pm 2.5^{\circ}\text{C}$
N (NiCr-Si-NiSi)	$-40 \div 1000^{\circ}\text{C}$	$\pm 0.0040^{\circ}\text{C} \times t $	$-40 \div 1200^{\circ}\text{C}$	$\pm 0.0075^{\circ}\text{C} \times t $
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



CERAMIC PROTECTION TUBE - FEATURES

Material	Operation temperature	Advantages	Disadvantages	Application
C530 (73-75% Al ₂ O ₃)	max. 1600°C	resistant to temperature shock	low resistance to mechanical load	electric furnaces up to 1300°C or others
C610 (60% Al ₂ O ₃)	max. 1500°C	gas-tight, average thermal shock resistance, high flame resistance	low resistance to mechanical load, low Al ₂ O ₃ content	gas-tight furnaces, diffusion furnaces
C799 (99,7% Al ₂ O ₃)	max. 1800°C	gas-proof, acid resistant, steam resistant, very high flame resistance	low resistance to mechanical load, low resistance to temperature shock	gas-tight furnaces up to 1800°C (liquid glass tanks), chemical industry, manufacturing of concrete

ACCESSORIES

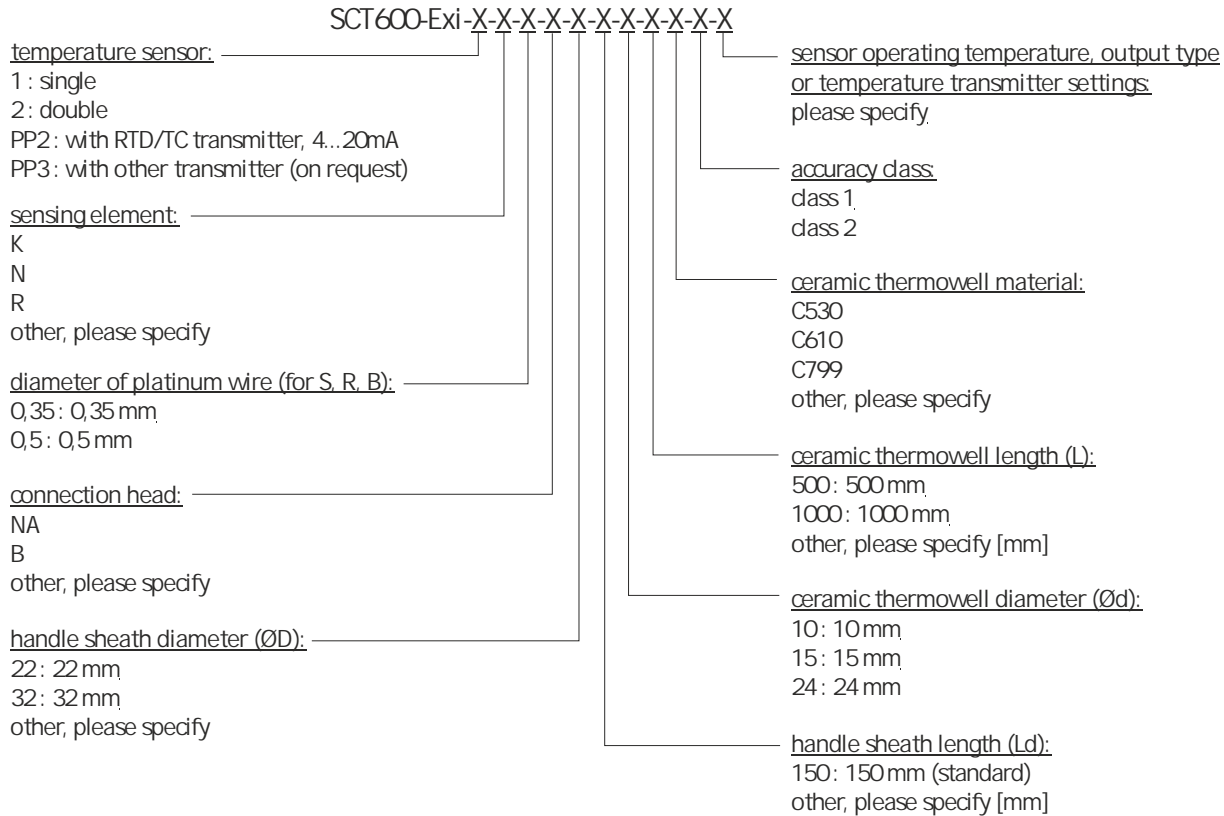
Mounting bracket
SUZ11



Mounting bracket
SUZ21



ORDERING



Ordering example:

SCT600-Exi-1-K-B-22-150-15-500-C799-2-1100

Single TC intrinsically safe temperature sensor, K thermocouple, 2 tolerance class, B head type, ceramic protection tube made of C799, 15 mm diameter, 500 mm length, handle sheath diameter 22 mm and length 150 mm, max. operating temperature 1100°C.

