



SCT600-Exi

- thermoelectric sensor with ceramic protection tube
- temperature range -40 ÷ 1600°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:

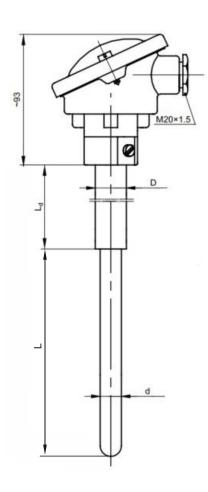
- -glassand ceramics industry,
- -heat-treating furnaces,
- -boilerhouses,
- -air and gas ducts.

TECHNICAL DATA

Sensing element	J. K. N. R. S. B. E. T thermocouple (single, double)		
	1 (3)		
Measuring range	depending on thermocouple and material: -40 ÷ 1600°C		
Connection head	B, NA or other, operating temperature -40 ÷ 150°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 ÷ 26 mm (typical 6, 8, 10, 12, 15, 20, 24 mm)		
Process connection	mounting brackets, threaded compression fittings		
ATEX approval	II 1G Exia IIC T6-T1 Ga; II 1D Exia 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) N (NiCrSi-NiSi)	-40 ÷ 1000°C -40 ÷ 1000°C	± 1.5°C ± 0.0040°C x t	-40 ÷ 1200°C -40 ÷ 1200°C	± 2.5°C ± 0.0075°C x t
B (PtRh30-PtRh6)	-	-	600 ÷ 1700°C	± 0.0025°C x t
R (PtRh13-Pt) S (PtRh10-Pt)	0 ÷ 1100°C 1100 ÷ 1600°C	± 1.0°C ± [1+0.003(t-1100)]°C	0 ÷ 600°C 600 ÷ 1600°C	± 1.5°C ± 0.0025°C x t



CONNECTION HEAD TYPES









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CERAMIC PROTECTION TUBE - FEATURES

Material	Operation temperature	Advantages	Disadvantages	Application
C530 (73-75% Al ₂ O ₃)	max. 1600°C	resistant to temperature shock	lowresistance 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	lowresistance to mechanical load, lowAl 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

SCT600-Exi-X-X-X-X-X-X-X-X-X-X-X-X temperature sensor: sensor operating temperature, output type 1: single or temperature transmitter settings: 2: double please specify PP2: with RTD/TC transmitter, 4...20mA PP3: with other transmitter (on request) accuracy dass: dass 1 sensing element: dass 2 Κ Ν ceramic thermowell material: R C530 other, please specify C610 C799 diameter of platinum wire (for S, R, B): other, please specify 0,35:0,35 mm 0,5:0,5 mm ceramic thermowell length (L): 500: 500 mm connection head: 1000: 1000 mm NA other, please specify [mm] other, please specify ceramic thermowell diameter (Ød): 10: 10 mm handle sheath diameter (ØD): 15:15 mm 22: 22 mm 24:24 mm 32: 32 mm other, please specify handle sheath length (Ld): 150: 150 mm (standard) other, please specify [mm]

Ordering example:

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

Single TC intrinsically safe temperature sensor, K thermocouple, 2 tolerance dass, B head type, ceramic protection tube made of C799, $15\,\mathrm{mm}$ diameter, $500\,\mathrm{mm}$ length, handle sheath diameter $22\,\mathrm{mm}$ and length $150\,\mathrm{mm}$, max. operating temperature $1100^\circ\mathrm{C}$.

