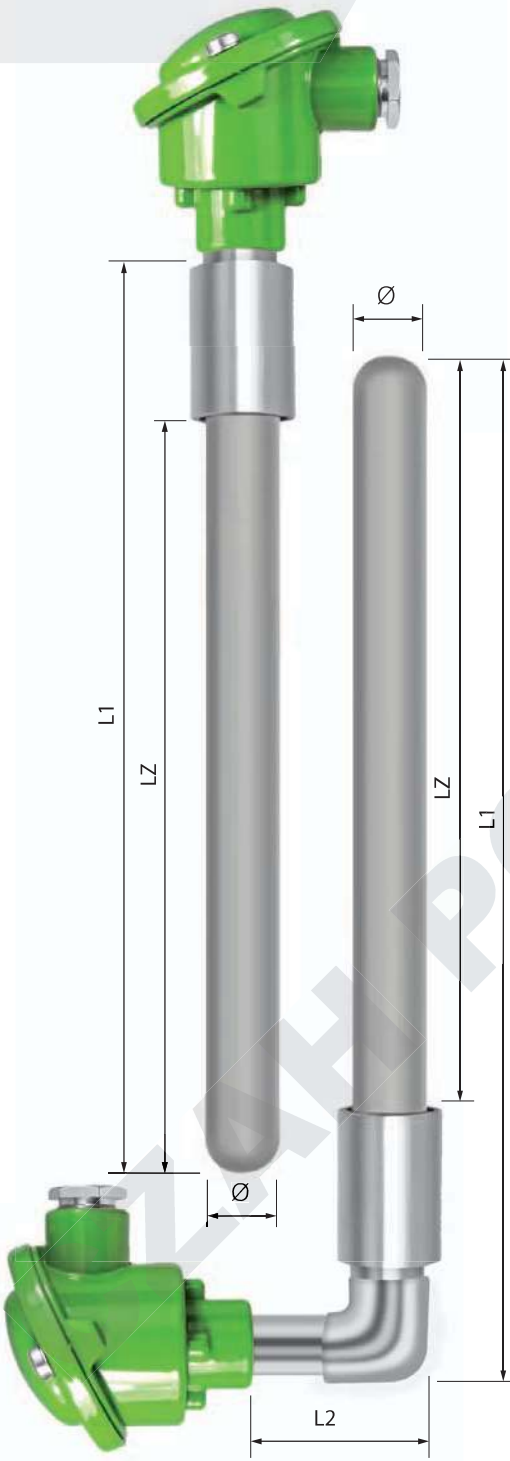


21

# THERMOCOUPLES WITH SPECIAL PROTECTION TUBES

Sensors intended for temperature measurements in the molten metal alloys, eg. aluminium alloy. Tubes are available in a range of materials, eg. SIALON or SiC. SIALON tubes are characterized with the unique combination of physical properties, such as high strength, toughness and excellent thermal shock resistance and resistance to corrosion. Depending on the environment, SIALON can be used be at temperatures up to 1400°C. Standard thermocouples are type K (NiCr-NiAl), simplex or duplex.



21	sensor type	accuracy class	tube material	length LZ	tube diameter	length L <sub>r</sub> or L <sub>r</sub> /L <sub>2</sub>	head type	temp. transmitter
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Give sensor type and its number table 1, eg. 1K – simplex 2K – duplex

Give accuracy class 1 or 2, table I, page 63

Give tube type

Give length LZ

Give tube diameter, table 2

Give length L1 for straight sensor or length L1/L2 for angle sensor

Give head type, table 3

Give type and range of a transmitter (if requested), table 4

## TAB. ORDERING CODE – STRAIGHT THERMOCOUPLE

21	1K	1	SYL	765	28	1500	NA	SEM206TC, 4 ... 20mA, 0 ... 1200 °C
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### 21 – 1K – 1 – SYL – 765 – 28 – 1500 – NA – SEM206TC, 4 .. 20mA, 0 ... 1200°C

Temp. sensor model 21 (thermocouple), type K, simplex, accuracy class 1, with SIALON protection tube, immersion length LZ=765 mm, outer tube diameter: 28 mm, total length: 1500 mm, sensor fitted with a NA head with transmitter type SEM206TC 4 ... 20mA rated from 0 to 1200 °C.

## TAB. ORDERING CODE – ANGLE THERMOCOUPLE

21	2K	1	SYL	765	28	950/500	NA	-
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### 21 – 2K – 1 – SYL – 765 – 28 – 950/500 – NA

Temp. sensor model 21 (thermocouple), type K, duplex, accuracy class 1, with SIALON protection tube, immersion length LZ=765 mm, outer tube diameter: 28 mm, total length: 1500 mm, sensor fitted with a NA head.

**TAB. 1 PROTECTION TUBE TYPE**




TYPE	MATERIAL
SYL	Sialon
SIC	SiC

**TAB. 2 TUBE DIAMETER AND LENGTH \*)**

DIAMETER	LENGTH LZ (FOR GIVEN DIAMETER)	AVAILABLE MATERIAL (FOR GIVEN DIAMETER)
Ø22 mm	520 mm	SIALON
Ø22 mm	565 mm	SIALON
Ø22 mm	635 mm	SIALON
Ø22 mm	765 mm	SIALON
Ø22 mm	785 mm	SIALON
Ø22 mm	865 mm	SIALON
Ø22 mm	915 mm	SIALON
Ø22 mm	1025 mm	SIALON
Ø22 mm	1185 mm	SIALON
Ø28 mm	315 mm	SIALON
Ø28 mm	565 mm	SIALON
Ø28 mm	665 mm	SIALON
Ø28 mm	730 mm	SIALON
Ø28 mm	815 mm	SIALON
Ø28 mm	865 mm	SIALON
Ø28 mm	915 mm	SIALON
Ø28 mm	1065 mm	SIALON
Ø25 mm	500 mm	SiC
Ø50 mm	600 mm	SiC
Ø50 mm	700 mm	SiC
Ø57 mm	910 mm	SiC
Ø57 mm	950 mm	SiC

\*) non-standard diameters and lengths on request

**TAB. 3 TERMINAL HEAD TYPE**

TERMINAL HEAD *)			
TYPE	B	NA	DA
			

\*) different terminal heads available on request, for technical data see table A, page 50

**TAB. 4 TEMPERATURE TRANSMITTER**

If the in-head signal transmitter is requested e.g. signal 4...20 mA, please give all the necessary details, such as: type, temperature range. List of transmitters is available in the table E, page 60.