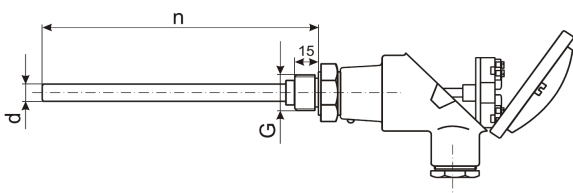
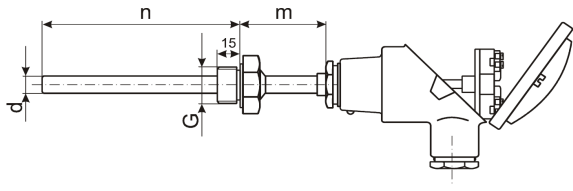
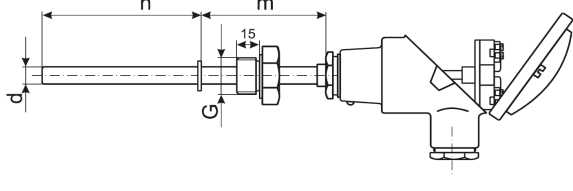
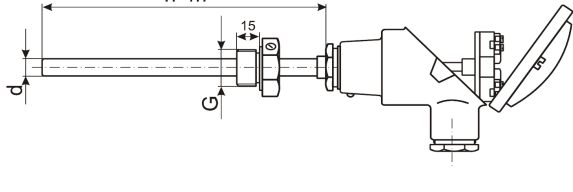
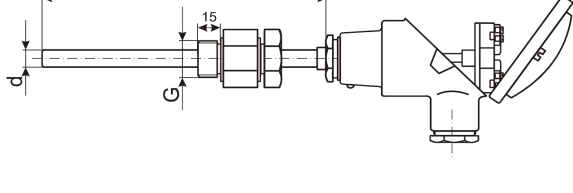


Termocuplu tip TSCS

T/C PROBE WITH PROTECTION HEAD AND INSERT (FOR IN-HEAD TRANSMITTER)** Sheath - stainless steel (see Appendix - Sheath materials) Head - aluminum, stainless steel, or plastic (see Appendix - Protection heads)	CSx (TSCSx)	SENSITIVE ELEMENT	TEMPERATURE RANGE	DIMENSIONS																																																								
	OCSx (TSOCSx)			d [mm]	d-insert [mm]	wires																																																						
Normal Thermocouple Insert Design																																																												
<p>DESIGN WITHOUT EXTENSION (CS)</p>  <p>EXTENDED DESIGN WITH WELDED CONNECTION (CS1)</p>  <p>EXTENDED DESIGN WITH MOVABLE CONNECTION (CS2)</p>  <p>DESIGN WITH ADJUSTABLE CONNECTION (CS3)</p>  <p>DESIGN WITH GLAND-TYPE CONNECTION (CS4)</p> 	1 x J; 1 x L 2 x J; 2 x L	T4	0...800 °C	10,12,14,16,20 12,14,16,20	6,8,10 8,10	2 2x2																																																						
	1 x K 2 x K	T3 T6*	0...850 °C 0...1150 °C	10,12,14,16,20 12,14,16,20	6,8,10 8,10	2 2x2																																																						
	1 x E 2 x E	T3 T13	0...850 °C 0...1000 °C	10,12,14,16,20 12,14,16,20	6,8,10 8,10	2 2x2																																																						
	1 x S 1 x R 2 x S 2 x R	T16 T6* T16 T6*	0...1100 °C 0...1150 °C 0...1100 °C 0...1150 °C	10,12,14,16,20 12,14,16,20	6,8,10 8,10	2 2x2																																																						
	MI Thermocouple Insert Design																																																											
	1 x J 2 x J	T4	0...800 °C	6,8,10,12,14,16,20	3, 4.5, 6, 8	2 2x2																																																						
	1 x K 1 x N, 1 x E 2 x K 2 x N, 2 x E	T3 T16 T6* T6*	0...850 °C 0...1100 °C 0...1150 °C 0...1250 °C	8,10,12,14,16,20	4.5, 6, 8	2 2x2																																																						
	<p>Protection head: B, MA, MB, G, N, Dx, Ex, EX (see Appendix - Protection heads)</p> <p>Process connection 'G' (nipple or union nut): - M16x1.5(Q0), M18x1.5(Q1), M20x1.5(Q2), M27x2(Q5), M33x2(Q25) - 3/8"(Q3/Q9), 1/2"(Q4/Q10), 3/4"(Q6/Q11), 1"(Q12/Q15) - welded or adjustable flange - no mounting appliances</p> <p>Thermal isolation between nipple and metal head: (for TS(O)CS only)</p> <table border="1"> <thead> <tr> <th>Protection head</th> <th>Length 'n'</th> <th>Maximum temperature</th> <th>Insulation material</th> </tr> </thead> <tbody> <tr> <td>MA, MB</td> <td>up to 50 mm</td> <td rowspan="2">200 °C</td> <td rowspan="2">POM</td> </tr> <tr> <td>B</td> <td>up to 100 mm</td> </tr> <tr> <td>other</td> <td>up to 150 mm</td> <td>400 °C</td> <td>Teflon®</td> </tr> </tbody> </table> <p>Process length: n = 50...3000 mm</p> <p>Extension length: m = 0...1500 mm</p> <p>Extension diameter: (for TS(O)CS1 and TS(O)CS2 only, [mm])</p> <table border="1"> <thead> <tr> <th rowspan="2">Ext. length 'm'</th> <th colspan="4">Probe diameter 'd'</th> </tr> <tr> <th>6 mm</th> <th>8 mm</th> <th>10 mm</th> <th>10+ mm</th> </tr> </thead> <tbody> <tr> <td>up to 50 mm</td> <td>d</td> <td>d</td> <td>d</td> <td>d</td> </tr> <tr> <td>50...150 mm</td> <td>8</td> <td>d</td> <td>d</td> <td>d</td> </tr> <tr> <td>150...500 mm</td> <td>10</td> <td>10</td> <td>d</td> <td>d</td> </tr> <tr> <td>500+ mm</td> <td>14</td> <td>14</td> <td>14</td> <td>d</td> </tr> </tbody> </table> <p>Tip shape (hot junction design): standard (isolated), grounded, open-tube, exposed (see Appendix - Tip shapes)</p> <p>Process pressure:</p> <table border="1"> <thead> <tr> <th>Probe design</th> <th>CS, CS1</th> <th>CS2</th> <th>CS4</th> <th>CS3</th> </tr> </thead> <tbody> <tr> <td>Max. pressure *</td> <td>25 bar</td> <td>16 bar</td> <td>6 bar</td> <td>0 bar</td> </tr> </tbody> </table> <p>Sheath material: 1.4404(M9), 1.4541(M2), 1.4571(M3), 1.4762(M4), 1.4841(M5), 1.4845(M6), 1.4876(M7), 2.4816(M8), 1.4362 (M15)</p> <p>MI sheath material: 1.4404(M9), 1.4541(M2), 1.4571(M3), 1.4762(M4), 1.4841(M5), 1.4876(M7), 2.4816(M8)</p> <p>Accuracy class: '1' or '2' (see Appendix - T/C Tolerance)</p>							Protection head	Length 'n'	Maximum temperature	Insulation material	MA, MB	up to 50 mm	200 °C	POM	B	up to 100 mm	other	up to 150 mm	400 °C	Teflon®	Ext. length 'm'	Probe diameter 'd'				6 mm	8 mm	10 mm	10+ mm	up to 50 mm	d	d	d	d	50...150 mm	8	d	d	d	150...500 mm	10	10	d	d	500+ mm	14	14	14	d	Probe design	CS, CS1	CS2	CS4	CS3	Max. pressure *	25 bar	16 bar	6 bar	0 bar
	Protection head	Length 'n'	Maximum temperature	Insulation material																																																								
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other	up to 150 mm	400 °C	Teflon®																																																									
Ext. length 'm'	Probe diameter 'd'																																																											
	6 mm	8 mm	10 mm	10+ mm																																																								
up to 50 mm	d	d	d	d																																																								
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Max. pressure *	25 bar	16 bar	6 bar	0 bar																																																								
* Please contact																																																												
** Order transmitter separately!!!																																																												

Ordering code TS*(1,2,3,4) - G0.G1G2.G3.G4.G6.G7.G9'9".G10.G11.G14 - #1.#2

Code	Feature or option	Code values
*	Base model variant	CS - standard (w/ terminal block), OCS - prepared for in-head transmitter (w/o terminal block)
G0	Protection head	B - type "B", MA - type "MA", MB - type "MB", G - IP65, type "G", N - type "N", D - type "D", DW - windowed, type "DW", DH - w/ high cap. type "DH", DHW - windowed, type "DHW", E - IP65, type "E", ES - stainless-steel, type "ES", EG - IP68 ATEX-approved, type "EG", EGS - IP66 ATEX-approved, type "EGS", EGW - windowed ATEX-approved, type "EGW", EX - explosion-proof instrument housing (specify!)
G1	Number of thermocouples	1 or 2
G2	Thermocouple	J - type "J", K - type "K", N - type "N", E - type "E", L - type "L", S - type "S", R - type "R"
G3	Temperature range	T3 - 0...850 °C, T4 - 0...800 °C, T6 - 0...1200 °C ⁽⁷⁾ , T13 - 0...1000 °C, T16 - 0...1100 °C
G4	Diameter 'd' [mm]	T/C w/ normal insert 10/6, 10/8, 12/6, 12/8, 14/6, 14/8, 14/10, 16/10, 20/10
		T/C w/ MI insert 6/3, 8/4, 10/6, 12/6, 14/6, 16/6, 20/6, 20/8
G6	Probe length 'n' [mm] ⁽¹⁾	50...3000
G7	Probe length 'm' [mm] ⁽²⁾	0...1500
G9'	Mounting connection	X - no mounting appliances, Q0 - M16x1.5, Q1 - M18x1.5, Q2 - M20x1.5, Q3 - G3/8", Q4 - G1/2", Q5 - M27x2, Q6 - G3/4", Q9 - 3/8" NPT, Q10 - 1/2" NPT, Q11 - 3/4" NPT, Q12 - G1", Q15 - 1" NPT, Q25 - M33x2, Uxx - union nut (xx - same as for Qxx), F - flange (specify!), Z - other connection (specify!)
G9"	Compression fitting ferrule ⁽³⁾	TF - Teflon®, BR - brass, SS - stainless steel
G10	Sheath material (both outer and insert)	T/C w/ normal insert M2 - 1.4541, M3 - 1.4571, M4 - 1.4762, M5 - 1.4841, M6 - 1.4845, M7 - 1.4876, M8 - 2.4816, M9 - 1.4404, M15 - 1.4362
		T/C w/ MI insert M2 - 1.4541, M3 - 1.4571, M4 - 1.4762, M5 - 1.4841, M6 - 1.4845, M8 - 2.4816, M9 - 1.4404
G11	Accuracy class	1 - '1' ⁽⁷⁾ , 2 - '2'
G14	Insert tip shape (hot junction)	X - standard (isolated from sheath), G - grounded, E - exposed hot junction, O - open-tube design
#1	Options	X - none, OV - vibration proof (secured screws) ⁽⁴⁾ , OS - spring-loaded insert, OT - thermal isolation ⁽⁵⁾ , OP - electrochemically polished sheath surface
#2	Local indicator	X - none, A - local indicator mounted ⁽⁶⁾

⁽¹⁾ 'n+m' for TS(O)CS3 and TS(O)CS4!

⁽²⁾ Only for TS(O)CS1 and TS(O)CS2!

⁽³⁾ Only for TS(O)CS4!

⁽⁴⁾ Requires 'OS' option!

⁽⁵⁾ Only for TS(O)CS!

⁽⁶⁾ With windowed head only! See indicator datasheets and order separately!

⁽⁷⁾ Contact

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