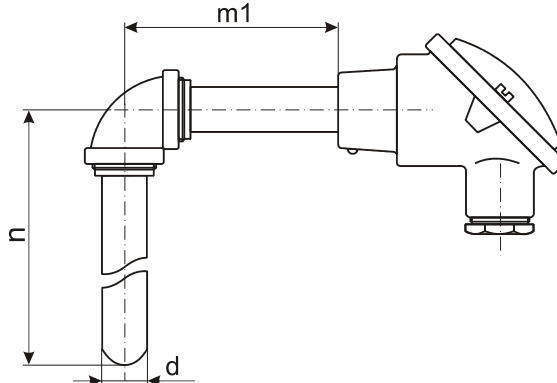
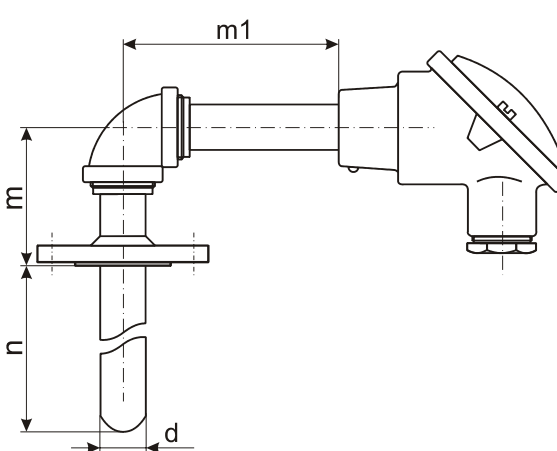
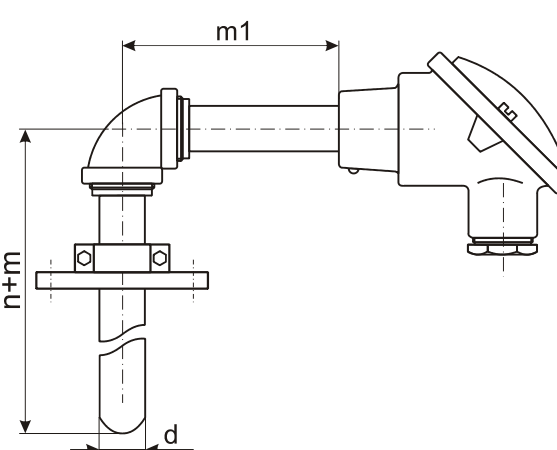


<b>ANGLED RTD PROBE WITH PROTECTION HEAD</b> (FOR IN-HEAD TRANSMITTER)** Sheath - stainless steel (see Appendix - Sheath materials) Head - aluminum, stainless steel, or plastic (see Appendix - Protection heads)	Lx (TSLx)	SENSITIVE ELEMENT	TEMPERATURE RANGE	DIMENSIONS						
	OLx (TSOLx)			d [mm]	wires					
<b>DESIGN WITHOUT FLANGE (L)</b> 		1 x Pt (RB,RD,RF,RG)	T9 -50...200 °C T1 -50...400 °C T11* -50...600 °C	10, 12, 14, 16, 20, 22	2, 3, 4*					
		2(3) x Pt (RB,RD,RF,RG)	T2* -200...600 °C T4* -0...800 °C							
		1 x Cu (RH, RK)	T9 -50...200 °C	10, 12, 14, 16, 20, 22	2, 3, 4*					
<b>DESIGN WITH WELDED FLANGE (L1)</b> 		2 x Cu (RH, RK)	T9 -50...200 °C	12, 14, 16, 20, 22	2x2(3)*					
		<b>Protection head:</b> B, MA, MB, G, N, Dx, Ex, EX (see Appendix - Protection heads)								
		<b>Process connection:</b> - welded flange - adjustable flange - no mounting appliances								
<b>Insertion length:</b> n = 200...1500 mm										
<b>Extension length:</b> m = 100...1000 mm										
<b>Holding tube:</b> - m1 = 100...1000 mm - OD 20(22) mm - tube/elbow material 1.4301 or 1.4541										
<b>Tip shape:</b> standard, narrowed, pitted (see Appendix - Tip shapes)										
<b>Process pressure:</b> <table border="1" style="width: 100%;"> <tr> <td>Probe design</td> <td>L, L1</td> <td>L3</td> </tr> <tr> <td>Max. pressure *</td> <td>25 bar</td> <td>0 bar</td> </tr> </table>					Probe design	L, L1	L3	Max. pressure *	25 bar	0 bar
Probe design	L, L1	L3								
Max. pressure *	25 bar	0 bar								
<b>Sheath material:</b> 1.4301(M1), 1.4404(M9), 1.4541(M2), 1.4571(M3), 1.4362 (M15)										
<b>Wire material:</b> Cu, Ni, or Ag										
<b>Accuracy class:</b> 'A', 'B', or '2xB' (see Appendix - RTD Tolerance)										
<b>DESIGN WITH ADJUSTABLE FLANGE (L3)</b> 		* Please contact COMECO!								
		** Order transmitter separately!!!								

## Ordering code TS\*(1,3) - G0.G1G2.G3.G4.G6.G7'.G7".G9.G10.G11.G12.G13.G14 - #1.#2

Code	Feature or option	Code values
*	Base model variant	<b>L</b> - standard (w/ terminal block), <b>OL</b> - prepared for in-head transmitter (w/o terminal block)
G0	Protection head	<b>B</b> - type "B", <b>MA</b> - type "MA", <b>MB</b> - type "MB", <b>G</b> - IP65, type "G", <b>N</b> - type "N", <b>D</b> - type "D", <b>DW</b> - windowed, type "DW", <b>DH</b> - w/ high cap, type "DH", <b>DHW</b> - windowed, type "DHW", <b>E</b> - IP65, type "E", <b>ES</b> - stainless-steel, type "ES", <b>EG</b> - IP68 ATEX-approved, type "EG", <b>EGS</b> - IP66 ATEX-approved, type "EGS", <b>EGW</b> - windowed ATEX-approved, type "EGW", <b>EX</b> - explosion-proof instrument housing (specify!)
G1	Number of RTD sensors	<b>1, 2, or 3</b> <sup>(6)</sup>
G2	Sensor	<b>RB</b> - Pt50, <b>RD</b> - Pt100, <b>RF</b> - Pt500, <b>RG</b> - Pt1000, <b>RH</b> - Cu50, <b>RK</b> - Cu100
G3	Temperature range	<b>T1</b> - -50...400 °C, <b>T2</b> - -200...600 °C (Ni or Ag wires only!), <b>T4</b> - 0...800 °C (Ag wires only!), <b>T9</b> - -50...200 °C, <b>T11</b> - -50...600 °C (Ni or Ag wires only!)
G4	Diameter 'd' [mm]	<b>10, 12, 14, 16, 20, 22</b>
G6	Probe length 'n' [mm] <sup>(1)</sup>	<b>200...1500</b>
G7'	Probe length 'm' [mm] <sup>(2)</sup>	<b>100...1000</b>
G7"	Probe length 'm1' [mm]	<b>100...1000</b>
G9	Mounting connection	<b>X</b> - no mounting appliances, <b>F</b> - flange (specify!), <b>Z</b> - other connection (specify!)
G10	Sheath material	<b>M1</b> - 1.4301, <b>M2</b> - 1.4541, <b>M3</b> - 1.4571, <b>M9</b> - 1.4404, <b>M15</b> - 1.4362
G11	Accuracy class <sup>(3)</sup>	<b>A</b> - 'A', <b>B</b> - 'B', <b>C</b> - '2xB'
G12	Number of wires	<b>2, 3, 4</b> <sup>(6)</sup>
G13	Wire material <sup>(3)</sup>	<b>CU</b> - copper, <b>NI</b> - nickel, <b>AG</b> - silver
G14	Tip shape	<b>X</b> - standard closed, <b>N</b> - narrowed, <b>P</b> - pitted <sup>(4)</sup>
#1	Options	<b>X</b> - none, <b>OV</b> - vibration proof (MgO or Silicone filled, secured screws), <b>OP</b> - electrochemically polished sheath surface
#2	Local indicator	<b>X</b> - none, <b>A</b> - local indicator mounted <sup>(5)</sup>

<sup>(1)</sup> 'n+m' for TS(O)L3!

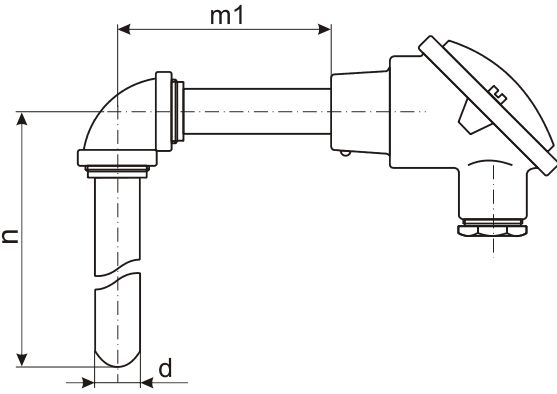
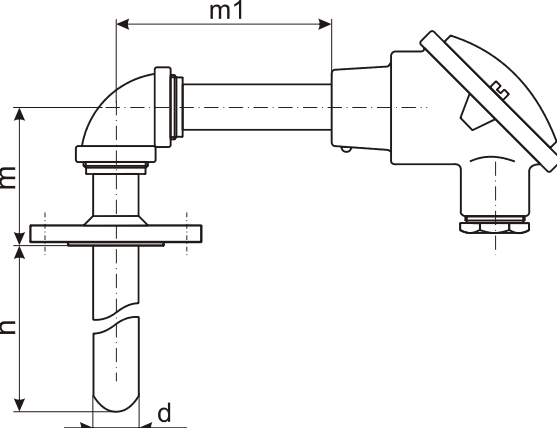
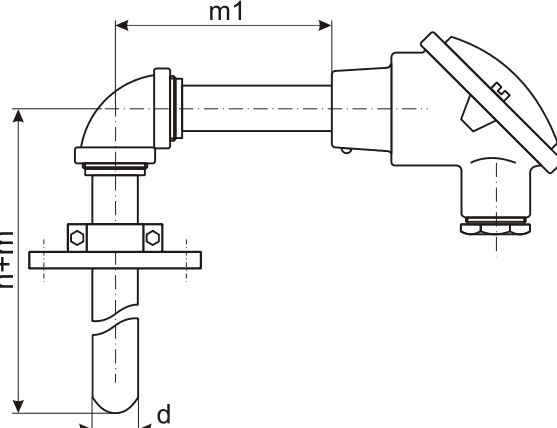
<sup>(2)</sup> Only for TS(O)L1!

<sup>(3)</sup> Only for Pt sensors!

<sup>(4)</sup> Only for non-explosion-proof RTDs!

<sup>(5)</sup> With windowed head only! See indicator datasheets and order separately!

<sup>(6)</sup> Contact COMECO!

<b>ANGLED T/C PROBE WITH PROTECTION HEAD</b>  <b>(FOR IN-HEAD TRANSMITTER)**</b> Sheath - stainless steel (see Appendix - Sheath materials) Head - aluminum, stainless steel, or plastic (see Appendix - Protection heads)	Lx (TSLx)	SENSITIVE ELEMENT	TEMPERATURE RANGE	DIMENSIONS							
	OLx (TSOLx)			d [mm]	wires						
<b>DESIGN WITHOUT FLANGE (L)</b>  	<b>Regular Thermocouple Design</b>										
	1 x J; 1 x L 2 x J; 2 x L	T4	0...800 °C	10, 12, 14, 16, 20, 22	2 2x2						
	1 x K 2 x K	T3 T16 T6*	0...850 °C 0...1100 °C 0...1150 °C	10, 12, 14, 16, 20, 22	2 2x2						
<b>DESIGN WITH WELDED FLANGE (L1)</b>  	<b>MI Thermocouple Design</b>										
	1 x J 1 x K 1 x N; 1 x E	T4 T3 T16	0...800 °C 0...850 °C 0...1100 °C	10	2 2						
	2 x K	T3 T16	0...850 °C 0...1100 °C	10	2x2						
<b>DESIGN WITH ADJUSTABLE FLANGE (L3)</b>  	<p><b>Protection head:</b> B, MA, MB, G, N, Dx, Ex, EX (see Appendix - Protection heads)</p> <p><b>Process connection:</b> - welded flange - adjustable flange - no mounting appliances</p> <p><b>Insertion length:</b> n = 200...1500 mm</p> <p><b>Extension length:</b> m = 100...1000 mm</p> <p><b>Holding tube:</b> - m1 = 100...1000 mm - OD 20(22) mm - material 1.4301 or 1.4541</p> <p><b>Tip shape (hot junction design):</b> standard (isolated), grounded, open-tube, exposed (see Appendix - Tip shapes)</p> <p><b>Process pressure:</b></p> <table border="1" style="width: 100%;"> <tr> <td>Probe design</td> <td>L, L1</td> <td>L3</td> </tr> <tr> <td>Max. pressure *</td> <td>25 bar</td> <td>0 bar</td> </tr> </table> <p><b>Sheath material:</b> 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><b>MI sheath material:</b> 1.4541(M2), 1.4571(M3), 1.4876(M7), 2.4816(M8)</p> <p><b>Accuracy class:</b> '1' or '2' (see Appendix - T/C Tolerance)</p>					Probe design	L, L1	L3	Max. pressure *	25 bar	0 bar
	Probe design	L, L1	L3								
	Max. pressure *	25 bar	0 bar								
<p>* Please contact COMECO! ** Order transmitter separately!!!</p>											

COMECO reserves the right of changing specifications without prior notice!

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

Code	Feature or option	Code values	
<b>*</b>	Base model variant	<b>L</b> - standard (w/ terminal block), <b>OL</b> - prepared for in-head transmitter (w/o terminal block)	
<b>G0</b>	Protection head	<b>B</b> - type "B", <b>MA</b> - type "MA", <b>MB</b> - type "MB", <b>G</b> - IP65, type "G", <b>N</b> - type "N", <b>D</b> - type "D", <b>DW</b> - windowed, type "DW", <b>DH</b> - w/ high cap, type "DH", <b>DHW</b> - windowed, type "DHW", <b>E</b> - IP65, type "E", <b>ES</b> - stainless-steel, type "ES", <b>EG</b> - IP68 ATEX-approved, type "EG", <b>EGS</b> - IP66 ATEX-approved, type "EGS", <b>EGW</b> - windowed ATEX-approved, type "EGW", <b>EX</b> - explosion-proof instrument housing (specify!)	
<b>G1</b>	Number of thermocouples	<b>1</b> or <b>2</b>	
<b>G2</b>	Thermocouple	<b>J</b> - type "J", <b>K</b> - type "K", <b>N</b> - type "N", <b>E</b> - type "E", <b>L</b> - type "L", <b>S</b> - type "S", <b>R</b> - type "R"	
<b>G3</b>	Temperature range	<b>T3</b> - 0...850 °C, <b>T4</b> - 0...800 °C, <b>T6</b> - 0...1200 °C <sup>(5)</sup> , <b>T13</b> - 0...1000 °C, <b>T16</b> - 0...1100 °C	
<b>G4</b>	Diameter 'd' [mm]	regular T/C	<b>10, 12, 14, 16, 20, 22</b>
		MI T/C	<b>10</b>
<b>G6</b>	Probe length 'n' [mm] <sup>(1)</sup>	<b>200...1500</b>	
<b>G7'</b>	Probe length 'm' [mm] <sup>(2)</sup>	<b>100...1000</b>	
<b>G7"</b>	Probe length 'm1' [mm]	<b>100...1000</b>	
<b>G9</b>	Mounting connection	<b>X</b> - no mounting appliances, <b>F</b> - flange (specify!), <b>Z</b> - other connection (specify!)	
<b>G10</b>	Sheath material	regular T/C	<b>M2</b> - 1.4541, <b>M3</b> - 1.4571, <b>M4</b> - 1.4762, <b>M5</b> - 1.4841, <b>M6</b> - 1.4845, <b>M7</b> - 1.4876, <b>M8</b> - 2.4816, <b>M9</b> - 1.4404, <b>M15</b> - 1.4362
		MI T/C	<b>M2</b> - 1.4541, <b>M3</b> - 1.4571, <b>M7</b> - 1.4876 (Incolloy 800), <b>M8</b> - 2.4816 (Inconel 600)
<b>G11</b>	Accuracy class	<b>1</b> - '1' <sup>(5)</sup> , <b>2</b> - '2'	
<b>G14</b>	Tip shape (hot junction)	<b>X</b> - standard (isolated from sheath), <b>G</b> - grounded, <b>E</b> - exposed hot junction <sup>(3)</sup> , <b>O</b> - open-tube design <sup>(3)</sup>	
<b>#1</b>	Options	<b>X</b> - none, <b>OV</b> - vibration proof (spring-type terminals <sup>(5)</sup> , secured screws), <b>OP</b> - electrochemically polished sheath surface	
<b>#2</b>	Local indicator	<b>X</b> - none, <b>A</b> - local indicator mounted <sup>(4)</sup>	

<sup>(1)</sup> 'n+m' for TS(O)L3!

<sup>(2)</sup> Only for TS(O)L1!

<sup>(3)</sup> Only for non-explosion-proof thermocouples!

<sup>(4)</sup> With windowed head only! See indicator datasheets and order separately!

<sup>(5)</sup> Contact COMECO!