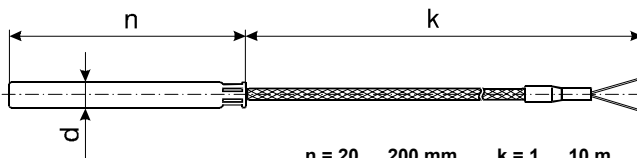
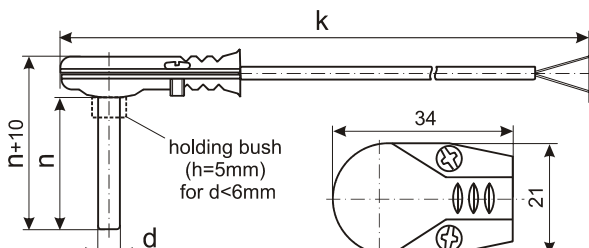
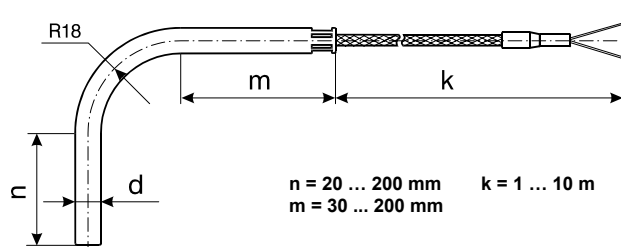


(MI**) RTD CABLE PROBE FOR FREE MOUNTING Sheath - stainless steel (see table notes) Cable - see table notes	TSAx	SENSITIVE ELEMENT	CABLE TYPE	TEMPERATURE RANGE	DIMENSIONS														
					d [mm]	wires													
<p>STRAIGHT-TUBE DESIGN (TSA)</p>  <p>n = 20 ... 200 mm k = 1 ... 10 m</p> <p>DESIGN WITH ANGLED TERMINATION (TSAL)</p>  <p>n = 20 ... 200 mm k = 1 ... 10 m</p> <p>BENDED-TUBE DESIGN (TSAB)</p>  <p>n = 20 ... 200 mm k = 1 ... 10 m m = 30 ... 200 mm</p>	<p>1 x Pt (RB,RD,RF,RG)</p> <p>GLGL</p> <p>T9 -50...200 °C T1* -50...400 °C</p> <p>T7 0...200 °C T8 0...400 °C</p> <p>2 x Pt (RB,RD,RF,RG)</p> <p>TT</p> <p>T22 -200...200 °C</p>	<p>3*</p> <p>4, 4.5**</p> <p>5</p> <p>6</p> <p>8</p> <p>6, 8</p> <p>5*</p> <p>6</p> <p>8</p> <p>6, 8</p> <p>6</p> <p>8</p>	<p>2, 3*</p> <p>2, 3*</p> <p>2, 3*</p> <p>2, 3, 4*</p> <p>2, 3, 4</p> <p>2x2, 2x3*</p> <p>2, 3*</p> <p>2, 3, 4*</p> <p>2, 3, 4</p> <p>2x2, 2x3*</p> <p>2, 3</p> <p>2x2</p>	<p>1 x Cu (RH, RK)</p> <p>SLSL, TSL, YY, UU, YU</p> <p>T9 -50...200 °C</p> <p>2 x Cu (RH, RK)</p> <p>GLGL, TT</p> <p>T7 0...200 °C</p> <p>1 x PTC (RP, RQ)</p> <p>SLSL, TSL, YY, UU, YU</p> <p>T12 -50...100 °C</p> <p>2 x PTC (RP, RQ)</p> <p>GLGL, TT</p> <p>T19 0...100 °C</p>	<p>Sheath material: 1.4301 (M1), 1.4541 (M2), 1.4571 (M3), 1.4404 (M9)</p> <p>Cable type: - GLGLP(V) (glass fiber w/ steel braid, max. 400 °C ambient temperature) - SLSL or TSL (silicone, max. 250 °C ambient temperature) - TT (Teflon®, max. 250 °C ambient temperature) - YY (PVC, max. 100 °C ambient temperature) - UU or YU (PUR, max. 80 °C ambient temperature)</p> <p>Applicable cables:</p> <table border="1"> <thead> <tr> <th>Probe design / Temp. range</th> <th>TSA, TSAB</th> <th>TSAL</th> </tr> </thead> <tbody> <tr> <td>T12, T19</td> <td>all</td> <td rowspan="2">all</td> </tr> <tr> <td>T7, T9</td> <td>no PUR, no PVC</td> </tr> <tr> <td>T22</td> <td>TT</td> <td>TT, SLSL, TSL</td> </tr> <tr> <td>T1, T8</td> <td>GLGLP</td> <td>no PUR, no PVC</td> </tr> </tbody> </table> <p>Tip shape: standard, narrowed, pitted (see Appendix - Tip Shapes)</p> <p>Accuracy class: 'A', 'B', or '2xB' (see Appendix - RTD Tolerance)</p> <p>Cable connector: 4-pin (C3) (see Appendix - Connectors)</p>	Probe design / Temp. range	TSA, TSAB	TSAL	T12, T19	all	all	T7, T9	no PUR, no PVC	T22	TT	TT, SLSL, TSL	T1, T8	GLGLP	no PUR, no PVC
	Probe design / Temp. range	TSA, TSAB	TSAL																
	T12, T19	all	all																
	T7, T9	no PUR, no PVC																	
	T22	TT	TT, SLSL, TSL																
	T1, T8	GLGLP	no PUR, no PVC																
	<p>* Please contact COMECO!</p> <p>** Available only for TSAL!</p>																		

Ordering code TSA(L,B) - (MI -⁽¹⁾) G1G2.G3.G4.G6.G7.G8.G10.G11.G12.G14.G15 - #1

Code	Feature or option	Code values	
G1	Number of RTD sensors	1 or 2	
G2	Sensor	RB - Pt50, RD - Pt100, RF - Pt500, RG - Pt1000, RH - Cu50, RK - Cu100, RP - PTC 1k, RQ - PTC 2k	
G3	Temperature range	T1 - -50...400 °C, T7 - 0...200 °C, T8 - 0...400 °C, T9 - -50...200 °C, T12 - 50...100 °C, T19 - 0...100 °C, T22 - -200...200 °C	
G4	Diameter 'd' [mm]	regular design	4, 5, 6, 8
		MI design	3 ⁽⁵⁾ , 4.5, 6, 8
G6	Probe length 'n' [mm]	20...200	
G7	Probe length 'm' [mm] ⁽²⁾	30...200	
G8	Cable length 'k' [m] and type	1GL...10GL - glass fiber, 1SL...10SL - silicone, 1TF...10TF - Teflon®, 1PU...10PU - polyurethane ⁽⁵⁾ , 1PV...10PV - PVC	
G10	Sheath material (wetted parts)	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4404	
G11	Accuracy class	X - none ⁽³⁾ , A - 'A', B - 'B', C - '2xB'	
G12	Number of wires	2, 3, 4 ⁽⁵⁾	
G14	Tip shape	X - standard closed, N - narrowed ⁽⁴⁾ , P - pitted ⁽⁴⁾	
G15	Connector	X - none, C3 - 4-pin male plug-in connector ø8 (for H5700 thermometer only)	
#1	Options	X - none, OV - vibration proof (MgO or Silicone filled) ⁽⁴⁾ , OS - cable protection SS spring (≈ 50 mm), OB - braid termination lead (only w/o connector), OP - electrochemically polished sheath surface ⁽⁴⁾	

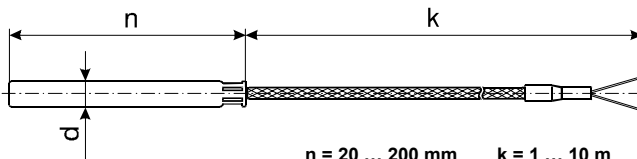
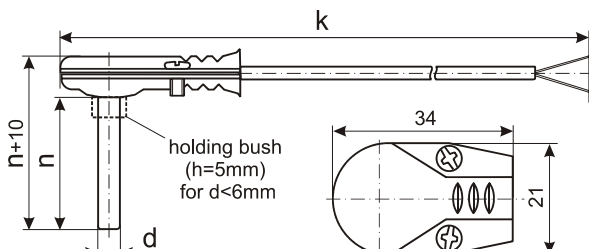
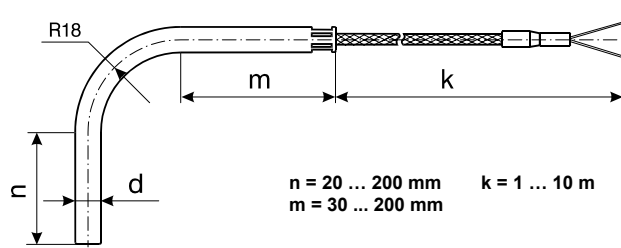
⁽¹⁾ Available only for TSAL!

⁽²⁾ Only for TSAB!

⁽³⁾ For non-Pt sensors

⁽⁴⁾ Only for non-MI (regular) design!

⁽⁵⁾ Contact COMECO!

(MI**) T/C CABLE PROBE FOR FREE MOUNTING Sheath - stainless steel (see table notes) Cable - see table notes	TSAx		DIMENSIONS																
	SENSITIVE ELEMENT	CABLE TYPE	TEMPERATURE RANGE	d [mm]	wires														
STRAIGHT-TUBE DESIGN (TSA)																			
 <p style="text-align: center;">$n = 20 \dots 200 \text{ mm}$ $k = 1 \dots 10 \text{ m}$</p>																			
DESIGN WITH ANGLED TERMINATION (TSAL)																			
 <p style="text-align: center;">$n = 20 \dots 200 \text{ mm}$ $k = 1 \dots 10 \text{ m}$</p>																			
BENDED-TUBE DESIGN (TSAB)																			
 <p style="text-align: center;">$n = 20 \dots 200 \text{ mm}$ $k = 1 \dots 10 \text{ m}$ $m = 30 \dots 200 \text{ mm}$</p>																			
Regular Design																			
1 x K	SLSL, TSL, YY, UU, YU GLGL, TT, SFSF	T9 -50...200 °C T1* -50...400 °C T17 -50...50 °C T7 0...200 °C T8 0...400 °C T4* 0...800 °C	4, 5, 6, 8	2															
1 x J, 1 x T	SLSL, TSL, YY, UU, YU GLGL, TT, SFSF	T9 -50...200 °C T1* -50...400 °C T7 0...200 °C T8 0...400 °C	4, 5, 6, 8	2															
MI Design **																			
1 x N, 1 x E	SLSL, TSL, YY, UU, YU GLGL, TT, SFSF	T9 -50...200 °C T1* -50...400 °C T7 0...200 °C T8 0...400 °C T4* 0...800 °C	3, 4.5, 6, 8	2															
1 x T	SLSL, TSL, YY, UU, YU GLGL, TT, SFSF	T9 -50...200 °C T1* -50...400 °C T7 0...200 °C T8 0...400 °C	3, 4.5, 6, 8	2															
<p>Sheath material: 1.4301 (M1), 1.4541 (M2), 1.4571 (M3), 1.4404 (M9), 1.4841 (M5), 2.4816 (M8)</p> <p>Cable type: - GLGLP(V) (glass fiber w/ steel braid, max. 400 °C ambient temperature) - SLSL or TSL (silicone, max. 250 °C ambient temperature) - TT (Teflon®, max. 250 °C ambient temperature) - YY (PVC, max. 100 °C ambient temperature) - UU or YU (PUR, max. 80 °C ambient temperature) - SFSF (mineral fiber, max. 1000 °C ambient temperature)</p> <p>Applicable cables:</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Probe design</th> <th>TSA, TSAB</th> <th>TSAL</th> </tr> </thead> <tbody> <tr> <td>Temp. range</td> <td></td> <td></td> </tr> <tr> <td>T7, T9, T17</td> <td>no PUR, no PVC</td> <td>all</td> </tr> <tr> <td>T1, T8</td> <td>GLGLP, SFSF</td> <td>no PUR, no PVC</td> </tr> <tr> <td>T4</td> <td>SFSF</td> <td>GLGLP, SLSL*, TSL*</td> </tr> </tbody> </table> <p>Tip shape (hot junction design): standard (isolated), grounded, open-tube, exposed (see Appendix - Tip Shapes)</p> <p>Accuracy class: '1' or '2' (see Appendix - T/C Tolerance)</p> <p>Cable connector: 4-pin (C3), 'T/C standard' (C5) or 'T/C miniature' (C6) (see Appendix - Connectors)</p>					Probe design	TSA, TSAB	TSAL	Temp. range			T7, T9, T17	no PUR, no PVC	all	T1, T8	GLGLP, SFSF	no PUR, no PVC	T4	SFSF	GLGLP, SLSL*, TSL*
Probe design	TSA, TSAB	TSAL																	
Temp. range																			
T7, T9, T17	no PUR, no PVC	all																	
T1, T8	GLGLP, SFSF	no PUR, no PVC																	
T4	SFSF	GLGLP, SLSL*, TSL*																	
<p>* Please contact COMECO!</p> <p>** Available only for TSAL!</p>																			

Ordering code TSA(L,B) - (MI -⁽¹⁾) G2.G3.G4.G6.G7.G8.G10.G11.G14.G15 - #1

Code	Feature or option	Code values
G2	Thermocouple	regular design J - type "J", K - type "K", T - type "T"
		MI design E - type "E", N - type "N", T - type "T"
G3	Temperature range	T1 - -50...400 °C, T4 - 0...800 °C ⁽⁴⁾ , T7 - 0...200 °C, T8 - 0...400 °C, T9 - -50...200 °C, T17 - -50...50 °C
G4	Diameter 'd' [mm]	regular design 4 ⁽⁴⁾ , 5 , 6 , 8
		MI design 3 , 4.5 , 6 , 8
G6	Probe length 'n' [mm]	20...200
G7	Probe length 'm' [mm] ⁽²⁾	30...200
G8	Cable length 'k' [m] and type	1GL...10GL - glass fiber, 1MF...10MF - mineral fiber, 1SL...10SL - silicone, 1TF...10TF - Teflon®, 1PU...10PU - polyurethane ⁽⁴⁾ , 1PV...10PV - PVC
G10	Sheath material (wetted parts)	regular design M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4404
		MI design M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M5 - 1.4841, M8 - 2.4816 (Inconel 600), M9 - 1.4404
G11	Accuracy class	1 - '1' ⁽⁴⁾ , 2 - '2'
G14	Tip shape (hot junction)	X - standard (isolated from sheath), G - grounded, E - exposed hot junction, O - open-tube design
G15	Connector	X - none, C3 - 4-pin male plug-in connector ø8 (for H5700 thermometer only), C5 - T/C connector, C6 - miniature T/C connector
#1	Options	X - none, OV - vibration proof (MgO or Silicone filled) ⁽³⁾ , OS - cable protection SS spring (≈ 50 mm), OB - braid termination lead (only w/o connector), OP - electrochemically polished sheath surface ⁽³⁾

⁽¹⁾ Available only for TSAL!

⁽²⁾ Only for TSAB!

⁽³⁾ Only for non-MI (regular) design!

⁽⁴⁾ Contact COMECO!