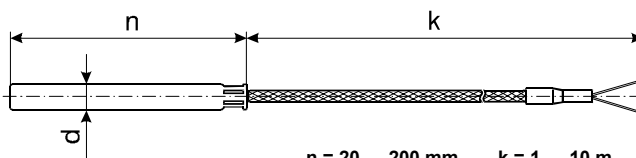
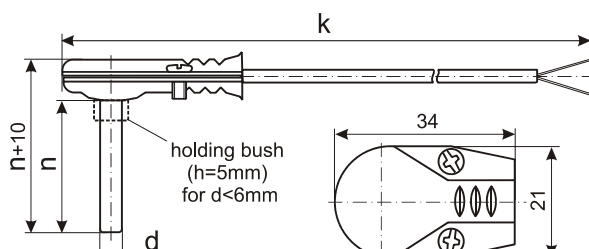
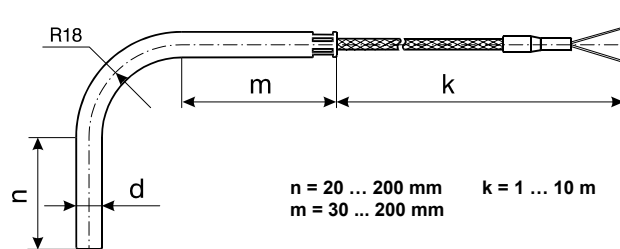


RTD CABLE PROBE FOR FREE MOUNTING		Ax (TSAx)		SENSITIVE ELEMENT	CABLE TYPE	TEMPERATURE RANGE	DIMENSIONS																		
Sheath - stainless steel (see table notes) Cable - see table notes							d [mm]	wires																	
STRAIGHT-TUBE DESIGN (A)  n = 20 ... 200 mm k = 1 ... 10 m DESIGN WITH ANGLED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

Ordering code TSA(L,B) - 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 RTD 4, 5, 6, 8
	MI RTD ⁽¹⁾	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⁾

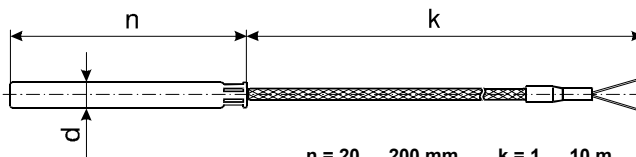
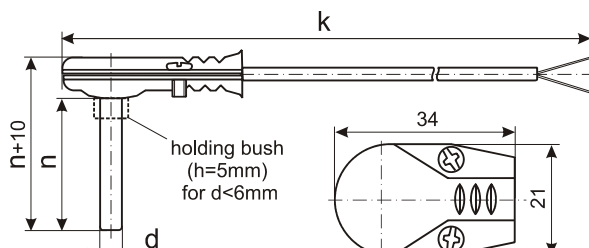
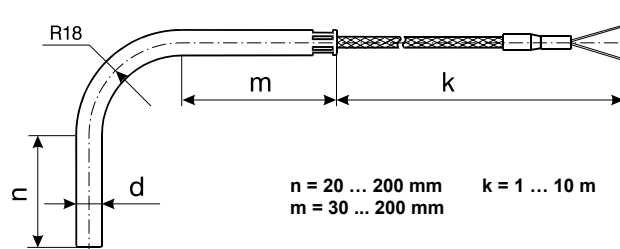
⁽¹⁾ Only for TSAL!

⁽²⁾ Only for TSAB!

⁽³⁾ For non-Pt sensors

⁽⁴⁾ Only for non-MI (regular) sheath types!

⁽⁵⁾ Contact COMECO!

T/C CABLE PROBE FOR FREE MOUNTING		Ax (TSAx)		SENSITIVE ELEMENT	CABLE TYPE	TEMPERATURE RANGE	DIMENSIONS																
Sheath - stainless steel (see table notes) Cable - see table notes							d [mm]	wires															
STRAIGHT-TUBE DESIGN (A)  n = 20 ... 200 mm k = 1 ... 10 m				1 x K, 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, 4.5, 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	3, 4, 4.5, 5, 6, 8	2															
DESIGN WITH ANGLED TERMINATION (AL)  n = 20 ... 200 mm k = 1 ... 10 m																							
BENDED-TUBE DESIGN (AB)  n = 20 ... 200 mm k = 1 ... 10 m m = 30 ... 200 mm																							
Sheath material: 1.4301 (M1), 1.4541 (M2), 1.4571 (M3), 1.4404 (M9), 1.4841 (M5), 2.4816 (M8) 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) Applicable cables: <table><tr><th>Probe design</th><th>A, AB</th><th>AL</th></tr><tr><th>Temp. range</th><td></td><td></td></tr><tr><td>T7, T9</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></table> Tip shape (hot junction design): standard (isolated), grounded, open-tube, exposed (see Appendix - Tip shapes) Accuracy class: '1' or '2' (see Appendix - T/C Tolerance) Cable connector: 4-pin (C3), 'T/C standard' (C5) or 'T/C miniature' (C6) (see Appendix - Connectors)									Probe design	A, AB	AL	Temp. range			T7, T9	no PUR, no PVC	all	T1, T8	GLGLP, SFSF	no PUR, no PVC	T4	SFSF	GLGLP, SLSL*, TSL*
Probe design	A, AB	AL																					
Temp. range																							
T7, T9	no PUR, no PVC	all																					
T1, T8	GLGLP, SFSF	no PUR, no PVC																					
T4	SFSF	GLGLP, SLSL*, TSL*																					
* Please contact COMECO!																							

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

Code	Feature or option	Code values
G2	Thermocouple	J - T/C type "J", K - T/C type "K", T - T/C type "T", N - MI T/C type "N" ⁽¹⁾ , E - MI T/C type "E" ⁽¹⁾ , T - MI T/C type "T" ⁽¹⁾
G3	Temperature range	T1 - -50...400 °C, T4 - 0...800 °C ⁽⁴⁾ , T7 - 0...200 °C, T8 - 0...400 °C, T9 - -50...200 °C
G4	Diameter 'd' [mm]	
	regular T/C	4 ⁽⁴⁾ , 5 , 6 , 8
	MI T/C ⁽¹⁾	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 T/C	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4404
	MI T/C ⁽¹⁾	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⁾ Only for TSAL!⁽²⁾ Only for TSAB!⁽³⁾ Only for non-MI (regular) sheath types!⁽⁴⁾ Contact COMECO!