

SCREW-IN CABLE PROBE Sheath - stainless steel (see table notes) Cable - see table notes	TSAGx	SENSITIVE ELEMENT	CABLE TYPE	TEMPERATURE RANGE	DIMENSIONS																																								
					d [mm]	wires																																							
STRAIGHT DESIGN WITH WELDED CONNECTION (TSAG)																																													
		1 x Pt (RB,RD,RF,RG)	SLSL, TSL, YY, UU, YU	T9 -50...200 °C T1* -50...400 °C	4, 5 6	2, 3* 2, 3, 4*																																							
		2 x Pt (RB,RD,RF,RG)	GLGL, TT	T7 0...200 °C T8 0...400 °C T22 -200...200 °C	8 6, 8	2, 3, 4 2x2, 2x3*																																							
		1 x Cu (RH, RK)	SLSL, TSL, YY, UU, YU	T9 -50...200 °C	5* 6 8	2, 3* 2, 3, 4 2, 3, 4																																							
		2 x Cu (RH, RK)	GLGL, TT	T7 0...200 °C	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																																							
STRAIGHT DESIGN WITH MOVABLE CONNECTION (TSAG2)																																													
		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 T8 0...400 °C T4 0...800 °C T3* 0...850 °C	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 T8 0...400 °C T4* 0...800 °C	5, 6, 8	2																																							
<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) - SFSF (mineral fiber, max. 1000 °C ambient temperature)</p> <p>Applicable cables:</p> <table border="1"> <thead> <tr> <th>Probe design</th> <th>TSAG, TSAG2</th> <th>TSAGL, TSAGL2</th> </tr> </thead> <tbody> <tr> <td>Temp. range</td> <td>all</td> <td>all</td> </tr> <tr> <td>T12, T19</td> <td>all</td> <td>all</td> </tr> <tr> <td>T7, T9</td> <td>no PUR, no PVC</td> <td>all</td> </tr> <tr> <td>T22</td> <td>TT</td> <td>TT, SLSL, TSL</td> </tr> <tr> <td>T1, T8</td> <td>GLGLP, SFSF</td> <td>no PUR, no PVC</td> </tr> <tr> <td>T3, T4</td> <td>SFSF</td> <td>GLGLP, SFSF</td> </tr> </tbody> </table> <p>Tip shape: - RTD: standard, narrowed, pitted - T/C: standard (isolated), grounded, open-tube, exposed (see Appendix - Tip Shapes)</p> <p>Accuracy class: - RTD: 'A', 'B', or '2xB' - T/C: '1' or '2' (see Appendix - RTD or T/C Tolerance)</p> <p>Cable connector: 4-pin (C3), 'T/C standard' (C5) or 'T/C miniature' (C6) (see Appendix - Connectors)</p> <p>Available threads and HEX sizes:</p> <table border="1"> <thead> <tr> <th>G</th> <th>M6</th> <th>M8</th> <th>M10 1/8"</th> <th>M12 1/4"</th> <th>M14</th> <th>M16 3/8"</th> <th>M18</th> <th>M20 1/2"</th> </tr> </thead> <tbody> <tr> <td>SW</td> <td>10</td> <td>10</td> <td>12(13)</td> <td>14</td> <td>17</td> <td>19</td> <td>22</td> <td>24</td> </tr> </tbody> </table>							Probe design	TSAG, TSAG2	TSAGL, TSAGL2	Temp. range	all	all	T12, T19	all	all	T7, T9	no PUR, no PVC	all	T22	TT	TT, SLSL, TSL	T1, T8	GLGLP, SFSF	no PUR, no PVC	T3, T4	SFSF	GLGLP, SFSF	G	M6	M8	M10 1/8"	M12 1/4"	M14	M16 3/8"	M18	M20 1/2"	SW	10	10	12(13)	14	17	19	22	24
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Ordering code TSAG(2,L,L2) - G1G2.G3.G4.G6.G7.G8.G9.G10.G11.G12.G14.G15 - #1

Code	Feature or option	Code values	
G1	Number of sensors	1 or 2	
G2	Sensor	RB - Pt50, RD - Pt100, RF - Pt500, RG - Pt1000, RH - Cu50, RK - Cu100, RP - PTC 1k, RQ - PTC 2k, J - T/C type "J", K - T/C type "K", T - T/C type "T"	
G3	Temperature range	T1 - -50...400 °C, T3 - 0...850 °C ⁽⁴⁾ , T4 - 0...800 °C ⁽⁴⁾ , 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]	RTD	4, 5, 6, 8
		T/C	5, 6, 8
G6	Probe length 'n' [mm]	10...200 (see tables overleaf)	
G7	Probe length 'm' [mm] ⁽¹⁾	30...100 (see tables overleaf)	
G8	Cable length 'k' [m] and type	1GL...10GL - glass fiber, 1SL...10SL - silicone, 1TF...10TF - Teflon®, 1PU...10PU - polyurethane ⁽⁴⁾ , 1MF...10MF - mineral fiber, 1PV...10PV - PVC	
G9	Mounting connection	Q0 - M16x1.5, Q1 - M18x1.5, Q2 - M20x1.5, Q3 - G3/8", Q4 - G1/2", Q7 - M12x1.5, Q8 - M14x1.5, Q10 - 1/2" NPT, Q18 - G1/8", Q19 - 1/8" NPT, Q20 - M10x1, Q23 - G1/4", Q24 - 1/4" NPT, Q26 - M8x1, Q29 - M8x1.25, Q30 - M10x1.5, Q31 - M6x1, Uxx - union nut (xx - same as for Qxx)	
G10	Sheath material (wetted parts)	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4404	
G11	Accuracy class	RTD	X - none ⁽²⁾ , A - 'A', B - 'B', C - '2xB'
		T/C	1 - '1' ⁽⁴⁾ , 2 - '2'
G12	Number of wires ⁽³⁾	2, 3, 4 ⁽⁴⁾	
G14	Tip shape	RTD	X - standard closed, N - narrowed, P - pitted
		T/C	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), OS - cable protection SS spring (≈ 50 mm), OB - braid termination lead (only w/o connector), OP - electrochemically polished sheath surface	

⁽¹⁾ Only for TSAG2 and TSAGL2!

⁽²⁾ For non-Pt sensors

⁽³⁾ Only for RTD sensors!

⁽⁴⁾ Contact COMECO!