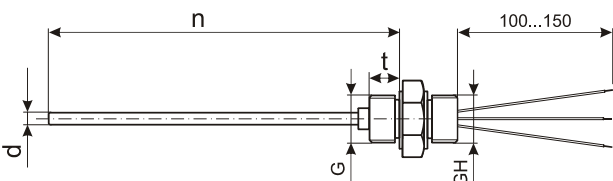
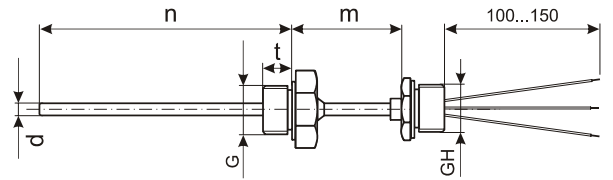
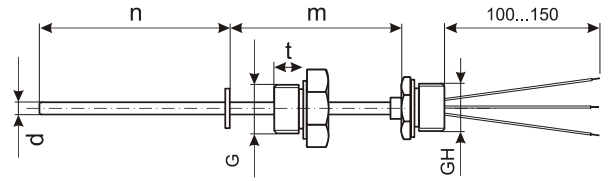


RTD PROBE FOR HEAD ASSEMBLY ECx(BTSECx) Sheath - stainless steel (see Appendix - Sheath materials) Extension wires - Teflon® or glass fiber	SENSITIVE ELEMENT	TEMPERATURE RANGE	DIMENSIONS			
			n [mm]	d [mm]	wires	
DESIGN WITHOUT EXTENSION (EC) 	1 x Pt (RB,RD,RF,RG)	T9 -50...200 °C	50...200	4	2, 3*	
		T1 -50...400 °C	50...500	4.5, 5	2, 3*	
		T11* -50...600 °C	50...1500	6	2, 3, 4*	
	2(3) x Pt (RB,RD,RF,RG)	T15 -200...200 °C	50...3000	8, 10, 12, 14, 16, 20, 21	6*	2x2
		T4* -0...800 °C	50...3000	12, 14, 16, 20, 21	6*	2x2(3)* 3x2*
	1 x Cu (RH, RK)	T9 -50...200 °C	50...1500	6	8, 10, 12, 14, 16, 20, 21	2, 3, 4*
2 x Cu (RH, RK)	T9 -50...200 °C	50...3000	8, 10	12, 14, 16, 20, 21	2x2	
			12, 14, 16, 20, 21	2x2(3)*		

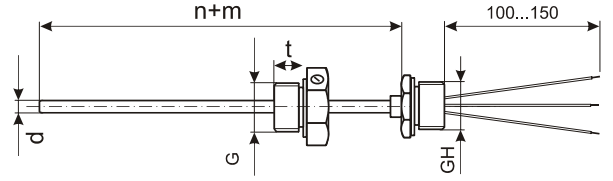
EXTENDED DESIGN WITH WELDED CONNECTION (EC1)



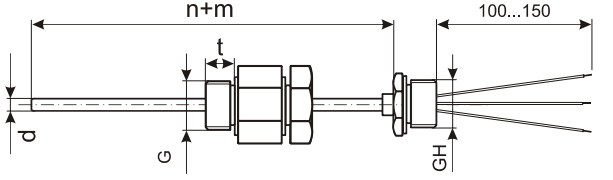
EXTENDED DESIGN WITH MOVABLE CONNECTION (EC2)



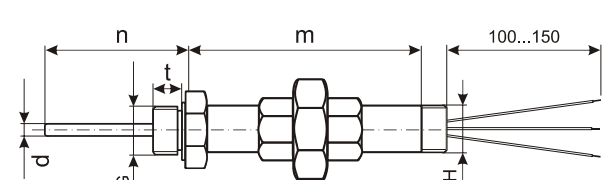
DESIGN WITH ADJUSTABLE CONNECTION (EC3)



DESIGN WITH GLAND-TYPE CONNECTION (EC4)



DESIGN WITH NIPPLE-UNION-NIPPLE CONNECTION (EC5)



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

Thread length:
t = 15 mm or 20 mm (NPT)

Head connection 'GH':

- M10x1(Q20), M12x1.5(Q7), M16x1.5(Q0), M18x1.5(Q1), M20x1.5(Q2)
- 1/4"(Q23/Q24), 3/8"(Q3/Q9), 1/2"(Q4/Q10), 3/4"(Q6/Q11)

Extension length:
m = 0...1500 mm (w/o spring-loaded adapter)
m = m1...1500 mm (w/ spring-loaded adapter)

Extension diameter: (for TSEC1 and TSEC2 only) [mm]

Probe diameter 'd'	4, 4.5 mm	5, 6 mm	8 mm	10 mm	10+ mm
Ext. length 'm'					
up to 50 mm	8	d	d	d	d
50...150 mm	8	8	d	d	d
150...500 mm	10	10	10	d	d
500+ mm	14	14	14	14	d

Tip shape:
standard, narrowed, pitted (see Appendix - Tip shapes)

Process pressure:

Probe design	EC, EC1	EC2	EC4	EC3, EC5
Max. pressure *	25 bar	16 bar	6 bar	0 bar

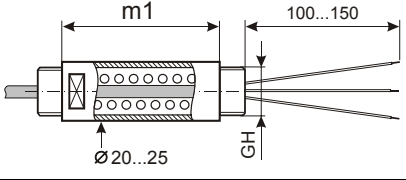
Sheath material:
1.4301(M1), 1.4362 (M15), 1.4404(M9), 1.4541(M2), 1.4571(M3), 1.4762(M4), 1.4848(M6)

Wire material:
Cu, Ni, or Ag

Extension wire isolation:
Teflon® (T) or glass fiber (GL)

Accuracy class:
'A', 'B', or '2xB' (see Appendix - RTD Tolerance)

Spring-loaded adapter:
(mounted between probe and protection head)



m1 = 60...100 mm

* Please contact BASI!

temperature probes

Ordering code BTSEC(1,2,3,4,5) - G1G2.G3.G4.G6.G7.G9'9".GH.G10.G11.G12.G13.G14 - #1

Code	Feature or option	Code values	
G1	Number of RTD sensors	1, 2, or 3 ⁽⁷⁾	
G2	Sensor	RB - Pt50, RD - Pt100, RF - Pt500, RG - Pt1000, RH - Cu50, RK - Cu100	
G3	Temperature range	T1 - -50...400 °C, T4 - 0...800 °C (Ag wires only!), T9 - -50...200 °C, T11 - -50...600 °C (Ni or Ag wires only!), T15 - -200...200 °C	
G4	Diameter 'd' [mm]	normal RTD	4, 5, 6, 8, 10, 12, 14, 16, 20, 21
		MI RTD ⁽⁴⁾	4.5, 6
G6	Probe length 'n' [mm] ⁽¹⁾	50...3000 (see table overleaf)	
G7	Probe length 'm' [mm] ⁽²⁾	0...1500 (m1...1500 with 'OA' option)	
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®, GR - graphite, BR - brass, SS - stainless steel	
GH	Head connection	Q0 - M16x1.5, Q1 - M18x1.5, Q2 - M20x1.5, Q3 - G3/8", Q4 - G1/2", Q6 - G3/4", Q7 - M12x1.5, Q9 - 3/8" NPT, Q10 - 1/2" NPT, Q11 - 3/4" NPT, Q20 - M10x1, Q23 - G1/4", Q24 - 1/4" NPT, Z - other connection (specify!)	
G10	Sheath material	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M4 - 1.4762, M6 - 1.4845, M9 - 1.4404, M15 - 1.4362	
G11	Accuracy class	X - none (for non Pt sensors), A - 'A', B - 'B', C - '2xB'	
G12	Number of wires	2, 3, 4 ⁽⁷⁾	
G13	Wire material	CU - copper, NI - nickel ⁽⁴⁾ , AG - silver ⁽⁴⁾	
G14	Tip shape	X - standard closed, N - narrowed, P - pitted ⁽⁵⁾	
#1	Options	X - none, OV - vibration proof (MgO or Silicone filled), OA - spring-loaded adapter ⁽⁶⁾ , OP - electrochemically polished sheath surface	

⁽¹⁾ 'n+m' for BTSEC3 and BTSEC4!

⁽²⁾ Only for BTSEC1, BTSEC2, and BTSEC5!

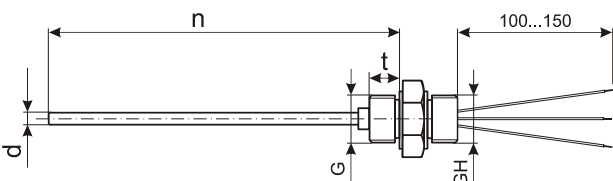
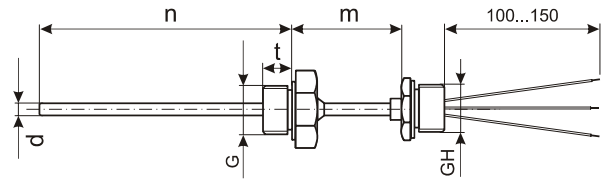
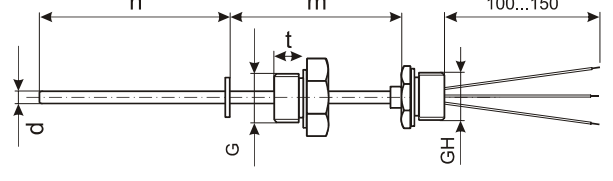
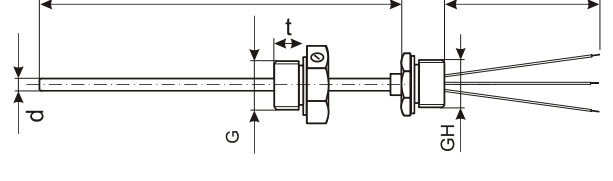
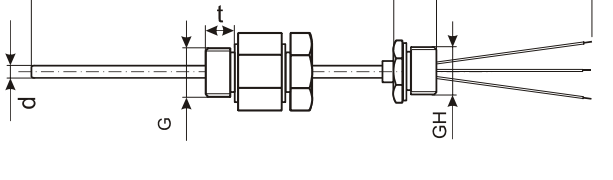
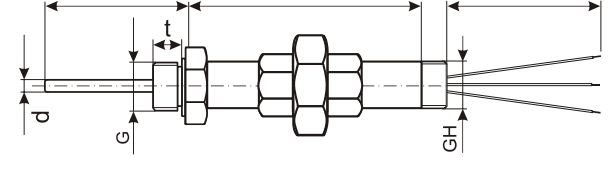
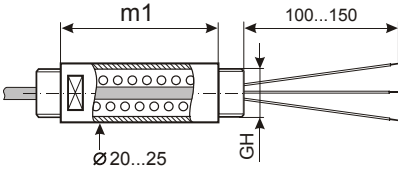
⁽³⁾ Only for BTSEC4!

⁽⁴⁾ Only for Pt sensors!

⁽⁵⁾ Only for non-explosion-proof RTDs!

⁽⁶⁾ Only for BTSEC, BTSEC1, and BTSEC5!

⁽⁷⁾ Contact BASI!

T/C PROBE FOR HEAD ASSEMBLY ECx (BTSECx) Sheath - stainless steel (see Appendix - Sheath materials) Extension wires - Teflon® or glass fiber	SENSITIVE ELEMENT	TEMPERATURE RANGE	DIMENSIONS																																										
			n [mm]	d [mm]	wires																																								
<p>DESIGN WITHOUT EXTENSION (EC)</p>  <p>EXTENDED DESIGN WITH WELDED CONNECTION (EC1)</p>  <p>EXTENDED DESIGN WITH MOVABLE CONNECTION (EC2)</p>  <p>DESIGN WITH ADJUSTABLE CONNECTION (EC3)</p>  <p>DESIGN WITH GLAND-TYPE CONNECTION (EC4)</p>  <p>DESIGN WITH NIPPLE-UNION-NIPPLE CONNECTION (EC5)</p> 	MI Thermocouple Design																																												
	1 x J	T4	0...800 °C	50...3000	3, 4.5, 6, 8, 10	2																																							
	2 x J					2x2																																							
	1 x K	T3	0...850 °C	50...3000	3, 4.5, 6, 8, 10	2																																							
	1 x N, 1 x E					2x2																																							
	2 x K	T16	0...1100 °C	50...3000	3, 4.5, 6, 8	2																																							
	2 x N, 2 x E					2x2																																							
1 x S, 1 x R	T16	0...1100 °C	50...3000	3, 4.5, 6, 8	2																																								
2 x S, 2 x R	T6*	0...1250 °C																																											
<p>Process connection 'G' (nipple or union nut):</p> <ul style="list-style-type: none"> - 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>Thread length: t = 15 mm or 20 mm (NPT)</p> <p>Head connection 'GH':</p> <ul style="list-style-type: none"> - M10x1(Q20), M12x1.5(Q7), M16x1.5(Q0), M18x1.5(Q1), M20x1.5(Q2) - 1/4"(Q23/Q24), 3/8"(Q3/Q9), 1/2"(Q4/Q10), 3/4"(Q6/Q11) <p>Extension length: m = 0...1500 mm (w/o spring-loaded adapter) m = m1...1500 mm (w/ spring-loaded adapter)</p> <p>Extension diameter: (for TSEC1 and TSEC2 only) [mm]</p> <table border="1"> <thead> <tr> <th>Probe diameter 'd'</th> <th>3, 4.5 mm</th> <th>6 mm</th> <th>8 mm</th> <th>10 mm</th> </tr> </thead> <tbody> <tr> <td>Ext. length 'm'</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>up to 50 mm</td> <td>8</td> <td>d</td> <td>d</td> <td>d</td> </tr> <tr> <td>50...150 mm</td> <td>8</td> <td>8</td> <td>d</td> <td>d</td> </tr> <tr> <td>150...500 mm</td> <td>10</td> <td>10</td> <td>10</td> <td>d</td> </tr> <tr> <td>500+ mm</td> <td>14</td> <td>14</td> <td>14</td> <td>14</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>EC, EC1</th> <th>EC2</th> <th>EC4</th> <th>EC3, EC5</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)</p> <p>MI-insert sheath material: 1.4404(M9), 1.4541(M2), 1.4571(M3), 1.4762(M4), 1.4841(M5), 1.4876(M7), 2.4816(M8), Microbell® (M10)</p> <p>Extension wire isolation: Teflon® (T) or glass fiber (GL)</p> <p>Accuracy class: '1' or '2' (see Appendix - T/C Tolerance)</p> <p>Spring-loaded adapter: (mounted between probe and protection head)</p>  <p>m1 = 60...100 mm d ≤ 8 mm</p>						Probe diameter 'd'	3, 4.5 mm	6 mm	8 mm	10 mm	Ext. length 'm'					up to 50 mm	8	d	d	d	50...150 mm	8	8	d	d	150...500 mm	10	10	10	d	500+ mm	14	14	14	14	Probe design	EC, EC1	EC2	EC4	EC3, EC5	Max. pressure *	25 bar	16 bar	6 bar	0 bar
Probe diameter 'd'	3, 4.5 mm	6 mm	8 mm	10 mm																																									
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150...500 mm	10	10	10	d																																									
500+ mm	14	14	14	14																																									
Probe design	EC, EC1	EC2	EC4	EC3, EC5																																									
Max. pressure *	25 bar	16 bar	6 bar	0 bar																																									
* Please contact BASI!																																													

temperature probes

Ordering code BTSEC(1,2,3,4,5) - G1G2.G3.G4.G6.G7.G9'9".GH.G10.G11.G14 - #1

Code	Feature or option	Code values
G1	Number of thermocouples	1 or 2
G2	Thermocouple	J - type "J", K - type "K", N - type "N", E - type "E", S - type "S", R - type "R"
G3	Temperature range	T4 - 0...800 °C, T3 - 0...850 °C, T13 - 0...1000 °C, T16 - 0...1100 °C, T6 - 0...1200 °C ⁽⁶⁾
G4	Diameter 'd' [mm]	3, 4.5, 6, 8, 10
G6	Probe length 'n' [mm] ⁽¹⁾	50...3000
G7	Probe length 'm' [mm] ⁽²⁾	0...1500 (m1...1500 with 'OA' option)
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®, GR - graphite, BR - brass, SS - stainless steel
GH	Head connection	Q0 - M16x1.5, Q1 - M18x1.5, Q2 - M20x1.5, Q3 - G3/8", Q4 - G1/2", Q6 - G3/4", Q7 - M12x1.5, Q9 - 3/8" NPT, Q10 - 1/2" NPT, Q11 - 3/4" NPT, Q20 - M10x1, Q23 - G1/4", Q24 - 1/4" NPT, Z - other connection (specify!)
G10	Sheath material	M2 - 1.4541, M3 - 1.4571, M4 - 1.4762 (1.4749), M5 - 1.4841, M7 - 1.4876 (Incolloy 800), M8 - 2.4816 (Inconel 600), M9 - 1.4404, M10 - Microbell®
G11	Accuracy class	1 - '1' ⁽⁶⁾ , 2 - '2'
G14	Tip shape (hot junction)	X - standard (isolated from sheath), G - grounded, E - exposed hot junction ⁽⁴⁾ , O - open-tube design ⁽⁴⁾
#1	Options	X - none, OA - spring-loaded adapter ⁽⁵⁾ , OP - electrochemically polished sheath surface

⁽¹⁾ 'n+m' for BTSEC3 and BTSEC4!

⁽²⁾ Only for BTSEC1, BTSEC2, and BTSEC5!

⁽³⁾ Only for TSEC4!

⁽⁴⁾ Only for non-explosion-proof thermocouples!

⁽⁵⁾ Only for BTSEC, BTSEC1, and BTSEC5!

⁽⁶⁾ Contact BASI!