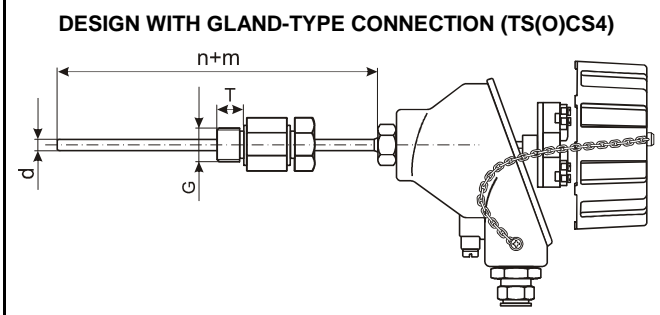
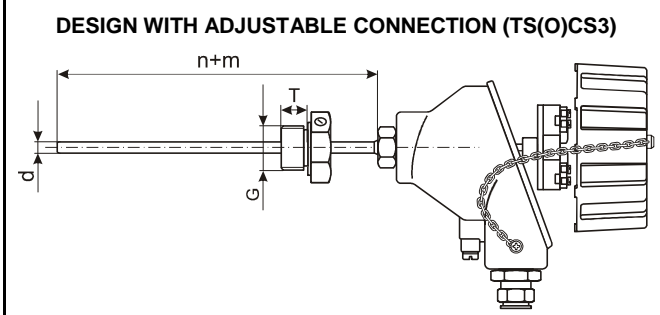
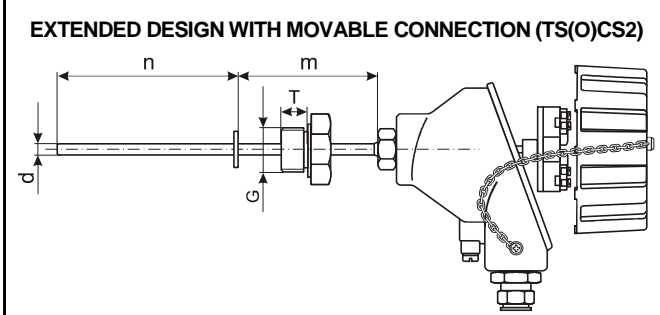
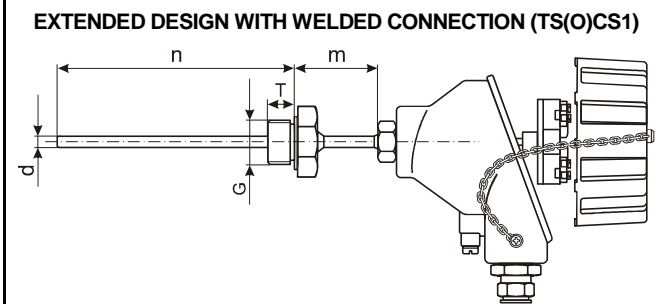
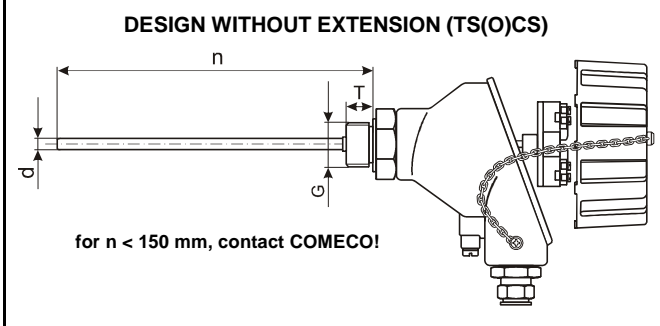


ATEX RTD PROBE WITH (MI) INSERT **TSCSx - EX**
- FOR IN-HEAD TRANSMITTER ** **TSOCSx - EX**

II 2 G Ex d IIC T6 Gb -20°C ≤ Ta ≤ +65°C
 II 2 D Ex tb IIIC T80 °C Db IP65 EC-type Certificate No. MP 08 ATEX 0002

SENSITIVE ELEMENT	TEMPERATURE RANGE	DIMENSIONS		
		d [mm]	d insert [mm]	wires



Regular Insert Design					
1 x Pt (RB,RD,RF,RG)	T9	-50...200 °C	8	4, 5	2, 3*
	T1	-50...400 °C	9, 10, 12, 14, 16, 20	6	2, 3, 4*
	T24	-50...500 °C	12, 14, 16, 20	8	2, 3, 4
	T11*	-50...600 °C	9, 10, 12, 14, 16, 20	6	2x2*
2 x Pt (RB,RD,RF,RG)	T2*	-200...600 °C	12, 14, 16, 20	8	2x2(3)*
	T4*	0...800 °C	9, 10, 12, 14, 16, 20	6	2x2*
	T26	-200...150 °C	12, 14, 16, 20	8	2x2(3)*
1 x Cu (RH, RK)	T9	-50...200 °C	9, 10, 12, 14, 16, 20	6	2, 3, 4*
			12, 14, 16, 20	8	2, 3, 4
2 x Cu (RH, RK)	T9	-50...200 °C	9, 10, 12, 14, 16, 20	6	2x2*
			12, 14, 16, 20	8	2x2(3)*

MI Insert Design					
1 x Pt (RB,RD,RF,RG)	T9	-50...200 °C	6, 8, 9, 10, 12, 14, 16, 20	3*	2, 3*
	T1	-50...400 °C	8, 9, 10, 12, 14, 16, 20	4.5	2, 3*
	T24	-50...500 °C	9, 10, 12, 14, 16, 20	6	2, 3, 4*
	T11*	-50...600 °C	12, 14, 16, 20	8	2, 3, 4
2 x Pt (RB,RD,RF,RG)	T2*	-200...600 °C	9, 10, 12, 14, 16, 20	6	2x2, 2x3*
	T4*	0...800 °C	12, 14, 16, 20	8	2x2, 2x3*
	T22	-200...200 °C	9, 10, 12, 14, 16, 20	6	2x2, 2x3*

Protection head:
 EG(SS), EGS, EGW(SS), EX8, EX8W, EX10(SS), EX10W(SS), EX8WD, EX10WD
 (see Appendix - Protection Heads)

Electrical entry:
 - cable gland(s): SS or brass, cemented, ID 7.5 mm
 - threaded head conduit(s)

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
 - other
 - w/o mounting appliances

Thread length:
 - cylindrical thread: T = 15 mm
 - NPT thread: according to ANSI B1.20.1

Extension length:
 m = 0...1500 mm

Extension diameter: (for TS(O)CS1 and TS(O)CS2 only, [mm])

Ext. length 'm'	Probe diameter 'd'			
	6 mm	8 mm	9, 10 mm	10+ mm
up to 50 mm	d	d	d	d
50...150 mm	8	d	d	d
150...500 mm	10	10	d	d
500+ mm	14	14	14	d

Tip shape:
 standard or narrowed (see Appendix - Tip Shapes)

Process pressure:

Probe design	TS(O)CS, TS(O)CS1	TS(O)CS2	TS(O)CS4	TS(O)CS3
Max. pressure *	25 bar	16 bar	6 bar	0 bar

Sheath material:
 1.4301(M1), 1.4401/1.4404(M9), 1.4541(M2), 1.4571(M3), 1.4362(M15)

Wire material:
 Cu, Ni, or Ag

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

* Please contact COMECO!
 ** Order transmitter separately!!!

COMECO reserves the right of changing specifications without prior notice!

Ordering code TS*(1,2,3,4) - (MI -) G0'n0".G1G2.G3.G4.G6.G7.G9'9".G10.G11.G12.G13.G14 - #1.#2 - EX

Code	Feature or option	Code values	
*	Base model variant	CS - standard (w/ terminal block), OCS - prepared for in-head transmitter (w/o terminal block)	
G0'	Protection head	EG - type "EG", EGS - type "EGS" ⁽¹²⁾ , EGSS - type "EGSS" ⁽¹²⁾ , EGW - type "EGW", EGWSS - type "EGWSS" ⁽¹²⁾ , EX8 - type "EX8", EX8W - type "EX8W", EX10 - type "EX10", EX10SS - type "EX10SS" ⁽¹²⁾ , EX10W - type "EX10W", EX10WSS - type "EX10WSS" ⁽¹²⁾ , EX8WD - type "EX8WD", EX10WD - type "EX10WD"	
G0"	Electrical entry ('n' - number of entries ⁽¹³⁾)	G - gland, U2 - M20x1.5, U4 - G1/2", U6 - G3/4", U10 - 1/2" NPT, U11 - 3/4" NPT	
G1	Number of RTD sensors	1 or 2	
G2	Sensor	RB - Pt50, RD - Pt100, RF - Pt500, RG - Pt1000, RH - Cu50, RK - Cu100	
G3	Temperature range	T1 - -50...400 °C, T2 - -200...600 °C, T4 - 0...800 °C, T9 - -50...200 °C, T11 - -50...600 °C, T22 - -200...200 °C, T24 - -50...500 °C, T26 - -200...150 °C	
G4	Diameter 'd' / 'd insert' [mm]	regular insert	8/4 , 8/5 , 9/6 , 10/6 , 12/6 , 14/6 , 12/8 , 14/8 , 16/6 , 16/8 , 20/6 , 20/8
		MI insert	6/3 ⁽¹²⁾ , 8/4.5 , 9/6 , 10/6 , 12/6 , 14/6 , 16/6 , 16/8 , 20/6 , 20/8
G6	Probe length 'n' [mm] ⁽¹⁾	50...3000	
G7	Probe length 'm' [mm] ⁽²⁾	0...1500	
G9'	Mounting connection	X - no mounting appliances ⁽³⁾ , 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 ⁽⁴⁾	BR - brass, GR - graphite, SS - stainless steel, TF - Teflon®	
G10	Sheath material (wetted parts and insert)	regular insert	M1 - 1.4301, M2 - 1.4541, M3 - 1.4571, M9 - 1.4401 (1.4404), M15 - 1.4362 ⁽¹²⁾
		MI insert	M2 - 1.4541, M3 - 1.4571, M9 - 1.4401 (1.4404)
G11	Accuracy class	X - none ⁽⁵⁾ , A - 'A', B - 'B', C - '2xB'	
G12	Number of wires	2 , 3 , 4 ⁽¹²⁾	
G13	Wire material ⁽⁶⁾	CU - copper ⁽⁷⁾ , NI - nickel, AG - silver ⁽⁸⁾	
G14	Tip shape	X - standard closed, N - narrowed ⁽¹²⁾	
#1	Options	X - none, OV - vibration proof (MgO or Silicone filled insert, secured screws) ^(8,9) , OS - spring-loaded insert, OP - electrochemically polished wetted parts	
#2	Incorporated devices	X - none, T - in-head transmitter ⁽¹⁰⁾ , A - local indicator ⁽¹¹⁾	

⁽¹⁾ 'n+m' for TS(O)CS3 and TS(O)CS4!

⁽²⁾ Only for TS(O)CS1 and TS(O)CS2!

⁽³⁾ Only for TS(O)CS!

⁽⁴⁾ Only for TS(O)CS4!

⁽⁵⁾ For non-Pt sensors

⁽⁶⁾ Only for Pt sensors!

⁽⁷⁾ Not applicable to non-MI (regular) RTD inserts for above 500 °C!

⁽⁸⁾ Only for non-MI (regular) inserts!

⁽⁹⁾ Requires 'OS' option!

⁽¹⁰⁾ Only for variant 'OCS'! See transmitter datasheets and order separately!

⁽¹¹⁾ With windowed head only! See indicator datasheets and order separately!

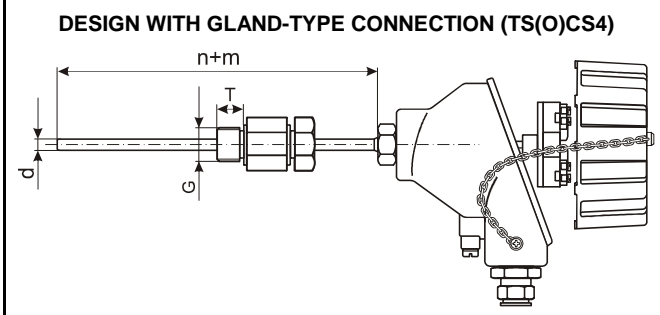
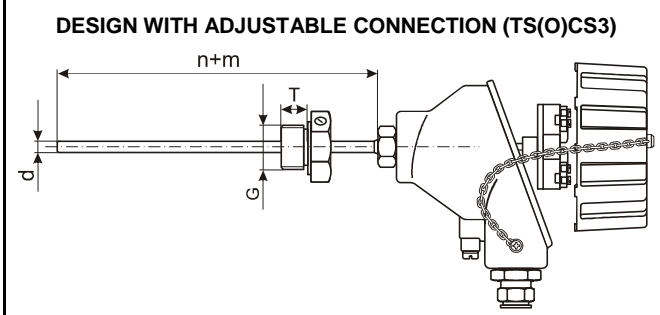
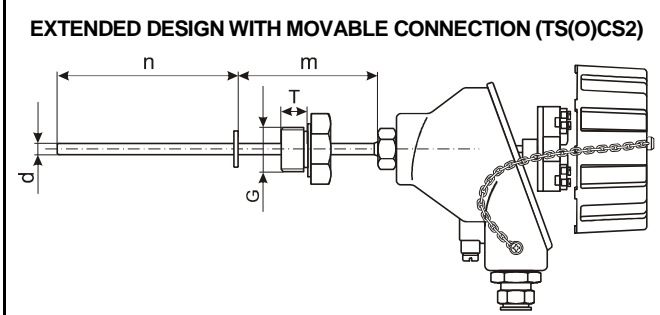
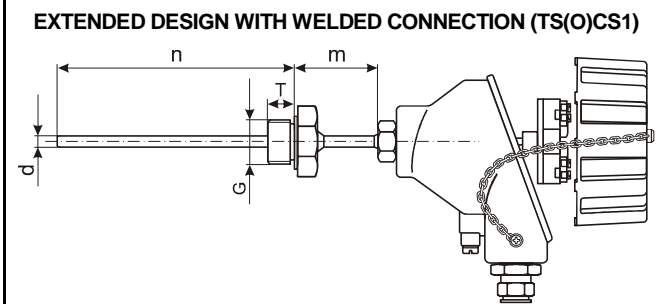
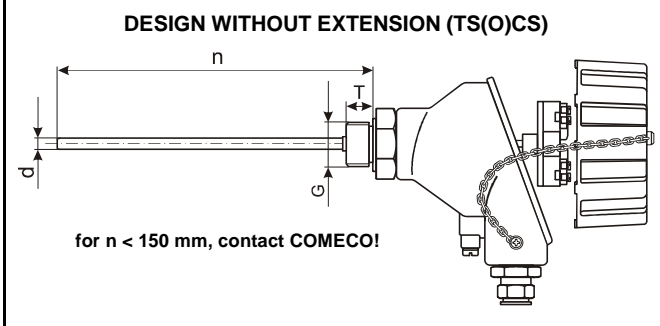
⁽¹²⁾ Contact COMECO!

⁽¹³⁾ Applicable for the selected head type (see Appendix - Protection Heads)

ATEX T/C PROBE WITH (MI) INSERT **TSCSx - EX**
- FOR IN-HEAD TRANSMITTER ** **TSOCSx - EX**

II 2 G Ex d IIC T6 Gb -20°C ≤ T_a ≤ +65°C
 II 2 D Ex tb IIIC T80 °C Db IP65 EC-type Certificate No. MP 08 ATEX 0002

SENSITIVE ELEMENT	TEMPERATURE RANGE	DIMENSIONS		
		d [mm]	d insert [mm]	wires



Regular Insert Design

1 x J; 1 x L	T4	0...800 °C	10, 12, 14, 16, 20	6, 8, 10	2
2 x J; 2 x L			12, 14, 16, 20	8, 10	2x2
1 x K	T3	0...850 °C	10, 12, 14, 16, 20	6, 8, 10	2
2 x K	T16	0...1100 °C	12, 14, 16, 20	8, 10	2x2
	T6*	0...1150 °C			
1 x E	T3	0...850 °C	10, 12, 14, 16, 20	6, 8, 10	2
2 x E	T13	0...1000 °C	12, 14, 16, 20	8, 10	2x2
1 x S	T16	0...1100 °C	10, 12, 14, 16, 20	6, 8, 10	2
1 x R	T6*	0...1150 °C			
2 x S	T16	0...1100 °C	12, 14, 16, 20	8, 10	2x2
2 x R	T6*	0...1150 °C			

MI Insert Design

1 x J	T4	0...800 °C	6, 8, 10, 12, 14, 16, 20	3, 4.5, 6, 8	2
2 x J					2x2
1 x K	T3	0...850 °C	8, 10, 12, 14, 16, 20	4.5, 6, 8	2
1 x N, 1 x E	T16	0...1100 °C			
2 x K	T6*	0...1150 °C			
2 x N, 2 x E	T6*	0...1250 °C			

Protection head:
 EG(SS), EGS, EGW(SS), EX8, EX8W, EX10(SS), EX10W(SS), EX8WD, EX10WD
 (see Appendix - Protection Heads)

Electrical entry:
 - cable gland(s): SS or brass, cemented, ID 7.5 mm
 - threaded head conduit(s)

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
 - other
 - w/o mounting appliances

Thread length:
 - cylindrical thread: T = 15 mm
 - NPT thread: according to ANSI B1.20.1

Process length:
 n = 50...3000 mm

Extension length:
 m = 0...1500 mm

Extension diameter: (for TS(O)CS1 and TS(O)CS2 only, [mm])

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

Insert tip shape (hot junction design):
 standard (isolated), grounded, open-tube, exposed (see Appendix - Tip Shapes)

Process pressure:

Probe design	TS(O)CS, TS(O)CS1	TS(O)CS2	TS(O)CS4	TS(O)CS3
Max. pressure *	25 bar	16 bar	6 bar	0 bar

Sheath material:
 1.4401/1.4404(M9), 1.4541(M2), 1.4571(M3), 1.4762/1.4749(M4), 1.4841(M5),
 1.4845(M6), 1.4876(M7), 2.4816(M8), 1.4362(M15)

Accuracy class:
 '1' or '2' (see Appendix - T/C Tolerance)

* Please contact COMECO!
 ** Order transmitter separately!!!

COMECO reserves the right of changing specifications without prior notice!

Ordering code TS*(1,2,3,4) - (MI -) G0'n0".G1G2.G3.G4.G6.G7.G9'9".G10.G11.G14 - #1.#2 - EX

Code	Feature or option	Code values
*	Base model variant	CS - standard (w/ terminal block), OCS - prepared for in-head transmitter (w/o terminal block)
G0'	Protection head	EG - type "EG", EGS - type "EGS" ⁽⁹⁾ , EGSS - type "EGSS" ⁽⁹⁾ , EGW - type "EGW", EGWSS - type "EGWSS" ⁽⁹⁾ , EX8 - type "EX8", EX8W - type "EX8W", EX10 - type "EX10", EX10SS - type "EX10SS" ⁽⁹⁾ , EX10W - type "EX10W", EX10WSS - type "EX10WSS" ⁽⁹⁾ , EX8WD - type "EX8WD", EX10WD - type "EX10WD"
G0"	Electrical entry ('n' - number of entries ⁽¹⁰⁾)	G - gland, U2 - M20x1.5, U4 - G1/2", U6 - G3/4", U10 - 1/2" NPT, U11 - 3/4" NPT
G1	Number of thermocouples	1 or 2
G2	Thermocouple	regular insert E - type "E", J - type "J", K - type "K", L - type "L", R - type "R", S - type "S"
		MI insert E - type "E", J - type "J", K - type "K", N - type "N"
G3	Temperature range	T3 - 0...850 °C, T4 - 0...800 °C, T6 - 0...1200 °C ⁽⁹⁾ , T13 - 0...1000 °C, T16 - 0...1100 °C
G4	Diameter 'd' / 'd insert' [mm]	regular insert 10/6 , 10/8 , 12/6 , 12/8 , 14/6 , 14/8 , 14/10 , 16/10 , 20/10 ⁽¹⁾
		MI insert 6/3 , 8/4.5 , 10/6 , 12/6 , 14/6 , 16/6 , 20/6 ⁽¹⁾ , 20/8 ⁽¹⁾
G6	Probe length 'n' [mm] ⁽²⁾	50...3000
G7	Probe length 'm' [mm] ⁽³⁾	0...1500
G9'	Mounting connection	X - no mounting appliances ⁽⁴⁾ , 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 ⁽⁵⁾	BR - brass, GR - graphite, SS - stainless steel, TF - Teflon®
G10	Sheath material (wetted parts and insert)	regular insert M2 - 1.4541, M3 - 1.4571, M4 - 1.4762 (1.4749), M5 - 1.4841, M6 - 1.4845, M7 - 1.4876, M8 - 2.4816, M9 - 1.4401 (1.4404), M15 - 1.4362
		MI insert M2 - 1.4541, M3 - 1.4571, M4 - 1.4762 (1.4749), M5 - 1.4841, M8 - 2.4816, M9 - 1.4401 (1.4404)
G11	Accuracy class	1 - '1' ⁽⁹⁾ , 2 - '2'
G14	Insert tip shape (hot junction)	X - standard (isolated from sheath), G - grounded, E - exposed hot junction, O - open-tube design
#1	Options	X - none, OV - vibration proof (secured screws) ⁽⁶⁾ , OS - spring-loaded insert, OP - electrochemically polished wetted parts
#2	Incorporated devices	X - none, T - in-head transmitter ⁽⁷⁾ , A - local indicator ⁽⁸⁾

⁽¹⁾ d = 21.3 mm for sheath materials 'M5' and 'M6'

⁽²⁾ 'n+m' for TS(O)CS3 and TS(O)CS4!

⁽³⁾ Only for TS(O)CS1 and TS(O)CS2!

⁽⁴⁾ Only for TS(O)CS!

⁽⁵⁾ Only for TS(O)CS4!

⁽⁶⁾ Requires 'OS' option!

⁽⁷⁾ Only for variant 'OCS'! See transmitter datasheets and order separately!

⁽⁸⁾ With windowed head only! See indicator datasheets and order separately!

⁽⁹⁾ Contact COMECO!

⁽¹⁰⁾ Applicable for the selected head type (see Appendix - Protection Heads)