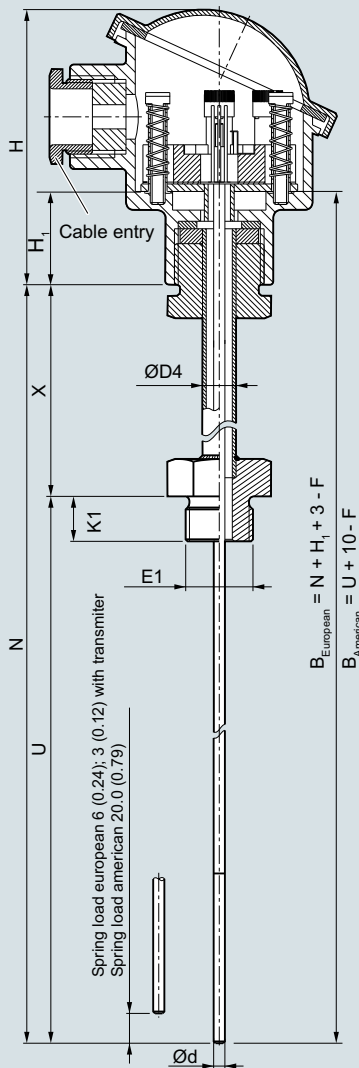


Dimensional drawings

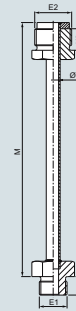


- B Measuring insert length
- Ød Measuring insert outer diameter
- ØD4 Extension outer diameter
- E1 Process connection, thread size
- H Head height
- H₁ Type Axx = 41 (1.61)
Type Bxx = 26 (1.02)
- K1 Screw depth
- N Nominal length
- U Insertion length
- X Extension length

Recommended rebound:

- European versions = inside length of the protective tube + 3 (0.12)
- American versions = inside length of the protective tube + 10 (0.39)

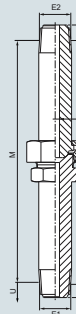
SITRANS TS500, temperature sensors for vessels and pipings, temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types, dimensions in mm (inch)



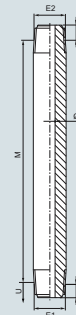
Extension (1, 2, 3), adjustable, european, cylindrical, dimensions in mm (inch)



Extension NPT (1, 2, 3), adjustable, european, conical, dimensions in mm (inch)



Extension NUN, adjustable, conical, european (5), american (8), dimensions in mm (inch)



Extension, nipple, non adjustable, conical, european (4), american (6), dimensions in mm (inch)

¹⁾ Numerics 1 ... 8: s. Selection and Ordering data option extension page 2/96

Temperature Measurement SITRANS TS500

For installation in existing protective tubes

2

Selection and Ordering data	Article No.	Ord. Code
SITRANS TS500 Temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7MC7500-	
Model existing thermowells	1	
Thread type G1/2" (1/2"BSPP) (not for American type) NPT1/2" M14x1.5 (not for American type) M18x1.5 (not for American type) M20x1.5 (not for American type) Without thread Special version	C J T U V N Z	J 1 Y
Insertion length U free length, standard lengths 110 mm (4.33 inch) 140 mm (5.51 inch) 200 mm (7.87 inch) 260 mm (10.24 inch) 410 mm (16.14 inch)	B 1 B 2 C 1 C 2 E 1	
Insertion U free length, customer-specific enter customer specific length with Y44, see page 2/99 Order codes 30 ... 100 mm (1.18 ... 3.94 inch) Initial: 100 mm (3.94 inch) 101 ... 200 mm (3.98 ... 7.87 inch) Initial: 200 mm (7.87 inch) 201 ... 300 mm (7.91 ... 11.81 inch) Initial: 300 mm (11.81 inch) 301 ... 400 mm (11.85 ... 15.75 inch) Initial: 400 mm (15.75 inch) 401 ... 500 mm (15.79 ... 19.68 inch) Initial: 500 mm (19.68 inch) 501 ... 600 mm (19.72 ... 23.62 inch) Initial: 600 mm (23.62 inch) 601 ... 800 mm (23.66 ... 31.50 inch) Initial: 800 mm (31.50 inch) 801 ... 1 000 mm (31.54 ... 39.37 inch) Initial: 1 000 mm (39.37 inch) 1 001 ... 1 250 mm (39.41 ... 49.21 inch) Initial: 1 250 mm (49.21 inch) 1 251 ... 1 500 mm (49.25... 59.05 inch) Initial: 1 500 mm (59.05 inch) Special length < 30 mm (1.18 inch) or > 1500 mm (59.00 inch)	A 0 B 0 C 0 D 0 E 0 F 0 G 0 H 0 J 0 K 0 X 0	
Measurement tip diameter 6 mm (0.24 inch) 8 mm (0.31 inch) (with sleeve) (with sleeve = not replaceable) 10 mm (0.39 inch) (with sleeve) (with sleeve = not replaceable)	6 8 0	

Selection and Ordering data	Article No.	Ord. Code
SITRANS TS500 Temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types	7MC7500-	
Extension X Without extension European type: X=65 (M=81 mm) (3.15 inch) adjustable European type: X=139 mm (5.47 inch) (M=155 mm (6.10 inch)) adjustable (DIN standard length for L=110) European type: X=149 mm (5.87 inch) (M=165 mm (6.50 inch)) adjustable European type: NIP, = 150 mm (5.91 inch) not adjustable (NPT1/2") European type: X=150 mm (5.91 inch) NUN adjustable (NPT1/2") American type: X=74 mm (2.91 inch) integrated sensor spring, NIP, not adjustable (NPT1/2"), Umin = 100 mm American type: X=150 mm (5.91 inch) integrated sensor spring NUN adjustable (NPT1/2")	0 1 2 3 4 5 6 8	
Extension X, customer-specific enter customer specific length with Y45, see page 2/99 Order codes 45 ... 150 mm (1.77 ... 5.91 inch) Standard: 150 mm (5.91 inch) 151 ... 300 mm (5.95 ... 11.81 inch) Standard: 300 mm (11.81 inch) 301 ... 450 mm (11.85 ... 17.72 inch) Standard: 450 mm (17.72 inch) Special length < 45 mm (1.77 inch) or > 450 mm (17.7 inch)	9 9 9 9	N 1 N 2 N 3 N 8
Model European type (M24 adjustable)		D

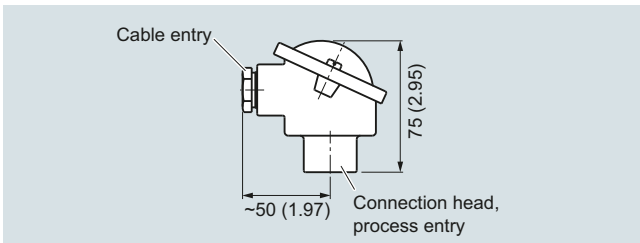
Additional configurations on page after next page!

You find ordering examples on page 2/41!

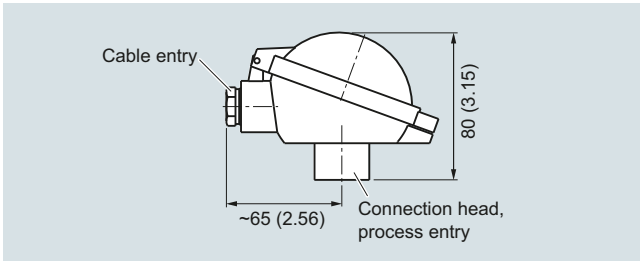
Temperature Measurement

SITRANS TS500

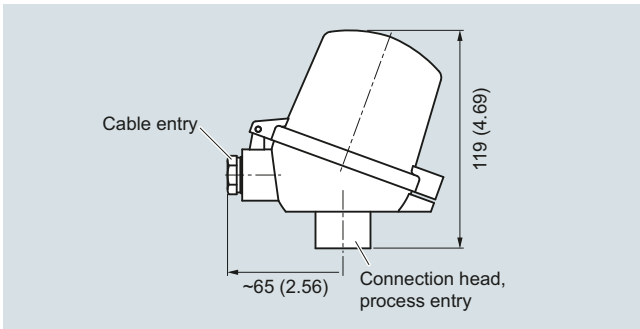
For installation in existing protective tubes



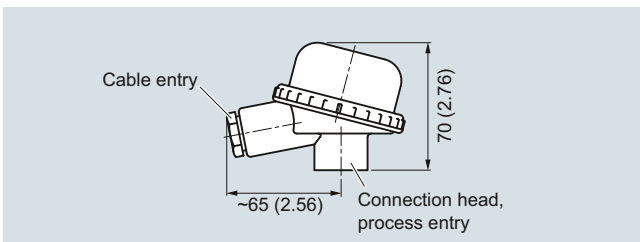
Connection head, aluminum, Type BA0, dimensions in mm (inch)



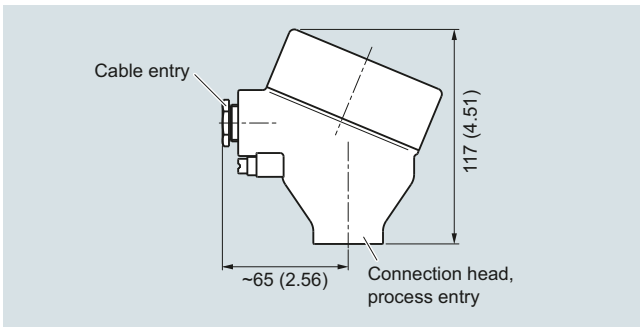
Connection head, aluminum, Type BB0, dimensions in mm (inch)



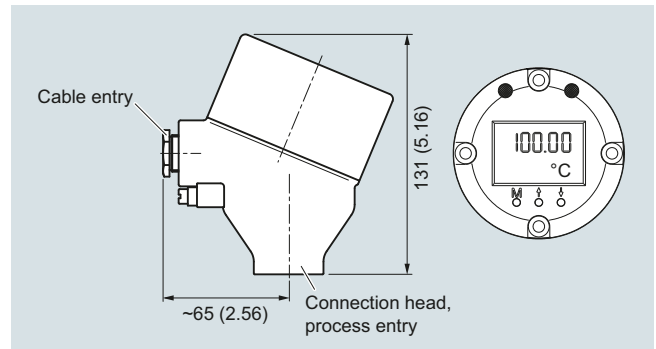
Connection head, aluminum, Type BC0, plastic, type BP0, dimensions in mm (inch)



Connection head, plastic, Type BM0, dimensions in mm (inch)



Connection head, aluminum, Type AG0, stainless steel, Type AU0, dimensions in mm (inch)



Connection head with 4-20 mA display, aluminum, Type AH0, stainless steel, Type AV0, dimensions in mm (inch)

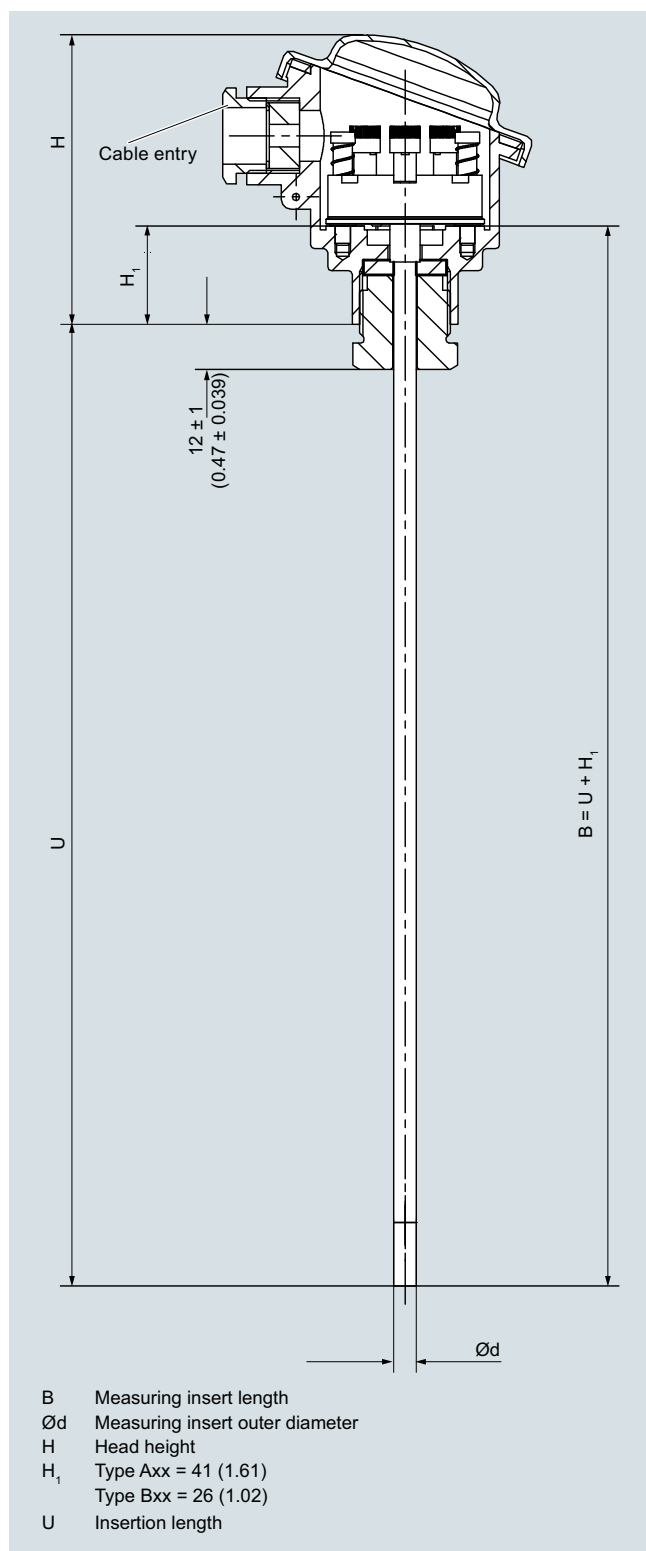
2

Temperature Measurement

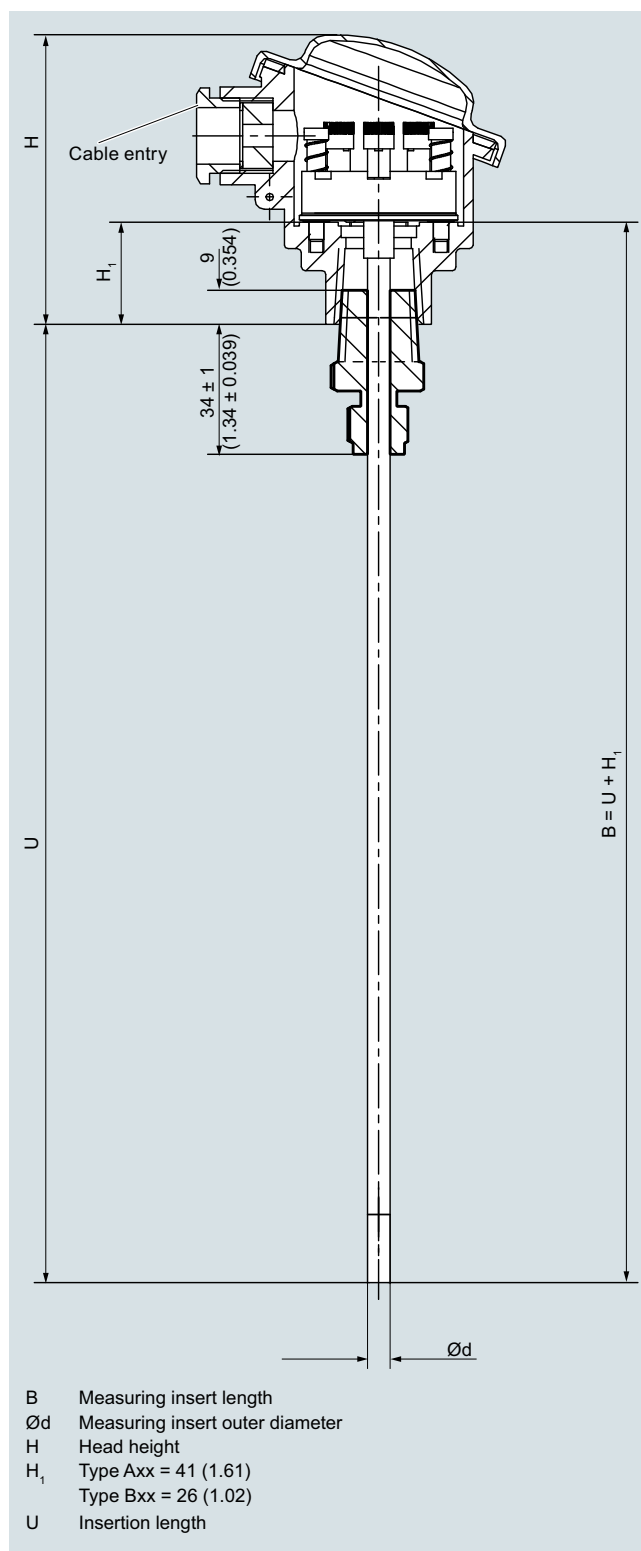
SITRANS TS500

For installation in existing protective tubes

2



SITRANS TS500, option G50 with seal,
input of connection head: M24x1.5, dimensions in mm (inch)



SITRANS TS500, option G51 with seal,
input of connection head: 1/2" NPT, dimensions in mm (inch)

Temperature Measurement SITRANS TS500

For installation in existing protective tubes

2

Selection and Ordering data	Article No.	Ord. Code	Selection and Ordering data	Order code
SITRANS TS500 Temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types			Options Add "-Z" to Article No. and add options, separate extensions with "+" .	
Head Aluminum head, BA0, flange cover, Standard Aluminum head, BB0, low hinged cover, screw connection Aluminum head, BC0, high hinged cover, screw connection Aluminum head, AG0, screw cover, suitable for Ex d ¹⁾ Aluminum head, AH0, screw cover, suitable for Ex d, display ¹⁾ Plastic head, BM0, screw cover Plastic head, BP0high hinged cover, screw connection Stainless steel head, AU0, screw cover, Ex d ¹⁾ Stainless steel head, AV0, screw cover, Ex d, display ¹⁾			Built-in head transmitter Measuring range to be set must be specified with plain text data "Y01". SITRANS TH100, 4 ... 20 mA, Pt100 SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100 SITRANS TH200, 4 ... 20 mA, Universal SITRANS TH200 Ex i (ATEX), 4 ... 20 mA, Universal SITRANS TH300, HART, Universal SITRANS TH300 Ex i (ATEX), HART, Universal SITRANS TH400 PA, Universal SITRANS TH400 PA Ex i, Universal SITRANS TH400 FF, Universal SITRANS TH400 FF Ex i, Universal	
Sensor²⁾ Please note: The accuracy class range can be lower than the measuring range. For more information, see page 2/18 Pt100, Basis, -50 ... +400 °C (-58 ... +752 °F) Pt100, vibration resistant, -50 ... +400 °C (-58 ... +752 °F) Pt100, expanded range, Umin = 100 mm -196 ... +600 °C (-321 ... +1 112 °F) Thermocouple Type J, only class 2, -40 ... +750 °C (-40 ... +1 382 °F) Thermocouple Type K, -40 ... +1 000 °C (-40 ... +1 832 °F) Thermocouple Type N, -40 ... +1 000 °C (-40 ... +1 832 °F)			Explosion protection Without explosion protection requirements (Europe, Australia, New Zealand) E00 Intrinsic safety "i"/"IS ¹⁾ " according to ATEX and IECEx (Europe, Australia, New Zealand) E01 Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to ATEX and IECEx (Europe, Australia, New Zealand) E03 Non-sparking "nA"/"NI" according to ATEX and IECEx (Europe, Australia, New Zealand) E04 Without explosion protection requirements (USA, Canada) Basis FM E10 Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to cFMus (USA); NPT connections at the enclosure are mandatory E13 Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to cFMus (USA, Canada); other connections (M,G,R) E14 Non-sparking "nA"/"NI" according to cFMus (USA, Canada) E16 Without explosion protection requirements (USA, Canada), Basis CSA E17 Intrinsic safety "i"/"IS ¹⁾ " according to cCSAus (USA, Canada) E18 Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to cCSAus (USA, Canada); NPT connections at the enclosure are mandatory E20 Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to cCSAus (USA); other connections (M, G, R) E21 Non-sparking "nA"/"NI" according to cCSAus (USA, Canada) E23 Without explosion protection requirements (China) E54 Intrinsic safety "i"/"IS ¹⁾ " according to NEPSI (China) E55 Flameproof enclosure "d"; dust protection through housing "t" ²⁾ according to NEPSI (China) E56 Non-sparking "nA"/"NI" according to NEPSI (China) E57 Without explosion protection requirements (EAC) E80 Intrinsic safety "i"/"IS ¹⁾ " according to EACEx (EAC) E81 Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to EACEx (EAC) E82 Non-sparking "nA"/"NI" according to EACEx (EAC) E83	
Sensor number/Accuracy Circuit Pt 100: 1 x 4-wire circuit or 2 x 3-wire circuit, see "Measuring technique: Connection types", page 2/20 Single, basic accuracy (Class 2/Class B) 1 Single, increased accuracy (Class 1/Class A) 2 Single, highest accuracy (Class AA) 3 Double, basic accuracy (Class 2/Class B) 5 Double, increased accuracy (Class 1/Class A) 6 Double, highest accuracy (Class AA) 7			Marine approvals Det Norske Veritas Germanischer Lloyd (DNV GL) D01 Bureau Veritas (BV) D02 Lloyd's Register of Shipping (LR) D04 American Bureau of Shipping (ABS) D05	
Selection and Ordering data			Certificates and approvals EN 10204-3.1 Factory certificate: visual, measurement and functional inspection C34 EN 10204-2.1: Declaration of compliance with the order C35	
Further designs Add "-Z" to Article No. and specify Order code.				
Insertion length customer-specific Select range, enter desired length in plain text (No entry = standard length)			Y44	
Extension length customer-specific Select range, enter desired length in plain text (No entry = standard length)			Y45	

¹⁾ Ex d in connection with Order code E03

²⁾ Pt1000 versions are also available. To find these, please switch to Online Configuration in the PIA Life Cycle Portal: www.siemens.com/pia-portal

Temperature Measurement

SITRANS TS500

For installation in existing protective tubes

Selection and Ordering data	Order code
Designation, calibration	
Stainless steel TAG plate , enter lettering in plain text	Y15
Plant calibration per 1 point, enter temperature in plain text	Y33
Transmitter options	
Transmitter, enter complete setting in plain text (Y01:+/-NNNN ... +/-NNNN C,F), marking on the device when Order code "Y15" is selected	Y01
Enter measuring point (max. 8 characters) in plain text	Y17
Transmitter, enter measuring point description (max. 16 characters) in plain text	Y23
Transmitter, enter measuring point text (max. 32 characters) in plain text	Y24
Transmitter, enter bus address in plain text	Y25
Transmitter, fail-safe value 3.6 mA (instead of 22.8 mA)	U36
Transmitter with a SIL 2 conformity	C20
Transmitter with a SIL 2/3 conformity	C23
Transmitter test protocol (5 points)	C11
Further options	
Connection form, flying leads (for the direct transmitter assembly, delivery without screws and springs)	G01
M12 device plug (in combination with 1x Pt100 and/or transmitter, Non-Ex and intrinsically safe, max. IP65/67)	G12
Han 7D device plug (Non Ex and intrinsically safe, without mating connector max. IP65/67)	G13
Connection head with 1/2" NPT thread without cable gland, for AU0 and AH0 only IP66	G20
Input of the connection head: M24x1.5, with sealing screw, Umin = 50 mm	G50
Input of the connection head: 1/2" NPT, with sealing screw, Umin = 50 mm	G51
Input of the connection head: M24x1.5, open, Umin = 50 mm	G52
Input of the connection head: 1/2" NP, open, Umin = 50 mm	G53
with outer earth screw for heads AG0, AH0, AU0 and AV0	A02
with inner earth screw for heads BC0, AG0, AH0, AU0 and AV0	A03
Option not found?	
Handling number special version	Y99

1) Please select Ex i version of the optional transmitter.

2) Only with connection heads code AG0, AH0, AU0, AV0, without cable gland (please select non-Ex version of the optional transmitter).

You find ordering examples on page 2/41.

Accessories, see page 2/238.