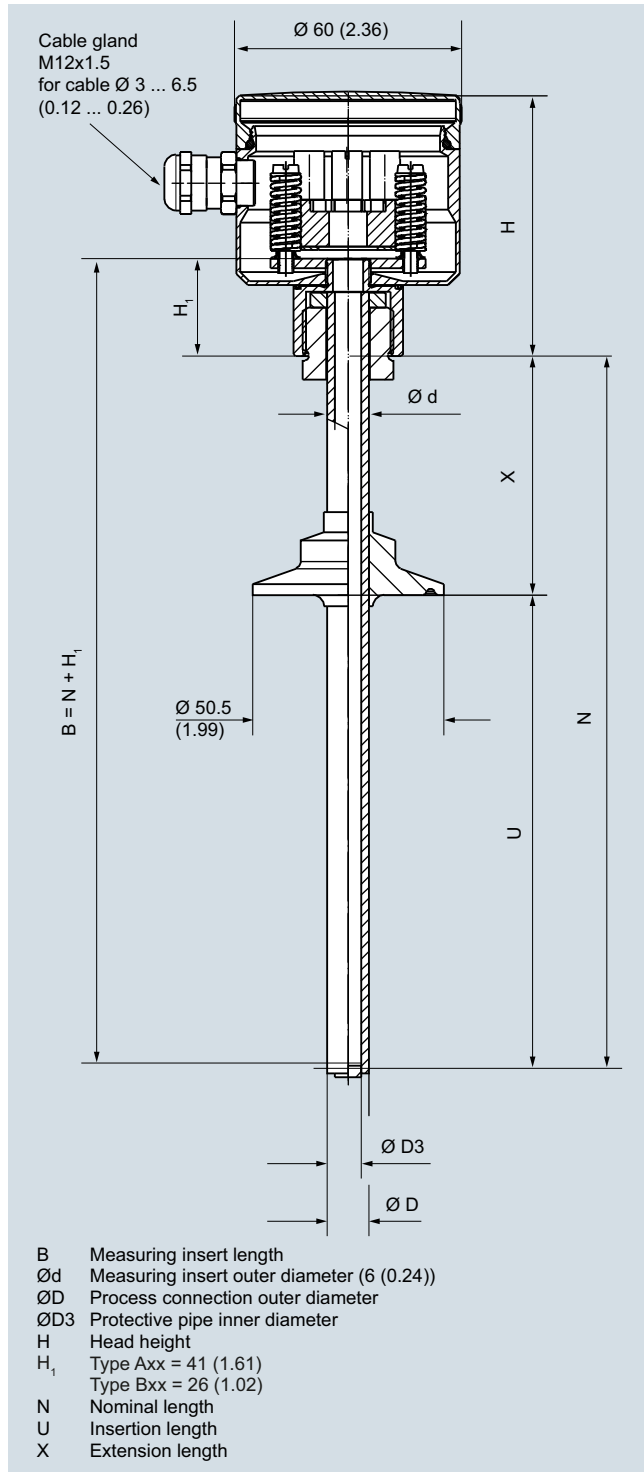


## Temperature Measurement

### SITRANS TS300

For food, pharmaceuticals and biotechnology modular design

#### Dimensional drawings



SITRANS TS300 modular design

For food, pharmaceuticals and biotechnology modular design

Selection and Ordering data		Article No.	Order code	Selection and Ordering data		Article No.	Order code
<b>SITRANS TS300 for food, pharmaceuticals and biotechnology, modular design for installation in pipelines and vessels</b>		7MC8005-	0 - 0	<b>SITRANS TS300 for food, pharmaceuticals and biotechnology, modular design for installation in pipelines and vessels</b>		7MC8005-	0 - 0
<a href="#">Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</a>				<b>Neck tube length X</b>			
<b>Head</b>				65 mm (2.56 inch) [M = 80 mm (3.15 inch)] 130 mm (5.12 inch) [M = 145 mm (5.71 inch)] Special version: (add Order code and plain text)		1	
Stainless steel head, BS0, screw cover (Standard version)		5		<b>Insertion length</b>		2	
Aluminum head, BA0, flange cover standard		1		Enter customer specific length with Y44, see Order codes below		9	N 1 Y
Plastic cover, BM0, screw cover		2		15 mm (0.59 inch)			
Aluminum head, BB0, hinged cover low		3		16 ... 35 mm (0.63 ... 1.38 inch) Initial: 35 mm (1.38 inch)			
Aluminum head, BC0, hinged cover high		4		36 ... 50 mm (1.42 ... 1.97 inch) Initial: 50 mm (1.97 inch)			
Special version: (add Order code and plain text)		9	H 1 Y	51 ... 100 mm (2.01 ... 3.94 inch) Initial: 100 mm (3.94 inch)			
<b>Process connection, material 1.4404 or 1.4435/316L</b>				101 ... 160 mm (3.98 ... 6.30 inch) Initial: 160 mm (6.30 inch)			
Milk pipe union to DIN 11851 with slotted union nut and nominal diameter/pressure				161 ... 250 mm (6.34 ... 9.84 inch) Initial: 250 mm (9.84 inch)			
DN 25/PN 40		AA		251 ... 400 mm (9.88 ... 15.75 inch) Initial: 400 mm (15.75 inch)			
DN 32/PN 40		AB		1 ... 4 inch, Initial: 4 inch			
DN 40/PN 40		AC		4 ... 6 inch, Initial: 6 inch			
DN 50/PN 25		AD		6 ... 9 inch, Initial: 9 inch			
Clamp connection:				Special version: (add Order code and plain text)			
ISO 2852	DIN 32676	Tri-Clamp	Outer diameter D				
–	–	1/2" / 3/4"	25.0 mm	<b>Sensor</b>			
DN 25/33.7/38	DN 25/32/40	1", 1 1/2"	50.5 mm	Thin-film technology: measuring range -50 ... +400 °C (-58 ... +752 °F)			
DN 40/51	DN 50	2"	64.0 mm	2 x Pt100, class A, three-wire 1 x Pt100, class A, four-wire			
DN 63.5	–	2 1/2"	77.5 mm	Special version: (add Order code and plain text)			
DN 88.9	DN 80	–	106.0 mm	<b>Further designs</b>			
Varivent connection (Tuchenhausen)				Add "-Z" to Article No. and add Order code			
Ø D <sub>6</sub> = 50 mm (1.97 inch), for Varivent housing DN 25 and DN 1"				Process connection completely electropolished			P01
Ø D <sub>6</sub> = 68 mm (2.68 inch), for Varivent housing DN 40 ... 125 and 1 1/2" ... 6"				Hygiene version (R <sub>a</sub> < 0.8 µm (3.1 x 10 <sup>-5</sup> inch)) Certificates			H01
NEUMO/BioControl				<ul style="list-style-type: none"> <li>Roughness depth measurement R<sub>a</sub> certified by factory certificate to EN 10204-3.1</li> <li>Material certificate to EN 10204-3.1</li> </ul>			C18
Size 25				TAG plate made of stainless steel specify TAG No. in plain text			C12
Size 50				Test report (at 0, 50 and 100%) specify measuring range in plain text			Y15
Size 65				If optional head transmitters are integrated, please note that all calibration points are located in the set measuring range. If the points are located outside the standard measuring range, a Y01 addition is always required.			Y33
Ingold flange				<b>Insertion length customer-specific</b> Select range, enter desired length in plain text (No entry = standard length)			Y44
DN 25 with hexagon union nut G 1 1/4", mounting length 40 mm (1.57"), diameter 24.8 mm (0.98") incl. O-ring							
Welding piece (sphere diameter 30 x 40 mm (1.2 x 1.6 inch) long)							
Special version: Type of screwed gland and nominal diameter (add Order code and plain text)							
<b>Protective tube</b>							
Ø D = 6 mm (0.24 inch)							
Ø D = 9 mm (0.35 inch)							
Ø D = 9 mm (0.35 inch)							
Ø D = 9 mm (0.35 inch) tapered tip							
D <sub>2</sub> = 5 Ø x 20 mm (0.2 x 0.79 inch)							
Special version: (add Order code and plain text)							
<b>Measuring insert</b>							
Ø 3/3.2 mm, (0.12/0.13 inch) miner. insul.							
Ø 6 mm (0.24 inch)							
Ø 6 mm (0.24 inch) miner. insul.							
Ø 3/3.2 mm, (0.12/0.12 inch) miner. insul.							
Special version: (add Order code and plain text)							

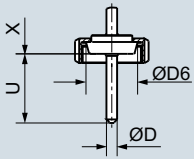
# Temperature Measurement

## SITRANS TS300

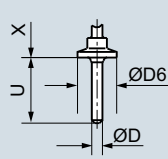
For food, pharmaceuticals and biotechnology modular design

### Dimensional drawings

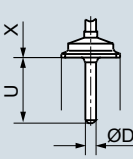
Conical connection with union nut according acc. to DIN 11851



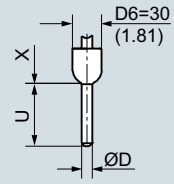
Tri-Clamp-connection



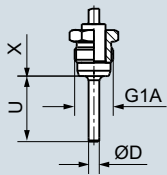
Clamp-connection acc. to DIN 32676 or ISO 2852



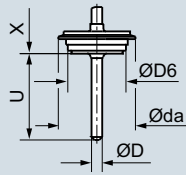
Ball weld sleeve Ball 30 x 40 (1.18 x 1.58)



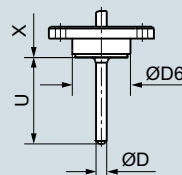
G1A without dead space due to conical metal cone



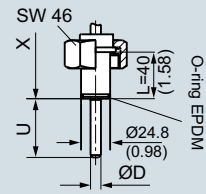
Varivent connection



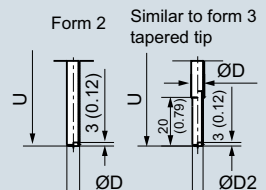
NEUMO BioControl



Ingold connection DN 25 with union nut



Protective pipe design based on DIN 43772



Process connections, dimensions in mm (inch)

Selection and Ordering data	Order code
<b>Further designs</b>	
Add <b>"-Z"</b> to Article No. and specify Order code.	
<b>Built-in head transmitter</b>	
Measuring range to be set must be specified with plain text data "Y11".	
SITRANS TH100, 4 ... 20 mA, Pt100	<b>T10</b>
SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	<b>T11</b>
SITRANS TH200, 4 ... 20 mA, universal	<b>T20</b>
SITRANS TH200 Ex i(ATEX), 4 ... 20 mA, universal	<b>T21</b>
SITRANS TH300, HART, universal	<b>T30</b>
SITRANS TH300 Ex i (ATEX), HART, universal	<b>T31</b>
SITRANS TH400 PA, universal	<b>T40</b>
SITRANS TH400 PA Ex i, universal	<b>T41</b>
SITRANS TH400 FF, universal	<b>T45</b>
SITRANS TH400 FF Ex i, universal	<b>T46</b>
<b>Transmitter options</b>	
Transmitter, enter complete setting in plain text (Y11:+/-NNNN ... +/-NNNN C,F)	<b>Y11</b>
Enter measuring point (max. 8 characters) in plain text	<b>Y17</b>
Transmitter, enter measuring point description (max. 16 characters) in plain text	<b>Y23</b>
Transmitter, enter measuring point text (max. 32 characters) in plain text	<b>Y24</b>
Transmitter, enter bus address in plain text	<b>Y25</b>
Transmitter, fail-safe value 3.6 mA (instead of 22.8 mA)	<b>U36</b>
Transmitter with a SIL 2 conformity	<b>C20</b>
Transmitter with a SIL 2/3 conformity	<b>C23</b>
Transmitter test protocol (5 points)	<b>C11</b>
<b>Further options</b>	
Connection form, flying leads (for the direct transmitter assembly, delivery without screws and springs)	<b>G01</b>
M12 plug (in combination with 1x Pt100 and/or transmitter, Non-Ex)	<b>G12</b>
<b>Option not found?</b>	
Specify special version in plain text	<b>Y98</b>
Process number for the special version	<b>Y99</b>

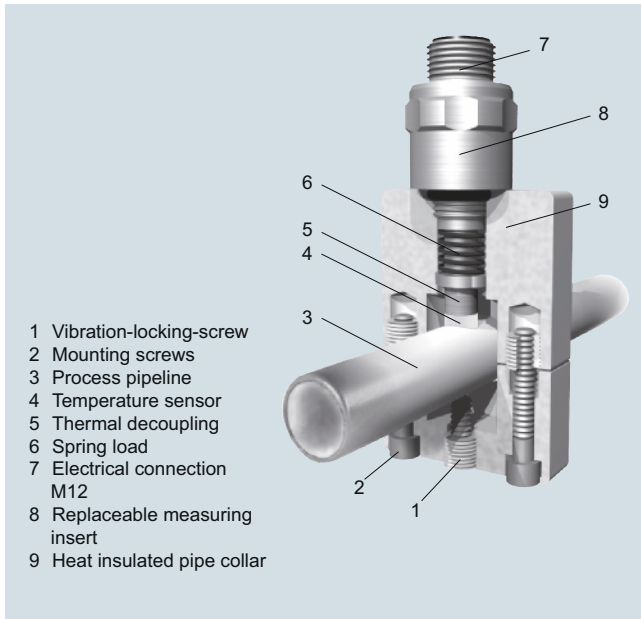
## Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology clamp-on design

### Dimensional drawings

2



Resistance thermometer with protection pipe in Clamp-on design, dimensions in mm (inch)

# Temperature Measurement

## SITRANS TS300

For food, pharmaceuticals and biotechnology clamp-on design

Selection and Ordering data		Article No.	Ord. code	Selection and Ordering data		Article No.	Ord. code
<b>SITRANS TS300</b>		7MC8016-	0	<b>SITRANS TS300</b>		7MC8016-	0
for food, pharmaceuticals and biotechnology				for food, pharmaceuticals and biotechnology			
<b>Clamp-on design for the measuring of the pipe surface temperature</b>				<b>Clamp-on design for the measuring of the pipe surface temperature</b>			
<a href="#">Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</a>							
<b>Design</b>							
Acc. to IEC 60751, class A		1		38.1 (1.50)		A3	
[-40 ... +150 °C (-40 ... +302 °F)]				41.0 (1.61)		B3	
Process optimized for steam sterilization		0		42.4 (1.67)		C3	
[100 ... 150 °C (212 ... 302 °F)]				44.5 (1.75)		D3	
<b>Type of connection</b>				48.3 (1.90)      90 x 85 x 20		E3	
Round connector M12 x 1		A		50.8 (2.00)      (3.54 x 3.35 x 0.79)		F3	
connection head form B, stainless steel		B		53.0 (2.09)		G3	
4 ... 20 mA compact transmitter		C		54.0 (2.13)		H3	
SITRANS TH100slim (standard measuring range 0 ... 100 °C (32 ... 212 °F))				57.0 (2.24)		J3	
<b>Mounting with pipe collar</b>				Special size <sup>1)</sup>		Z0    K1 Y	
<b>Pipe outer-Ø mm (inch)</b>	<b>Collar size mm (inch)</b>						
4 (0.16)		A1					
6 (0.24)		B1					
6.35 (0.25)		C1					
8 (0.31)		D1					
9.35 (0.37)		E1					
10 (0.39)		F1					
10.2 (0.40)	50 x 35 x 20	G1					
10.3 (0.41)	(1.97 x 1.38 x 0.79)	H1					
12 (0.47)		J1					
12.7 (0.50)		K1					
13 (0.51)		L1					
13.5 (0.53)		M1					
13.7 (0.54)		N1					
14 (0.55)		P1					
15.88 (0.62)		Q1					
16 (0.63)		R1					
17.2 (0.68)		S1					
18.0 (0.71)		A2					
19.0 (0.74)		B2					
19.05 (0.75)		C2					
20.0 (0.79)		D2					
21.3 (0.84)		E2					
22.0 (0.87)		F2					
23.0 (0.90)		G2					
24.0 (0.94)		H2					
25.0 (0.98)		J2					
25.4 (1.00)		K2					
26.7 (1.05)		L2					
26.9 (1.06)		M2					
28.0 (1.10)	70 x 70 x 20	N2					
29.0 (1.14)	(2.76 x 2.76 x 0.79)	P2					
30.0 (1.18)		Q2					
31.8 (1.25)		R2					
32.0 (1.26)		S2					
33.4 (1.31)		T2					
33.7 (1.33)		U2					
34.0 (1.34)		V2					
35.0 (1.38)		W2					
36.0 (1.42)		X2					
38.0 (1.49)		Y2					

<sup>1)</sup> Special sizes for pipe outer diameters: In order to process "Z0" special sizes, the following two additional items of information are essential:  
 - the required diameter specified in plain text under "K1Y"  
 - Selection of the corresponding pipe collar, clamping band or clamping bracket size (Order codes "S11" to "S35")

Recommended for all versions: Heat-conductive-compound, silicone-free, syringe 3 g, Order code: L15 (see page 2/53)

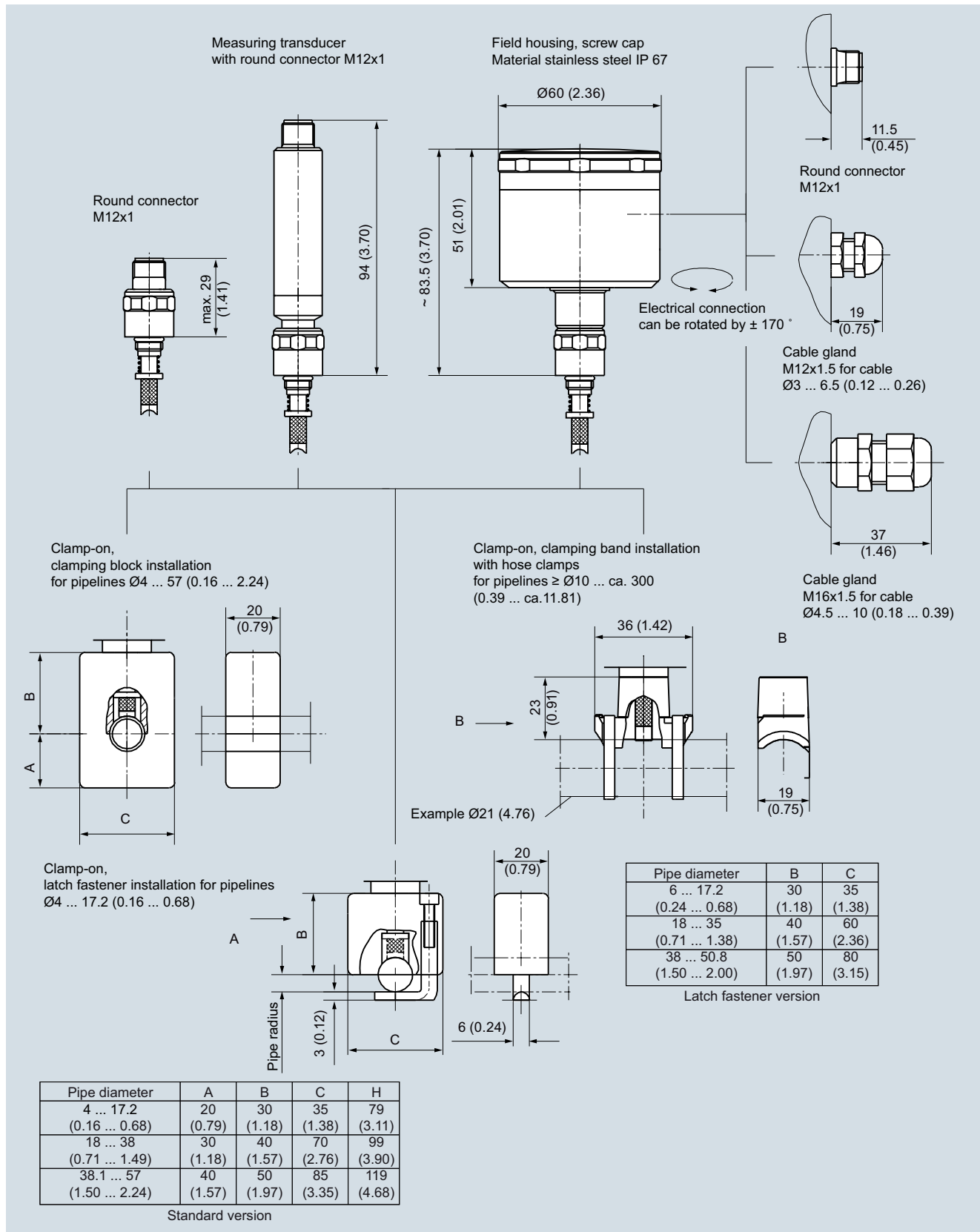
# Temperature Measurement

## SITRANS TS300

For food, pharmaceuticals and biotechnology clamp-on design

### Dimensional drawings

2



SITRANS TS300 Clamp-on design, round connector, field housing, cable gland, variants, dimensions in mm (inch)

For food, pharmaceuticals and biotechnology clamp-on design

Selection and Ordering data	Order code	Selection and Ordering data	Order code
<b>Further designs</b>		<b>Further Options</b>	
Add <b>"-Z"</b> to Article No. and specify Order code.		Assignment marking, engraving instead of adhesive label (Serial number and pipe diameter on plug and plastic block)	
<b>Built in head transmitter</b>		2 mm drain hole	
Measuring range to be set must be specified with plain text data "Y11".		Sensor 4-wire connection	
SITRANS TH100, 4 ... 20 mA, Pt100	<b>T10</b>	Heat-conductive-compound, silicone-free, syringe 3 g	
SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	<b>T11</b>	<b>Suffixes</b>	
SITRANS TH200, 4 ... 20 mA, universal	<b>T20</b>	Add <b>"-Z"</b> to Article No. and specify Order code and plain text.	
SITRANS TH200 Ex i (ATEX), 4 ... 20 mA, universal	<b>T21</b>	TAG plate made of stainless steel (specify TAG No. in plain text)	
SITRANS TH300, HART, universal	<b>T30</b>	Test report at 50 % and 100 % (specify the measuring range in plain text)	
SITRANS TH300 Ex i (ATEX), HART, universal	<b>T31</b>	If optional head transmitters are integrated, please note that all calibration points are located in the set measuring range. If the points are located outside the standard measuring range, a Y01 addition is always required.	
SITRANS TH400 PA, universal	<b>T40</b>	Special version, specify in plain text	
SITRANS TH400 PA Ex i, universal	<b>T41</b>	Process number for special version	
SITRANS TH400 FF, universal	<b>T45</b>		
SITRANS TH400 FF Ex i, universal	<b>T46</b>		
<b>Transmitter options</b>			
Transmitter, enter complete setting in plain text (Y11:+/-NNNN ... +/-NNNN C,F)	<b>Y11</b>		
Enter measuring point (max. 8 characters) in plain text	<b>Y17</b>		
Transmitter, enter measuring point description (max. 16 characters) in plain text	<b>Y23</b>		
Transmitter, enter measuring point text (max. 32 characters) in plain text	<b>Y24</b>		
Transmitter, enter bus address in plain text	<b>Y25</b>		
Transmitter, fail-safe value 3.6 mA (instead of 22.8 mA)	<b>U36</b>		
Transmitter with a SIL 2 conformity	<b>C20</b>		
Transmitter with a SIL 2/3 conformity	<b>C23</b>		
Transmitter test protocol (5 points)	<b>C11</b>		
<b>Other cable gland (only for connection head)</b>			
Polyamide for cable diameter 4.5 ... 10 mm (0.18 ... 0.39 inch)	<b>K02</b>		
Stainless steel for cable diameter 3 ... 6.5 mm (0.12 ... 0.25 inch)	<b>K03</b>		
Round connector M12 x 1	<b>K11</b>		
<b>Deviating pipe; mm (inch)</b>	<b>Collar size; mm (inch)</b>		
4 ... 17.2 (0.16 ... 0.68)	50 x 35 (1.97 x 1.38)	<b>S11</b>	
18 ... 38 (0.71 ... 1.49)	70 x 70 (2.76 x 2.76)	<b>S12</b>	
38.1 ... 57 (1.5 ... 2.24)	90 x 85 (3.54 x 3.35)	<b>S13</b>	
Larger nominal diameters on request		<b>S19</b>	
<b>Space-saving mounting (latch fastening)</b>			
Outer pipe; mm (inch):			
4 ... 17.2 (0.16 ... 0.68)		<b>S21</b>	
18 ... 35 (0.71 ... 1.38)		<b>S22</b>	
(Clamping band version recommended, see below)			
38 ... 50.8 (1.45 ... 2.00)		<b>S23</b>	
(Clamping band version recommended, see below)			
<b>Clamping band fastening (specify external tube diameter same as for standard collar)</b>			
Outer pipe; mm (inch):			
10 ... 57 (0.39 ... 2.24)		<b>S31</b>	
58 ... 220 (2.28 ... 8.66)		<b>S32</b>	
Without clamping band		<b>S35</b>	