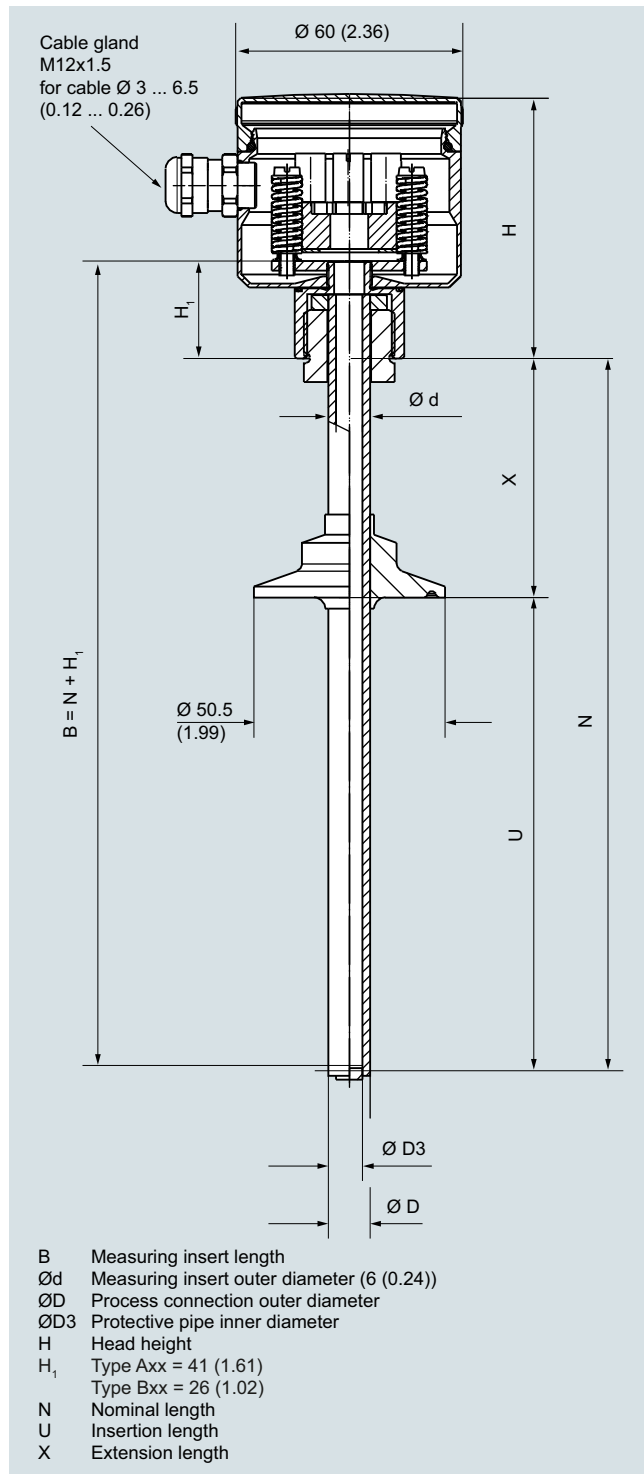


Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology modular design

Dimensional drawings



SITRANS TS300 modular design, dimensions in mm (inch)

Selection and Ordering data		Article No.	Order code	Selection and Ordering data		Article No.	Order code
SITRANS TS300 for food, pharmaceuticals and biotechnology, modular design for installation in pipelines and vessels		7MC8005-	0 - 0	SITRANS TS300 for food, pharmaceuticals and biotechnology, modular design for installation in pipelines and vessels		7MC8005-	0 - 0
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.				Neck tube length X			
Head Stainless steel head, BS0, screw cover (Standard version)		5		65 mm (2.56 inch) [M = 80 mm (3.15 inch)]		1	
Aluminum head, BA0, flange cover standard		1		130 mm (5.12 inch) [M = 145 mm (5.71 inch)]		2	
Plastic cover, BM0, screw cover		2		Special version: (add Order code and plain text)		9	N 1 Y
Aluminum head, BB0, hinged cover low		3		Insertion length Enter customer specific length with Y44, see Order codes below			
Aluminum head, BC0, hinged cover high		4		15 mm (0.59 inch)		B	
Special version: (add Order code and plain text)		9	H 1 Y	16 ... 35 mm (0.63 ... 1.38 inch) Initial: 35 mm (1.38 inch)		C	
Process connection, material 1.4404 or 1.4435/316L Milk pipe union to DIN 11851 with slotted union nut and nominal diameter/pressure				36 ... 50 mm (1.42 ... 1.97 inch) Initial: 50 mm (1.97 inch)		D	
DN 25/PN 40		AA		51 ... 100 mm (2.01 ... 3.94 inch) Initial: 100 mm (3.94 inch)		E	
DN 32/PN 40		AB		101 ... 160 mm (3.98 ... 6.30 inch) Initial: 160 mm (6.30 inch)		F	
DN 40/PN 40		AC		161 ... 250 mm (6.34 ... 9.84 inch) Initial: 250 mm (9.84 inch)		G	
DN 50/PN 25		AD		251 ... 400 mm (9.88 ... 15.75 inch) Initial: 400 mm (15.75 inch)		H	
Clamp connection:				1 ... 4 inch, Initial: 4 inch		J	
ISO 2852	DIN 32676	Tri-Clamp	Outer diameter D	4 ... 6 inch, Initial: 6 inch		K	
-	-	1/2" / 3/4"	25.0 mm	6 ... 9 inch, Initial: 9 inch		L	
DN 25/33.7/38	DN 25/32/40	1", 1 1/2"	50.5 mm	Special version: (add Order code and plain text)		Z	P 1 Y
DN 40/51	DN 50	2"	64.0 mm	Sensor Thin-film technology: measuring range -50 ... +400 °C (-58 ... +752 °F)			
DN 63.5	-	2 1/2"	77.5 mm	2 x Pt100, class A, three-wire		G	
DN 88.9	DN 80	-	106.0 mm	1 x Pt100, class A, four-wire		H	
Varivent connection (Tuchenhausen)				Special version: (add Order code and plain text)		Z	Q 1 Y
Ø D ₆ = 50 mm (1.97 inch), for Varivent housing DN 25 and DN 1"		KU		Further designs Add "-Z" to Article No. and add Order code			
Ø D ₆ = 68 mm (2.68 inch), for Varivent housing DN 40 ... 125 and 1 1/2" ... 6"		KV		Process connection completely electropolished			P01
NEUMO/BioControl				Hygiene version (R _a < 0.8 µm (3.1 x 10 ⁻⁵ inch))			H01
Size 25		BA		Certificates			
Size 50		BB		• Roughness depth measurement R _a certified by factory certificate to EN 10204-3.1			C18
Size 65		BC		• Material certificate to EN 10204-3.1			C12
Ingold flange				TAG plate made of stainless steel specify TAG No. in plain text			Y15
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		JA		Test report (at 0, 50 and 100%) specify measuring range in plain text			Y33
Welding piece (sphere diameter 30 x 40 mm (1.2 x 1.6 inch) long)		LA		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.			
Special version: Type of screwed gland and nominal diameter (add Order code and plain text)		ZA	J 1 Y	Insertion length customer-specific Select range, enter desired length in plain text (No entry = standard length)			Y44
Protective tube							
Ø D = 6 mm (0.24 inch)			1				
Ø D = 9 mm (0.35 inch)			2				
Ø D = 9 mm (0.35 inch) tapered tip			3				
D ₂ = 5 Ø x 20 mm (0.2 x 0.79 inch)			4				
Special version: (add Order code and plain text)			9				L 1 Y

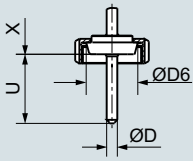
Temperature Measurement

SITRANS TS300

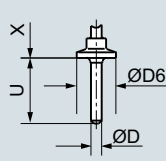
For food, pharmaceuticals and biotechnology modular design

Dimensional drawings

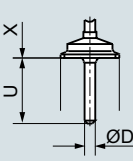
Conical connection with union nut according acc. to DIN 11851



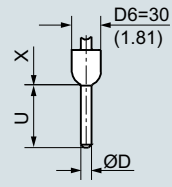
Tri-Clamp-connection



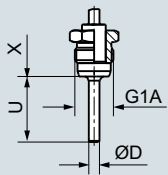
Clamp-connection acc. to DIN 32676 or ISO 2852



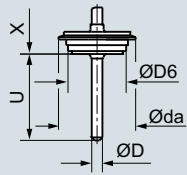
Ball weld sleeve Ball 30 x 40 (1.18 x 1.58)



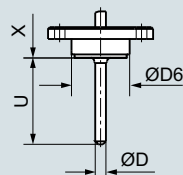
G1A without dead space due to conical metal cone



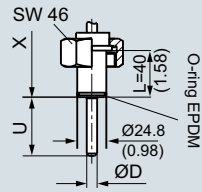
Varivent connection



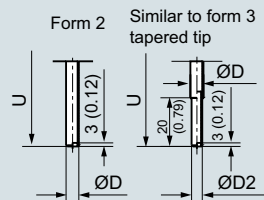
NEUMO BioControl



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
Further designs	
Add "-Z" to Article No. and specify Order code.	
Built-in head transmitter	
Measuring range to be set must be specified with plain text data "Y11".	
SITRANS TH100, 4 ... 20 mA, Pt100	T10
SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	T11
SITRANS TH200, 4 ... 20 mA, universal	T20
SITRANS TH200 Ex i(ATEX), 4 ... 20 mA, universal	T21
SITRANS TH300, HART, universal	T30
SITRANS TH300 Ex i (ATEX), HART, universal	T31
SITRANS TH400 PA, universal	T40
SITRANS TH400 PA Ex i, universal	T41
SITRANS TH400 FF, universal	T45
SITRANS TH400 FF Ex i, universal	T46
Transmitter options	
Transmitter, enter complete setting in plain text (Y11:+/-NNNN ... +/-NNNN C,F)	Y11
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)	G12
Option not found?	
Specify special version in plain text	Y98
Process number for the special version	Y99

Accessories, see page 2/238.

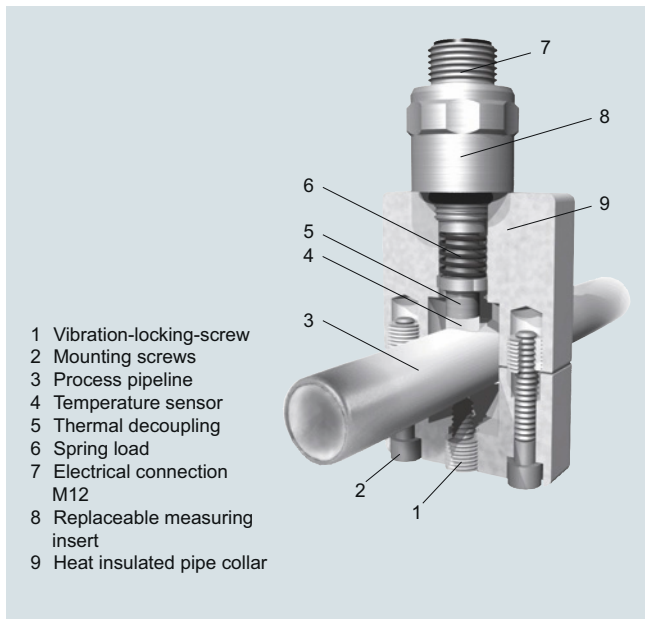
Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology clamp-on design

Dimensional drawings

2



Resistance thermometer with protection pipe in Clamp-on design

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
SITRANS TS300 for food, pharmaceuticals and biotechnology Clamp-on design for the measuring of the pipe surface temperature		7MC8016-	0	SITRANS TS300 for food, pharmaceuticals and biotechnology Clamp-on design for the measuring of the pipe surface temperature		7MC8016-	0
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.				38.1 (1.50) 41.0 (1.61) 42.4 (1.67) 44.5 (1.75) 48.3 (1.90) 90 x 85 x 20 50.8 (2.00) (3.54 x 3.35 x 0.79) 53.0 (2.09) 54.0 (2.13) 57.0 (2.24)			
Design Acc. to IEC 60751, class A [-40 ... +150 °C (-40 ... +302 °F)]		1					A3 B3 C3 D3 E3 F3 G3 H3 J3 Z0 K1 Y
Type of connection Device plug M12 x 1 connection head form B, stainless steel 4 ... 20 mA compact transmitter SITRANS TH100slim (standard measuring range 0 ... 100 °C (32 ... 212 °F))		A B C		Always indicate external tube diameter for ¹⁾ : <ul style="list-style-type: none"> • Installation with tube collar and deviating external tube diameter (S11-S19) • Securing with clamps (S21-S23) • Clamping band installation (S31-S35) 			
Mounting with pipe collar							
Pipe outer-Ø mm (inch)	Collar size mm (inch)						
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					

¹⁾ 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 2/55)

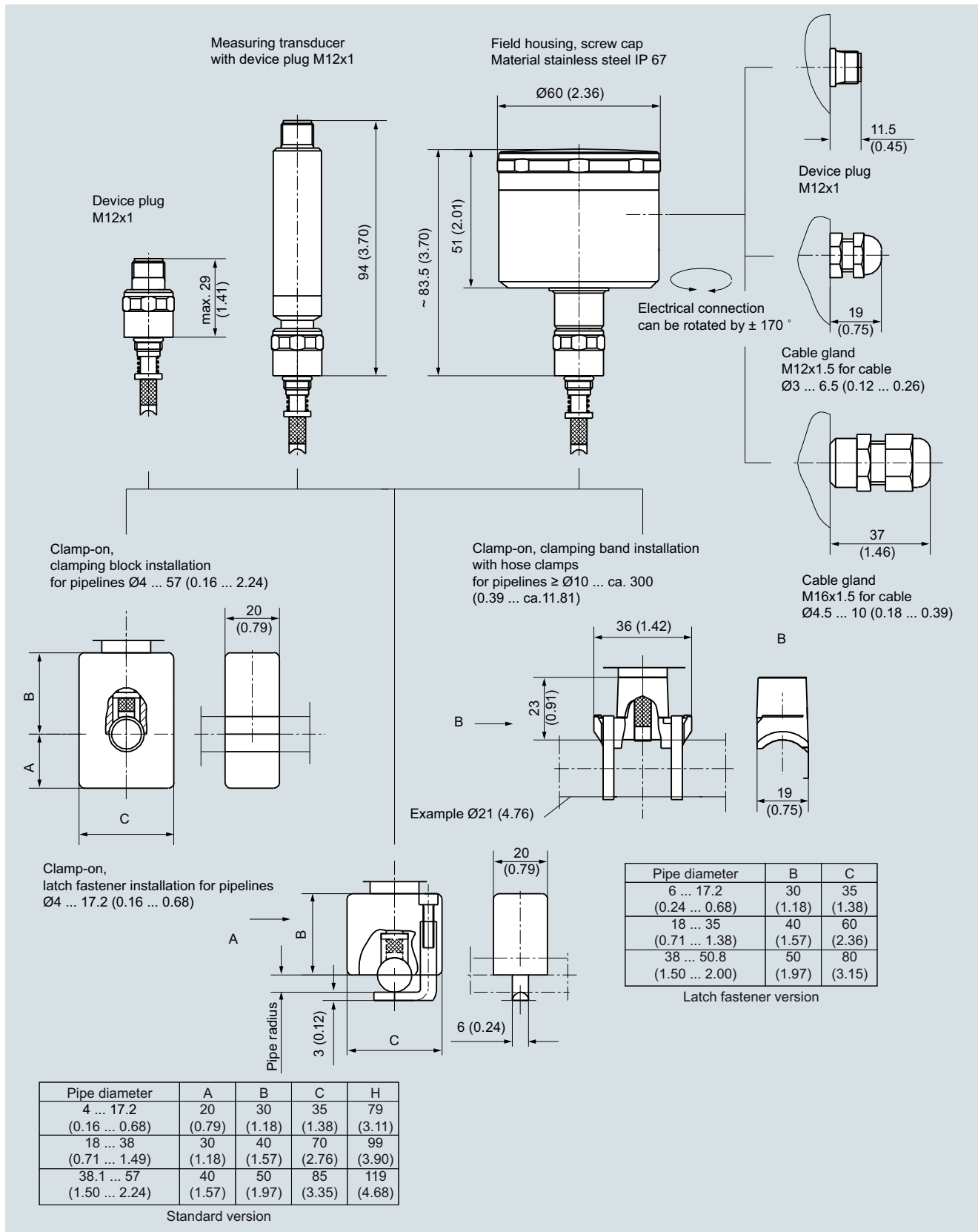
Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology clamp-on design

Dimensional drawings

2



SITRANS TS300 Clamp-on design, device plug, 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
Further designs Add "-Z" to Article No. and specify Order code.		Further Options Assignment marking, engraving instead of adhesive label (Serial number and pipe diameter on plug and plastic block)	L11
Built in head transmitter Measuring range to be set must be specified with plain text data "Y11".		2 mm drain hole	L12
SITRANS TH100, 4 ... 20 mA, Pt100	T10	Sensor 4-wire connection	L14
SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	T11	Heat-conductive-compound, silicone-free, syringe 3 g	L15
SITRANS TH200, 4 ... 20 mA, universal	T20	Suffixes	
SITRANS TH200 Ex i (ATEX), 4 ... 20 mA, universal	T21	Add "-Z" to Article No. and specify Order code and plain text.	
SITRANS TH300, HART, universal	T30	TAG plate made of stainless steel (specify TAG No. in plain text)	Y15
SITRANS TH300 Ex i (ATEX), HART, universal	T31	Test report at 0 %, 50 % and 100 % (specify the measuring range in plain text)	Y33
SITRANS TH400 PA, universal	T40	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 Ex i, universal	T41	Special version, specify in plain text	Y98
SITRANS TH400 FF, universal	T45	Process number for special version	Y99
SITRANS TH400 FF Ex i, universal	T46	Accessories, see page 2/238.	
Transmitter options		<u>Ordering examples:</u>	
Transmitter, enter complete setting in plain text (Y11:+/NNNN ... +/-NNNN C,F)	Y11	Deviating tube diameter 28.5 mm: 7MC8016-1AZ00-Z K1Y+S12 {K1Y: 28.5 mm}	
Enter measuring point (max. 8 characters) in plain text	Y17	Space-saving mounting, tube diameter 38 mm: 7MC8016-1AZ00-Z K1Y + S23 {K1Y: 38 mm}; as of diameter ≥ 18 mm, we recommend using the clamping band installation.	
Transmitter, enter measuring point description (max. 16 characters) in plain text	Y23	Clamping band installation, tube diameter 111 mm: 7MC8016-1AZ00-Z K1Y+S32 {K1Y: 111 mm}	
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		
Other cable gland (only for connection head)			
Polyamide for cable diameter 4.5 ... 10 mm (0.18 ... 0.39 inch)	K02		
Stainless steel for cable diameter 3 ... 6,5 mm (0.12 ... 0.25 inch)	K03		
Device plug M12 x 1	K11		
Deviating pipe; mm (inch)		Collar size; mm (inch)	
4 ... 17.2 (0.16 ... 0.68)		50 x 35 (1.97 x 1.38)	S11
18 ... 38 (0.71 ... 1.49)		70 x 70 (2.76 x 2.76)	S12
38.1 ... 57 (1.5 ... 2.24)		90 x 85 (3.54 x 3.35)	S13
Larger nominal diameters on request			S19
Space-saving mounting (latch fastening)			
Outer pipe; mm (inch):			
4 ... 17.2 (0.16 ... 0.68)	S21		
18 ... 35 (0.71 ... 1.38)	S22		
(Clamping band version recommended, see below)			
38 ... 50.8 (1.45 ... 2.00)	S23		
(Clamping band version recommended, see below)			
Clamping band installation			
Outer pipe; mm (inch):			
10 ... 57 (0.39 ... 2.24)	S31		
58 ... 220 (2.28 ... 8.66)	S32		
Without clamping band	S35		