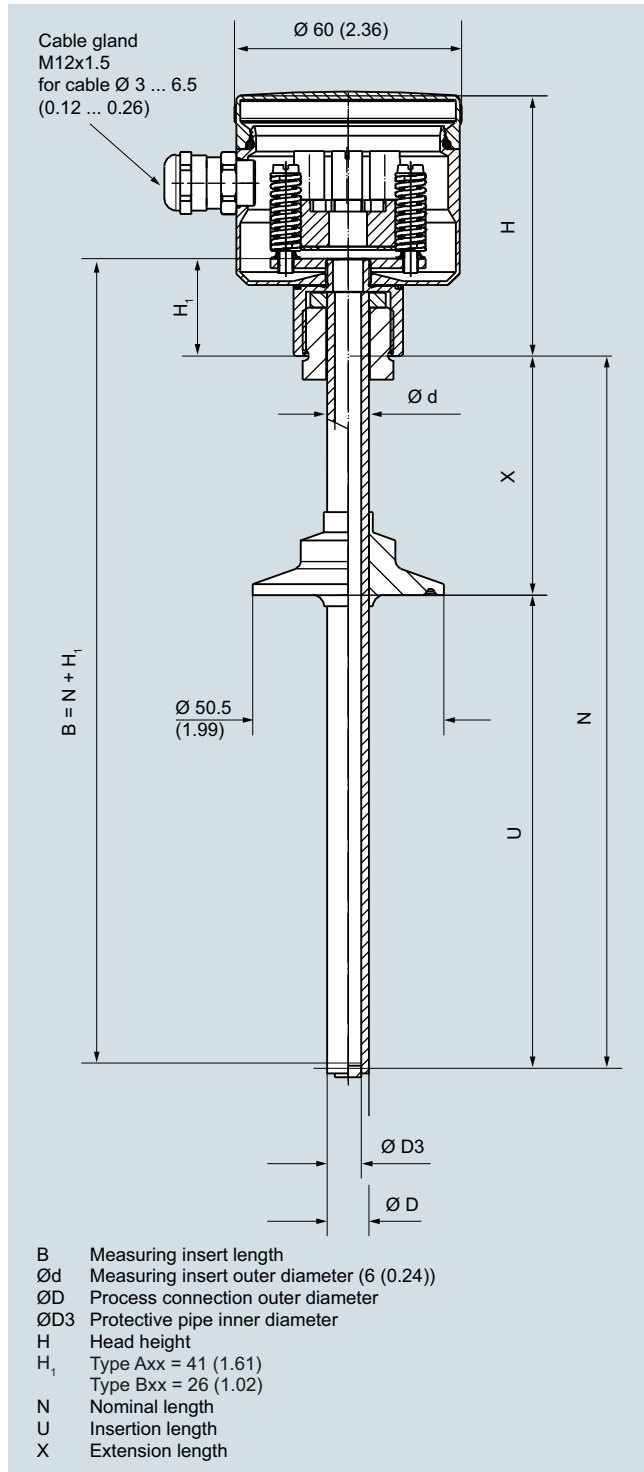


Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology modular design

Dimensional drawings



SITRANS TS300 modular design

Selection and Ordering data		Article No.	Order code
SITRANS TS300 for food, pharmaceuticals and biotechnology, modular design for installation in pipelines and vessels		7MC8005-	
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.			
Head			
Stainless steel head, BS0, screw cover (Standard version)	5		
Aluminum head, BA0, flange cover standard	1		
Plastic cover, BM0, screw cover	2		
Aluminum head, BB0, hinged cover low	3		
Aluminum head, BC0, hinged cover high	4		
Special version: (add Order code and plain text)	9	H 1 Y	
Process connection, material 1.4404 or 1.4435/316L			
Milk pipe union to DIN 11851 with slotted union nut and nominal diameter/pressure			
DN 25/PN 40	AA		
DN 32/PN 40	AB		
DN 40/PN 40	AC		
DN 50/PN 25	AD		
Clamp connection:			
ISO 2852	DIN	Tri-Clamp	Outer diameter D
	32676		
–	–	1/2" / 3/4"	25.0 mm
DN 25/33.7/38	DN 25/32/40	1", 1 1/2"	50.5 mm
DN 40/51	DN 50	2"	64.0 mm
DN 63.5	–	2 1/2"	77.5 mm
DN 88.9	DN 80	–	106.0 mm
CA			
CB			
CC			
CD			
CE			
Varivent connection (Tuchenhausen)			
∅ D ₆ = 50 mm (1.97 inch), for Varivent housing DN 25 and DN 1"	KU		
∅ D ₆ = 68 mm (2.68 inch), for Varivent housing DN 40 ... 125 and 1 1/2" ... 6"	KV		
NEUMO/BioControl			
Size 25	BA		
Size 50	BB		
Size 65	BC		
Ingold flange			
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		
Welding piece (sphere diameter 30 x 40 mm (1.2 x 1.6 inch) long)	LA		
Special version: Type of screwed gland and nominal diameter (add Order code and plain text)	ZA	J 1 Y	
Protective tube			
∅ D = 6 mm (0.24 inch)		1	
∅ D = 9 mm (0.35 inch)		2	
∅ D = 9 mm (0.35 inch)		3	
∅ D = 9 mm (0.35 inch) tapered tip		4	
D ₂ = 5 ∅ x 20 mm (0.2 x 0.79 inch)		9	L 1 Y
Special version: (add Order code and plain text)			

Selection and Ordering data		Article No.	Order code
SITRANS TS300 for food, pharmaceuticals and biotechnology, modular design for installation in pipelines and vessels		7MC8005-	
Neck tube length X			
65 mm (2.56 inch) [M = 80 mm (3.15 inch)]	1		
130 mm (5.12 inch) [M = 145 mm (5.71 inch)]	2		
Special version: (add Order code and plain text)	9	N 1 Y	
Insertion length			
Enter customer specific length with Y44, see Order codes below			
15 mm (0.59 inch)	B		
16 ... 35 mm (0.63 ... 1.38 inch)	C		
Initial: 35 mm (1.38 inch)	D		
36 ... 50 mm (1.42 ... 1.97 inch)	E		
Initial: 50 mm (1.97 inch)	F		
51 ... 100 mm (2.01 ... 3.94 inch)	G		
Initial: 100 mm (3.94 inch)	H		
101 ... 160 mm (3.98 ... 6.30 inch)	J		
Initial: 160 mm (6.30 inch)	K		
161 ... 250 mm (6.34 ... 9.84 inch)	L		
Initial: 250 mm (9.84 inch)	Z	P 1 Y	
251 ... 400 mm (9.88 ... 15.75 inch)			
Initial: 400 mm (15.75 inch)			
1 ... 4 inch, Initial: 4 inch			
4 ... 6 inch, Initial: 6 inch			
6 ... 9 inch, Initial: 9 inch			
Special version: (add Order code and plain text)			
Sensor			
Thin-film technology: measuring range -50 ... +400 °C (-58 ... +752 °F)			
2 x Pt100, class A, three-wire	G		
1 x Pt100, class A, four-wire	H		
Special version: (add Order code and plain text)	Z	Q 1 Y	
Further designs		Order code	
Add "-Z" to Article No. and add Order code			
Process connection completely electropolished	P01		
Hygiene version (R _a < 0.8 µm (3.1 x 10 ⁻⁵ inch))	H01		
Certificates			
• Roughness depth measurement R _a certified by factory certificate to EN 10204-3.1	C18		
• Material certificate to EN 10204-3.1	C12		
TAG plate made of stainless steel specify TAG No. in plain text	Y15		
Test report (at 0, 50 and 100%) specify measuring range in plain text	Y33		
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.			
Insertion length customer-specific			
Select range, enter desired length in plain text (No entry = standard length)	Y44		

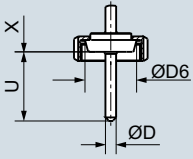
Temperature Measurement

SITRANS TS300

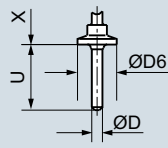
For food, pharmaceuticals and biotechnology modular design

Dimensional drawings

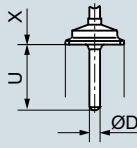
Conical connection with union nut according acc. to DIN 11851



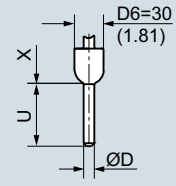
Tri-Clamp-connection



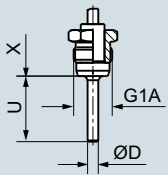
Clamp-connection acc. to DIN 32676 or ISO 2852



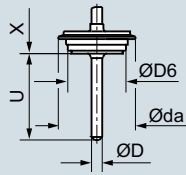
Ball weld sleeve Ball 30 x 40 (1.18 x 1.58)



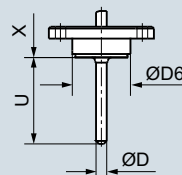
G1A without dead space due to conical metal cone



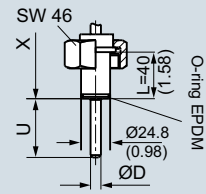
Varivent connection



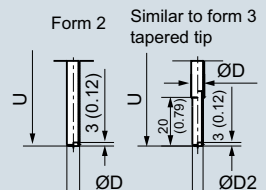
NEUMO BioControl



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 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

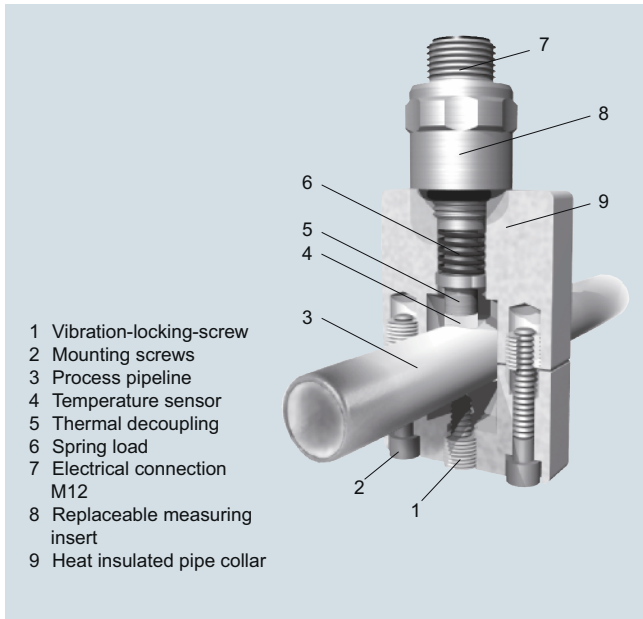
Temperature Measurement

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
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.							
Design Acc. to IEC 60751, class A [-40 ... +150 °C (-40 ... +302 °F)] Process optimized for steam sterilization [100 ... 150 °C (212 ... 302 °F)]			1	38.1 (1.50)			A3
			0	41.0 (1.61)			B3
Type of connection Round connector 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	42.4 (1.67)			C3
			B	44.5 (1.75)			D3
			C	48.3 (1.90)	90 x 85 x 20		E3
				50.8 (2.00)	(3.54 x 3.35 x 0.79)		F3
				53.0 (2.09)			G3
				54.0 (2.13)			H3
				57.0 (2.24)			J3
				Special size ¹⁾			Z0
							K1 Y
Mounting with pipe collar				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")			
Pipe outer-Ø mm (inch)	Collar size mm (inch)			Recommended for all versions: Heat-conductive-compound, silicone-free, syringe 3 g, Order code: L15 (see page 2/53)			
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				

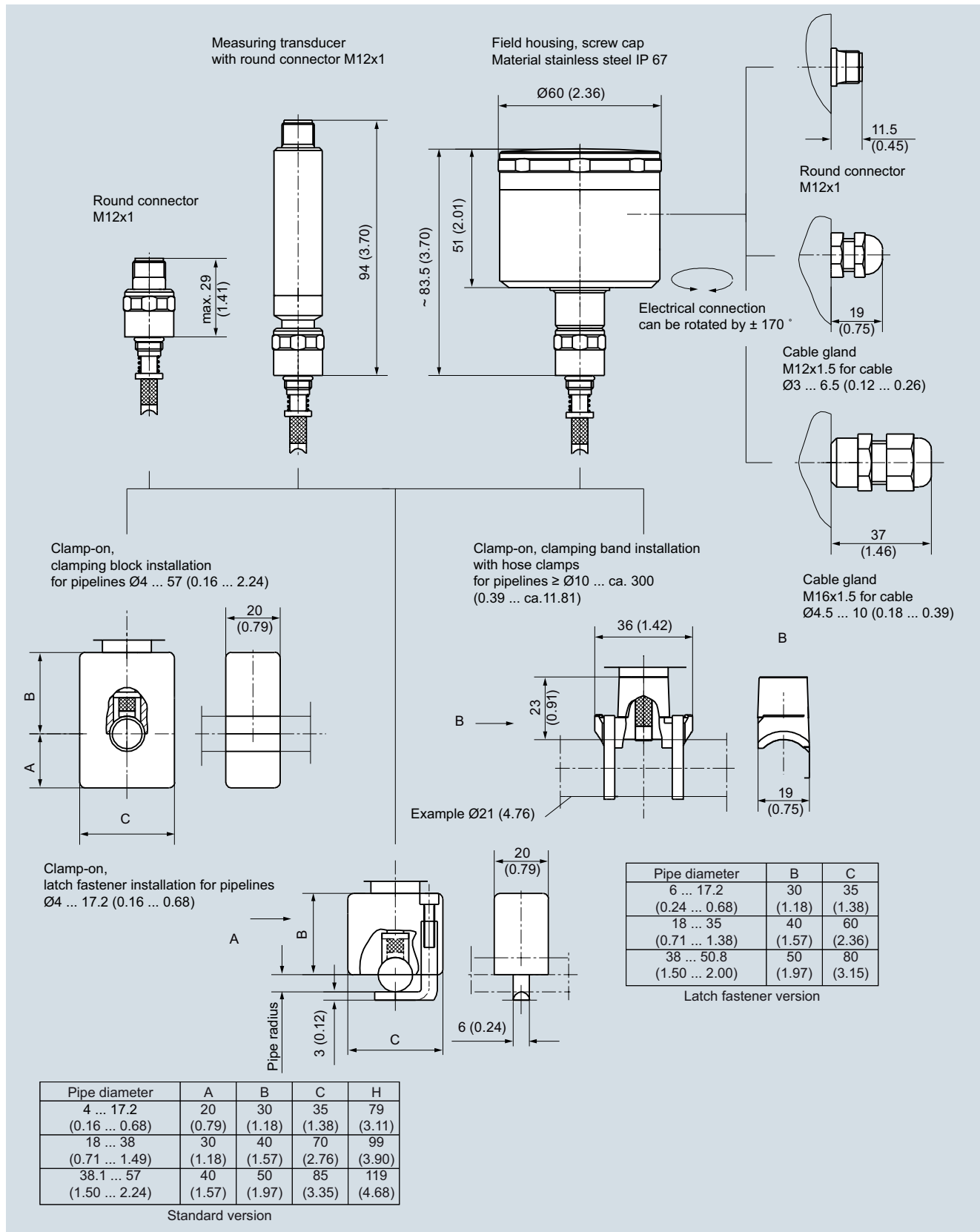
Temperature Measurement

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
Further designs		Further Options	
Add "-Z" to Article No. and specify Order code.		Assignment marking, engraving instead of adhesive label (Serial number and pipe diameter on plug and plastic block)	
Built in head transmitter		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	T10	Heat-conductive-compound, silicone-free, syringe 3 g	
SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	T11	Suffixes	
SITRANS TH200, 4 ... 20 mA, universal	T20	Add "-Z" to Article No. and specify Order code and plain text.	
SITRANS TH200 Ex i (ATEX), 4 ... 20 mA, universal	T21	TAG plate made of stainless steel (specify TAG No. in plain text)	
SITRANS TH300, HART, universal	T30	Test report at 50 % and 100 % (specify the measuring range in plain text)	
SITRANS TH300 Ex i (ATEX), HART, universal	T31	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	T40	Special version, specify in plain text	
SITRANS TH400 PA Ex i, universal	T41	Process number for special version	
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		
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		
Round connector 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 fastening (specify external tube diameter same as for standard collar)			
Outer pipe; mm (inch):			
10 ... 57 (0.39 ... 2.24)		S31	
58 ... 220 (2.28 ... 8.66)		S32	
Without clamping band		S35	

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