

Temperature Measurement SITRANS TS300

For food, pharmaceuticals and biotechnology
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-	0 - 0
Head			
Stainless steel head, BS0, screw cover (Standard version)		5	
Aluminum head, BA0, flange cover standard		1	
Plastic cover, BM0, srew 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 1.4404/316L			
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 32676	Tri-Clamp	Outer diameter D
-	-	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
Varivent connection (Tuchenhausen)			
Ø D ₆ = 50 mm (1.97 inch), for Varivent housing DN 25 and DN 1"		KU	
Ø 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	Measuring insert		
Ø D = 6 mm (0.24 inch)	Ø 3/3.2 mm, (0.12/0.13 inch) miner. insul.	1	
Ø D = 9 mm (0.35 inch)	Ø 6 mm (0.24 inch)	2	
Ø D = 9 mm (0.35 inch)	Ø 6 mm (0.24 inch) miner. insul.	3	
Ø D = 9 mm (0.35 inch)	Ø 3/3.2 mm, (0.12/0.12 inch) miner. insul.	4	
Ø D = 9 mm (0.35 inch) tapered tip			
D ₂ = 5 Ø x 20 mm (0.2 x 0.79 inch)			
Special version: (add Order code and plain text)		9	L 1 Y

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Neck tube length X			
65 mm (2.56 inch)		1	
130 mm (5.12 inch)		2	
Special version: (add Order code and plain text)		9	N 1 Y
Mounting length			
15 mm (0.59 inch)			
35 mm (1.38 inch)			
50 mm (1.97 inch)			
100 mm (3.94 inch)			
160 mm (6.30 inch)			
250 mm (9.84 inch)			
400 mm (15.75 inch)			
4 inch			
6 inch			
9 inch			
Special version: (add Order code and plain text)			P 1 Y
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		C19	
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.			
Special version description in plain text		Y98	
Process number for the special version		Y99	

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Further designs	
Add "-Z" to Article No. and specify Order Code.	
Built-in head transmitter	
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 (ATEX), 4 ... 20 mA, universal	T21
SITRANS TH300, HART, universal	T30
SITRANS TH300 Ex (ATEX), HART, universal	T31
SITRANS TH400 PA, universal	T40
SITRANS TH400 PA Ex, universal	T41
SITRANS TH400 FF, universal	T45
SITRANS TH400 FF Ex, 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
Harting plug Han 7 D (Non Ex)	G13
Connection head with 1/2" NPT thread without cable gland	G20
Plastic cable gland	G21
with spring lock for heads BB0 and BC0	A01
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?	
Specify special version in plain text	Y98
Process number for the special version	Y99

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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		7MC8016-	0	SITRANS TS300		7MC8016-	0
for food, pharmaceuticals and biotechnology				for food, pharmaceuticals and biotechnology			
Clamp-on design for the measuring of the pipe surface temperature				Clamp-on design for the measuring of the pipe surface temperature			
Design							
Process optimized for steam sterilisation			0	38.1 (1.50)			A3
Alternative acc. to IEC 60751, class A			1	41.0 (1.61) 70 x 70 x 20			B3
				42.4 (1.67) (2.76 x 2.76 x 0.79)			C3
				44.5 (1.75)			D3
Type of connection				48.3 (1.90)			E3
Round connector M12 x 1			A	50.8 (2.00)			F3
connection head form B, stainless steel			B	53.0 (2.09) 90 x 85 x 20			G3
4 ... 20 mA compact transmitter			C	54.0 (2.13) (3.54 x 3.35 x 0.79)			H3
SITRANS TH100slim (standard measuring range 0 ... 100 °C (32 ... 212 °F))				57.0 (2.24)			J3
Mounting with pipe collar				Special size ¹⁾			Z0
Pipe outer-Ø	Collar size			Mounting with strap			K1 Y
mm (inch)	mm (inch)			Outer pipe-Ø	Collar size		
				mm (inch)	mm (inch)		
4 (0.16)			A1	50 ... 60	50/70		A7
6 (0.24)			B1	(1.97 ... 2.36)	(1.97/2.76)		B7
6.35 (0.25)			C1	60 ... 75	60/80		B7
8 (0.31)			D1	(2.36 ... 2.95)	(2.76/3.15)		C7
9.35 (0.37)			E1	75 ... 85	70/90		C7
10 (0.39)			F1	(2.95 ... 3.35)	(1.97/3.54)		D7
10.2 (0.40)	50 x 35 x 20		G1	85 ... 105	90/110		D7
10.3 (0.41)	(1.97 x 1.38 x 0.79)		H1	(3.35 ... 4.13)	(3.54/4.33)		E7
12 (0.47)			J1	105 ... 125	110/130		E7
12.7 (0.50)			K1	(4.13 ... 4.92)	(4.33/5.12)		F7
13 (0.51)			L1	125 ... 155	125/160		F7
13.5 (0.53)			M1	(4.92 ... 6.10)	(4.92/6.30)		G7
13.7 (0.54)			N1	155 ... 200	155/200		G7
14 (0.55)			P1	(6.10 ... 7.87)	(6.10/7.87)		H7
15.88 (0.62)			Q1	Without strap			
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)	70 x 70 x 20		L2				
26.9 (1.06)	(2.76 x 2.76 x 0.79)		M2				
28.0 (1.10)			N2				
29.0 (1.14)			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 or latch fastener size
Order codes "S11" to "S23")

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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		Sensor 4-wire connection	L14
SITRANS TH100, 4 ... 20 mA, Pt100	T10	Heat-conductive-compound, silicone-free, syringe 3 g	L15
SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	T11		
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 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		
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 ... 17,9 (0.16 ... 0.70)	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):			
6 ... 17,2 (0.24 ... 0.68)		S21	
18 ... 35 (0.71 ... 1.38)		S22	
38 ... 50,8 (1.45 ... 2.00)		S23	