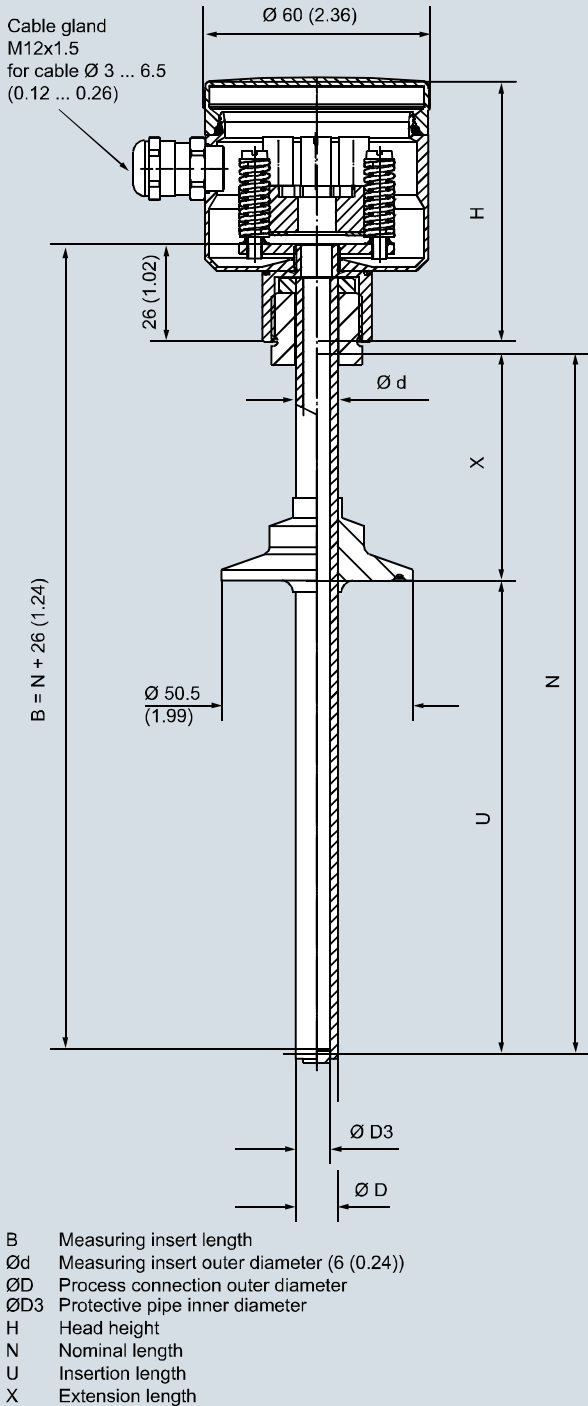


Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology
modular design

Dimensional drawings



SITRANS TS300 modular design

Temperature Measurement SITRANS TS300

For food, pharmaceuticals and biotechnology
modular design

2

| 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 |

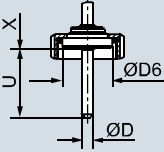
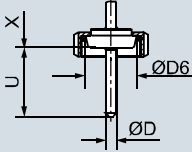
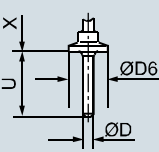
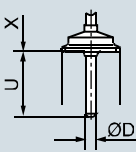
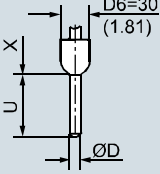
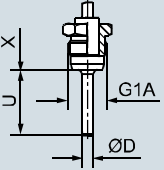
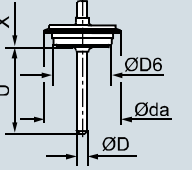
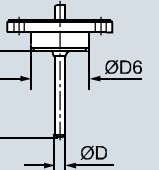
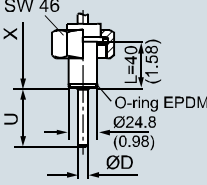
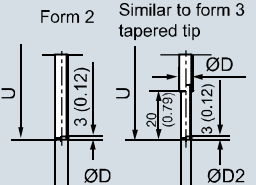
| Selection and Ordering data | | Article No. | Order code |
|--|--|-------------|------------|
| SITRANS TS300 for food, pharmaceuticals and biotechnology, modular design for installation in pipelines and vessels | | 7MC8005- | 0 - 0 |
| Neck tube length X | | | |
| 65 mm (2.56 inch) | | 1 | |
| 130 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 | |

Temperature Measurement SITRANS TS300

For food, pharmaceuticals and biotechnology modular design

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Dimensional drawings

| | | | | |
|--|--|---|--|--|
| <p>Female connection with union nut aseptic connection acc. to DIN 11864-1</p>  | <p>Conical connection with union nut according acc. to DIN 11851</p>  | <p>Tri-Clamp-connection</p>  | <p>Clamp-connection acc. to DIN 32676 or ISO 2852</p>  | <p>Ball weld sleeve Ball 30 x 40 (1.18 x 1.58)</p>  |
| <p>G1A without dead space due to conical metal cone</p>  | <p>Varivent connection</p>  | <p>NEUMO BioControl</p>  | <p>Ingold connection DN 25 with union nut</p>  | <p>Protective pipe design based on DIN 43772</p>  |

Process connections, dimensions in mm (inch)

Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology
modular design

2

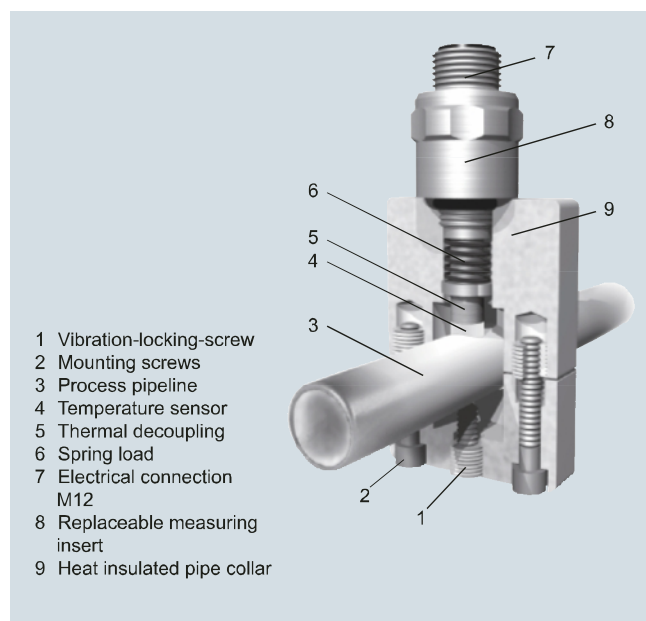
| Selection and Ordering data | Order code |
|--|------------|
| Further designs | |
| Add "-Z" to Article No. and specify Order Code. | |
| Built-in head transmitter | |
| SITRANS TH100, 4 ... 20 mA, Pt100 | T10 |
| SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100 | T11 |
| SITRANS TH200, 4 ... 20 mA, 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 |

Temperature Measurement SITRANS TS300

For food, pharmaceuticals and biotechnology
clamp-on design

Dimensional drawings

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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 | | 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 | | C7 |
| 8 (0.31) | | | D1 | (2.36 ... 2.95) | (2.76/3.15) | | D7 |
| 9.35 (0.37) | | | E1 | 75 ... 85 | 70/90 | | E7 |
| 10 (0.39) | | | F1 | (2.95 ... 3.35) | (1.97/3.54) | | F7 |
| 10.2 (0.40) | 50 x 35 x 20 | | G1 | 85 ... 105 | 90/110 | | G7 |
| 10.3 (0.41) | (1.97 x 1.38 x 0.79) | | H1 | (3.35 ... 4.13) | (3.54/4.33) | | H7 |
| 12 (0.47) | | | J1 | 105 ... 125 | 110/130 | | |
| 12.7 (0.50) | | | K1 | (4.13 ... 4.92) | (4.33/5.12) | | |
| 13 (0.51) | | | L1 | 125 ... 155 | 125/160 | | |
| 13.5 (0.53) | | | M1 | (4.92 ... 6.10) | (4.92/6.30) | | |
| 13.7 (0.54) | | | N1 | 155 ... 200 | 155/200 | | |
| 14 (0.55) | | | P1 | (6.10 ... 7.87) | (6.10/7.87) | | |
| 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 | | | | |

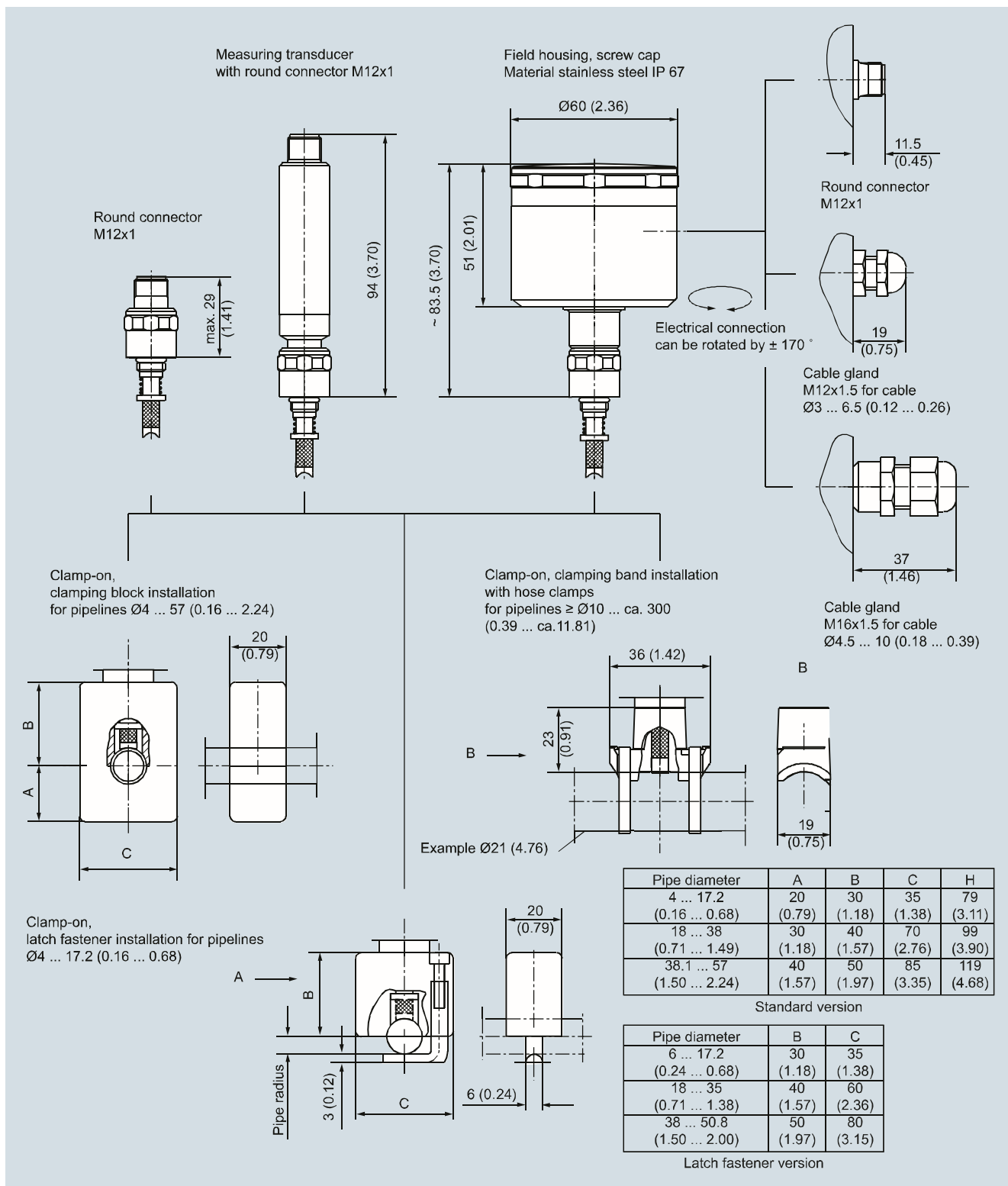
¹⁾ Special sizes for pipe outer diameters: In order to process "Z0" special sizes, the following two additional items of information are essential:
- the required diameter specified in plain text under "K1Y"
- Selection of the corresponding pipe collar or latch fastener size
Order codes "S11" to "S23")

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)

Temperature Measurement

SITRANS TS300

For food, pharmaceuticals and biotechnology
clamp-on design

2

| 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 | | 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 | |