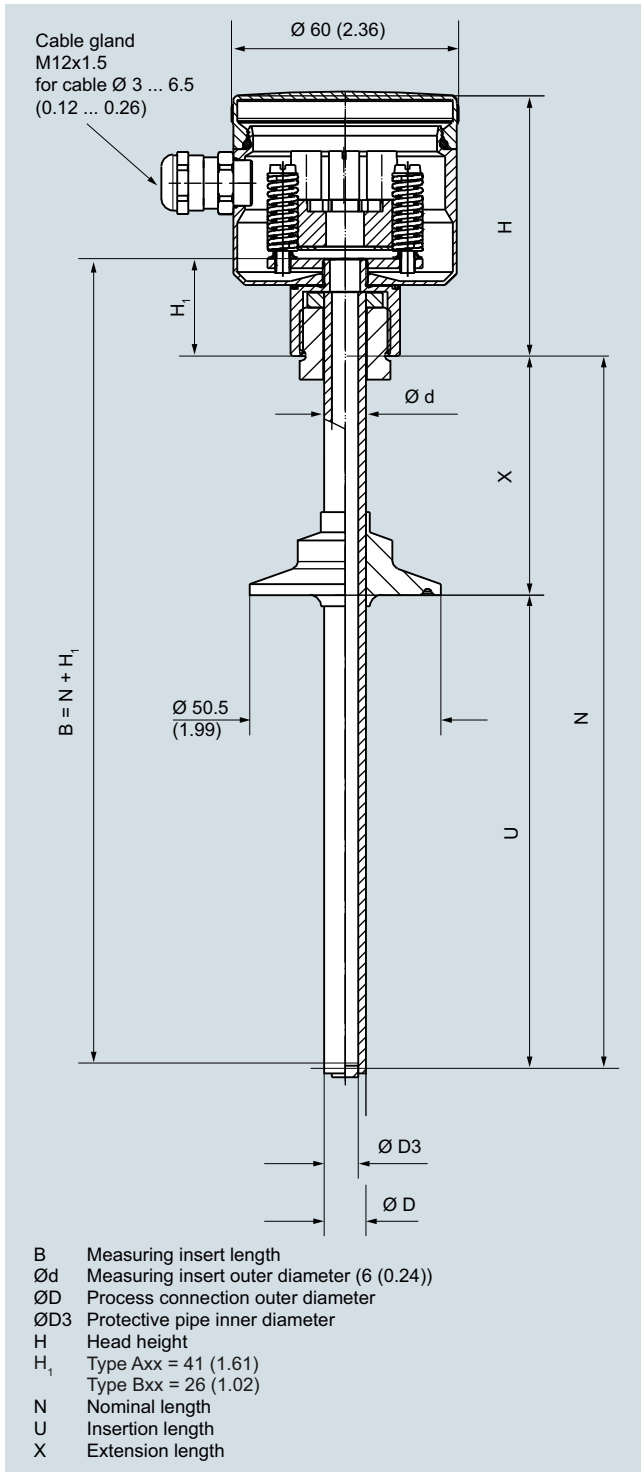


**Dimensional drawings**


SITRANS TS300 modular design

## 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

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  
Plastic cover, BM0, screw cover

1

2

Aluminum head, BB0, hinged cover low

3

Aluminum head, BC0, hinged cover high

4

Special version:

9

(add Order code and plain text)

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          | CA |
| DN 25/33.7/38 | DN 25/32/40 | 1", 1 1/2"  | 50.5 mm          | CB |
| DN 40/51      | DN 50       | 2"          | 64.0 mm          | CC |
| DN 63.5       | –           | 2 1/2"      | 77.5 mm          | CD |
| DN 88.9       | DN 80       | –           | 106.0 mm         | CE |

Varivent connection (Tuchenhausen)

Ø D<sub>6</sub> = 50 mm (1.97 inch),  
for Varivent housing DN 25 and DN 1"

KU

Ø D<sub>6</sub> = 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

Ø D = 6 mm  
(0.24 inch)

1

Ø D = 9 mm  
(0.35 inch)

2

Ø D = 9 mm  
(0.35 inch)

3

Ø D = 9 mm  
(0.35 inch)

4

tapered tip  
D<sub>2</sub> = 5 Ø x 20 mm  
(0.2 x 0.79 inch)

9

Special version:

(add Order code and plain text)

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) [M = 80 mm (3.15 inch)]

1

130 mm (5.12 inch) [M = 145 mm (5.71 inch)]

2

Special version:

9

(add Order code and plain text)

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)

36 ... 50 mm (1.42 ... 1.97 inch)

D

Initial: 50 mm (1.97 inch)

51 ... 100 mm (2.01 ... 3.94 inch)

E

Initial: 100 mm (3.94 inch)

101 ... 160 mm (3.98 ... 6.30 inch)

F

Initial: 160 mm (6.30 inch)

161 ... 250 mm (6.34 ... 9.84 inch)

G

Initial: 250 mm (9.84 inch)

251 ... 400 mm (9.88 ... 15.75 inch)

H

Initial: 400 mm (15.75 inch)

1 ... 4 inch, Initial: 4 inch

J

4 ... 6 inch, Initial: 6 inch

K

6 ... 9 inch, Initial: 9 inch

L

Special version:

Z

(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:

Z

(add Order code and plain text)

Q 1 Y

##### Further designs

Add "-Z" to Article No. and add Order code

Order code

Process connection completely electropolished

P01

Hygiene version

H01

(R<sub>a</sub> < 0.8 µm (3.1 x 10<sup>-5</sup> inch))

Certificates

• Roughness depth measurement R<sub>a</sub>  
certified by factory certificate to  
EN 10204-3.1

C18

• Material certificate to EN 10204-3.1

C12

TAG plate made of stainless steel

Y15

specify TAG No. in plain text

Test report (at 0, 50 and 100%)

Y33

specify measuring range in plain text

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

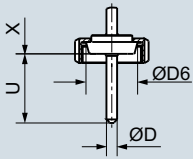
Y44

Select range, enter desired length in plain

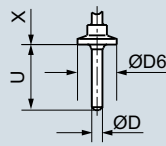
text (No entry = standard length)

### Dimensional drawings

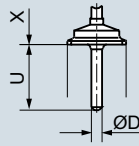
Conical connection with union nut according acc. to DIN 11851



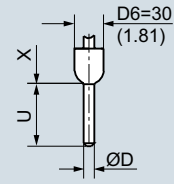
Tri-Clamp-connection



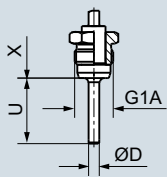
Clamp-connection acc. to DIN 32676 or ISO 2852



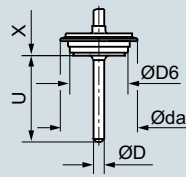
Ball weld sleeve Ball 30 x 40 (1.18 x 1.58)



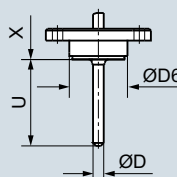
G1A without dead space due to conical metal cone



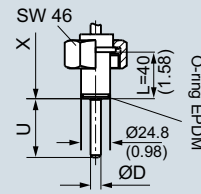
Varivent connection



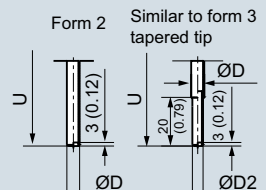
NEUMO BioControl



Ingold connection DN 25 with union nut



Protective pipe design based on DIN 43772



Process connections, dimensions in mm (inch)

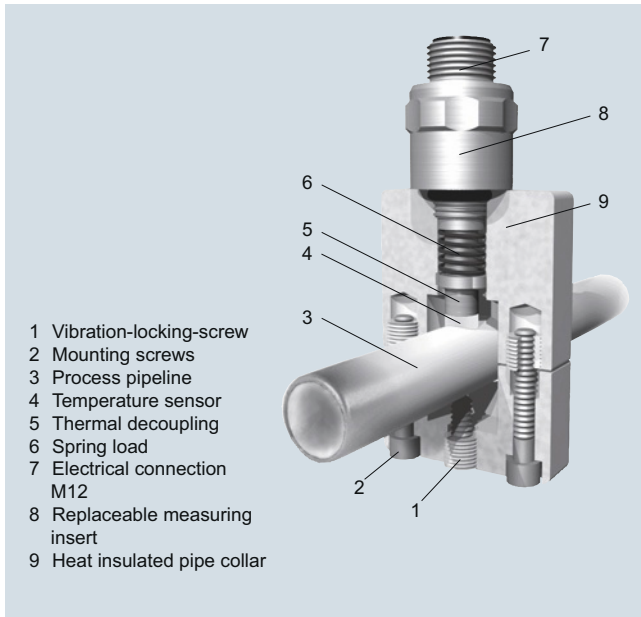
## Temperature Measurement

### SITRANS TS300

For food, pharmaceuticals and biotechnology modular design

| 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> |

2

**Dimensional drawings**

Resistance thermometer with protection pipe in Clamp-on design

# Temperature Measurement

## SITRANS TS300

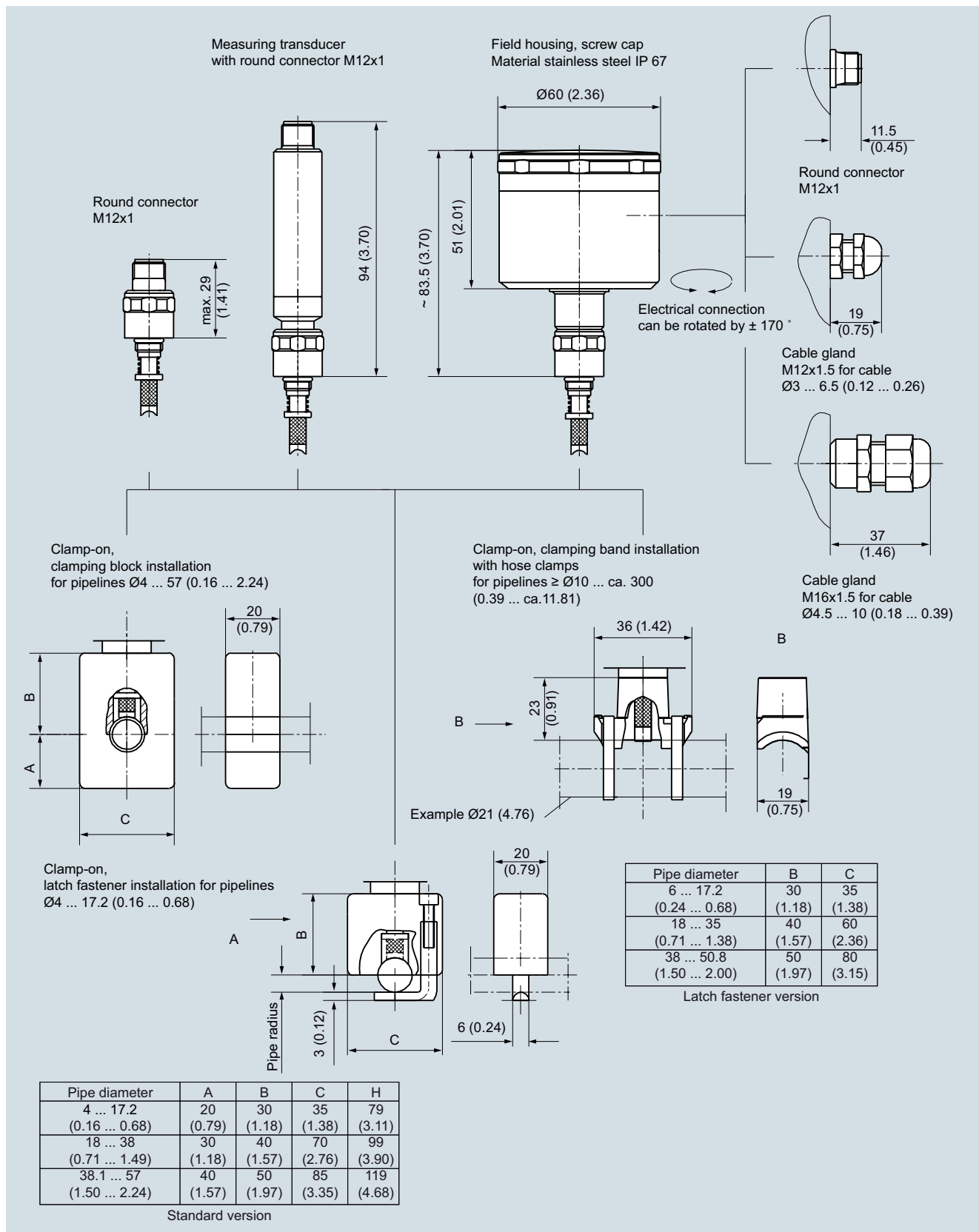
### For food, pharmaceuticals and biotechnology clamp-on design

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

| Selection and Ordering data  | Article No.  | Ord. code |
|--|--|-----------|
| <b>SITRANS TS300</b><br><b>for food, pharmaceuticals and biotechnology</b><br><b>Clamp-on design for the measuring of the pipe surface temperature</b>   | 7MC8016-   | 0         |
| <p>38.1 (1.50)</p> <p>41.0 (1.61)</p> <p>42.4 (1.67)</p> <p>44.5 (1.75)</p> <p>48.3 (1.90)</p> <p>50.8 (2.00)</p> <p>53.0 (2.09)</p> <p>54.0 (2.13)</p> <p>57.0 (2.24)</p> <p>90 x 85 x 20<br/>(3.54 x 3.35 x 0.79)</p> <p>Always indicate external tube diameter for<sup>1)</sup>:</p> <ul style="list-style-type: none"> <li>• Installation with tube collar and deviating external tube diameter (S11-S19)</li> <li>• Securing with clamps (S21-S23)</li> <li>• Clamping band installation (S31-S35)</li> </ul> <p><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:</p> <ul style="list-style-type: none"> <li>- the required diameter specified in plain text under "K1Y"</li> <li>- Selection of the corresponding pipe collar, clamping band or clamping bracket size (Order codes "S11" to "S35")</li> </ul> <p>Recommended for all versions: Heat-conductive-compound, silicone-free, syringe 3 g, Order code: L15 (see page 2/54)</p> | A3<br>B3<br>C3<br>D3<br>E3<br>F3<br>G3<br>H3<br>J3<br>Z0<br>K1 Y |           |

**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

| Selection and Ordering data   | Order code                        | Selection and Ordering data  | Order code |
|---|-----------------------------------|--|------------|
| <b>Further designs</b><br>Add "-Z" to Article No. and specify Order code.                                   |                                   | <b>Further Options</b><br>Assignment marking, engraving instead of adhesive label (Serial number and pipe diameter on plug and plastic block)  | <b>L11</b> |
| <b>Built in head transmitter</b><br>Measuring range to be set must be specified with plain text data "Y11". |                                   | 2 mm drain hole  | <b>L12</b> |
| SITRANS TH100, 4 ... 20 mA, Pt100   | <b>T10</b>                        | Sensor 4-wire connection   | <b>L14</b> |
| SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100   | <b>T11</b>                        | Heat-conductive-compound, silicone-free, syringe 3 g   | <b>L15</b> |
| SITRANS TH200, 4 ... 20 mA, universal   | <b>T20</b>                        | <b>Suffixes</b>  |            |
| SITRANS TH200 Ex i (ATEX), 4 ... 20 mA, universal   | <b>T21</b>                        | Add "-Z" to Article No. and specify Order code and plain text.   |            |
| SITRANS TH300, HART, universal  | <b>T30</b>                        | TAG plate made of stainless steel (specify TAG No. in plain text)  | <b>Y15</b> |
| SITRANS TH300 Ex i (ATEX), HART, universal  | <b>T31</b>                        | Test report at 50 % and 100 % (specify the measuring range in plain text)  | <b>Y33</b> |
| SITRANS TH400 PA, universal   | <b>T40</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 Ex i, universal  | <b>T41</b>                        | Special version, specify in plain text   | <b>Y98</b> |
| SITRANS TH400 FF, universal   | <b>T45</b>                        | Process number for special version   | <b>Y99</b> |
| SITRANS TH400 FF Ex i, universal  | <b>T46</b>                        |  |            |
| <b>Transmitter options</b>  |                                   | <u>Ordering examples:</u>  |            |
| Transmitter, enter complete setting in plain text (Y11:+/NNNN ... +/-NNNN C,F)                              | <b>Y11</b>                        | Deviating tube diameter 28.5 mm:<br>7MC8016-1AZ00-Z K1Y+S12 {K1Y: 28.5 mm}   |            |
| Enter measuring point (max. 8 characters) in plain text   | <b>Y17</b>                        | Space-saving mounting, tube diameter 38 mm:<br>7MC8016-1AZ00-Z K1Y + S23 {K1Y: 38 mm};<br>as of diameter ≥ 18 mm, we recommend using the clamping band installation.   |            |
| Transmitter, enter measuring point description (max. 16 characters) in plain text                           | <b>Y23</b>                        | Clamping band installation, tube diameter 111 mm:<br>7MC8016-1AZ00-Z K1Y+S32 {K1Y: 111 mm}   |            |
| 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<br>4.5 ... 10 mm (0.18 ... 0.39 inch)  | <b>K02</b>                        |  |            |
| Stainless steel for cable diameter<br>3 ... 6.5 mm (0.12 ... 0.25 inch)                                     | <b>K03</b>                        |  |            |
| Round connector M12 x 1   | <b>K11</b>                        |  |            |
| <b>Deviating pipe;<br/>mm (inch)</b>  | <b>Collar size;<br/>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)<br>(Clamping band version recommended, see below)                                 |                                   |  | <b>S22</b> |
| 38 ... 50.8 (1.45 ... 2.00)<br>(Clamping band version recommended, see below)                               |                                   |  | <b>S23</b> |
| <b>Clamping band installation</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> |