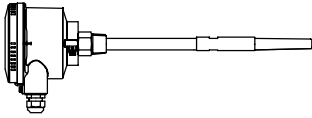


## Table of content

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Subject to change.

All dimensions in mm (inches).

All prices in Euro (€) or USD (\$),  
 excluding VAT.

All EURO prices are EXW Betzigau,  
 all USD prices are EXW Memphis,  
 excluding packaging costs.

Valid: From 01.01.2019 until 31.03.2020, unless otherwise  
 agreed.

By publishing this selection list all other lists become invalid.

We assume no liability for typing errors.

Different variations to those specified are possible.  
 Please contact our technical consultants.

## Overview

- Level limit detection in liquids, slurries, foam, interfaces and solids
  - Compact unit
  - Wide range of applications
  - No maintenance
  - Full-, demand-, empty detector
  - Extended pipe version or cable version
  - High chemical resistance on probes
  - Capacitive technology
  - Level detection independent of tank wall/ pipe
  - Sensitivity: dielectric constant  $\geq 1.5$
- Standard electronics with:
    - Universal power supply
    - Solid-state switch and Relay output
  - Digital electronics with:
    - Communication via PROFIBUS PA
    - Integrated Local User Interface
    - Self diagnostics
  - Multiple approvals available
  - 2011/65/EU RoHS conform

|           |                     |   |                      |
|-----------|---------------------|---|----------------------|
| Approvals | CE                  |   |                      |
|           | ATEX                | Zone 0  | Intrinsically Safe   |
|           |                     | Zone 0/1  | Flameproof           |
|           |                     | Zone 2  | Type of protection n |
|           |                     | Zone 20/21  | Dust Ignition Proof  |
|           | FM/ CSA             | General purp.   |                      |
|           |                     | Cl. I Div. 1  | Intrinsically Safe   |
|           |                     | Cl. I Div. 1  | Explosionproof       |
|           |                     | Cl. I Div. 2  | Non incensive        |
|           |                     | Cl. II, III Div. 1  | Dust Ignition Proof  |
|           | TR-CU               | Ordinary Locations, Intrinsically Safe, Flameproof, Dust Ignition Proof |                      |
|           | INMETRO             | Flameproof, Dust Ignition Proof   |                      |
|           | Lloyds              | Categories ENV1, ENV2, ENV3 and ENV5                                    |                      |
| WHG       | Overfill protection |   |                      |

|             |                     | Electronic module Standard                                    | Electronic module Digital  |
|-------------|---------------------|---|--|
| Electronics | Supply voltage      | 12 .. 250 V AC/ DC (0 .. 60 Hz)                               | 12 .. 30 V DC (24 V for IS version)  |
|             | Signal output       | Relais SPDT<br>Solid-state switch (30 V DC or AC peak, 82 mA) | Profibus PA<br>Solid-state switch (30 V DC or AC peak, 82 mA)  |
|             | Signal output delay | Rise time or Fall time 1 .. 60 sec.                           | Rise time 0 .. 100 sec.<br>Fall time 0 .. 100 sec.   |
|             | Failsafe            | High or Low   | High or Low  |
|             | User interface      | Potentiometer, switches, 3 LED indicator                      | LCD local user interface or Profibus PA  |
|             | Diagnostics         | -   | Over and Under Range<br>Electronics temperature<br>Function check<br>Maintenance alarm<br>Internal electronic self check |

|         |  |   |  |
|---------|--|---|--|
| Housing | Material of housing                    | Aluminium, powder-coated  |  |
|         | Ingress protection                     | Type 4/ NEMA 4/ IP68  |  |
|         | Material of Temperature extended shaft | 1.4404 (SS316L), option   |  |
|         | Ambient temperature                    | -40 .. 85°C (-40 .. 185°F)<br>With ATEX approval:<br>-40 .. 80°C (-40 .. 176°F)<br>-40 .. 60°C (-40 .. 140°F) | with Flameproof or Dust Ignition Proof<br>or Type of protection n<br>with Intrinsically safe |

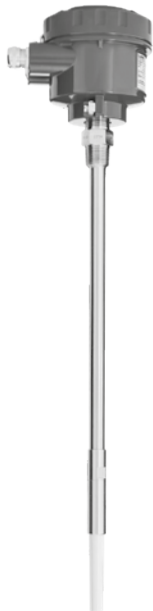
## Overview

|                       |                                   |  |   |
|-----------------------|-----------------------------------|--|---|
| Mechanics and Process | Length of extension "L"           | Short extension threaded<br>Short extension flanged/ Triclamp<br>Pipe extension<br>Cable extension | 120 .. 5,500 mm (4.72 .. 216.5")<br>98 .. 5,500 mm (3.86 .. 216.5")<br>210 .. 5,500 mm (8.27 .. 216.5")<br>500 .. 30,000 mm (19.69 .. 1,181") |
|                       | Diameter of pipe/ cable extension | Pipe extension<br>Cable  | ø20 mm (ø0.79")<br>ø6 mm (ø0.3")  |
|                       | Materials                         | Process connection<br>Pipe extension<br>Cable insulation<br>Probe (sensor)<br>Wetted seals         | 1.4404 (SS316L)<br>1.4404 (SS316L)<br>FEP<br>PPS or PVDF, FDA and 1935/2004/EC conform<br>FKM or FFKM   |
|                       | Process temperature               | Without temp. extended shaft<br>With temp. extended shaft  | -40 .. 85°C (-40 .. 185°F)<br>-40 .. 125°C (-40 .. 257°F)   |
|                       | Process pressure*                 | Pipe version<br>Cable/ sliding coupling  | -1 .. 25 bar g (-14.6 .. 365 psi g) nominal<br>-1 .. 10 bar g (-14.6 .. 150 psi g) nominal<br>*Observe Pressure versus Temperature Curves     |
|                       | Tensile load (cable version)      | max. 1,750 N   |   |

Short extension length



Pipe version extended



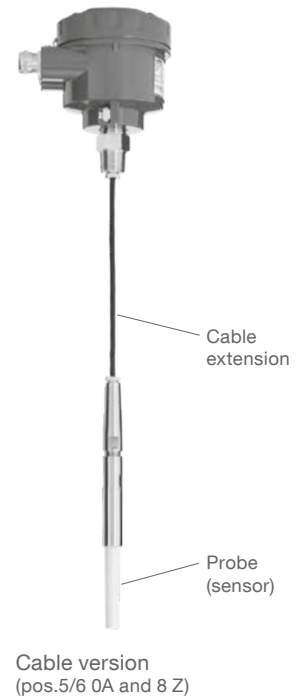
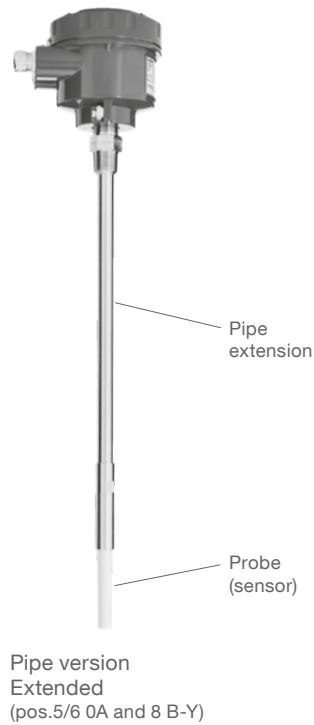
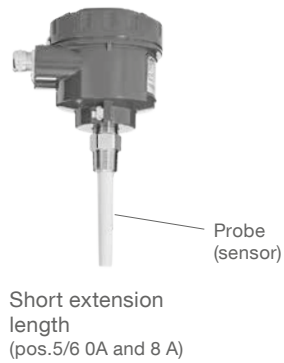
Cable version



Remote version



## CN 8100



**Dimensions** see pages 9 - 11

### Cable entries (by default)

Depending on model selected, the following cable entries are supported (options see pos.33 on page 7):

| Version:                     | Cable entries:   |
|------------------------------|--|
| Flameproof<br>(pos.2 T,D)    | M20 x 1.5<br>(1x open conduit +<br>1x Ex-d blind plug)                   |
| FM/ CSA<br>(pos.2 M,H,U,P,N) | NPT ½" tapered ANSI B1.20.1<br>(1x open conduit +<br>1x Ex-d blind plug) |
| All other versions           | M20 x 1.5<br>(1x screwed cable gland +<br>1x blind plug)                 |

## CN 8100

### Basic type

#### CN 8100

pos.2

#### Certificate (detailed Ex-markings: see page 12)

|   | Gas                           | Dust         | Protection method                    |
|---|-------------------------------|--------------|--------------------------------------|
| 0 | CE <sup>(4)</sup>             | -            | -                                    |
| Q | CE/ FM/ CSA <sup>(1, 4)</sup> | -            | General purpose                      |
| G | ATEX <sup>(4)</sup>           | Zone 2       | Type of protection n                 |
| T | ATEX <sup>(2, 4)</sup>        | Zone 0/1     | Flameproof, Dust Ignition Proof      |
| Y | ATEX <sup>(2, 6)</sup>        | Zone 0       | Intrinsically Safe                   |
| W | ATEX <sup>(2, 4)</sup>        | -            | Dust Ignition Proof                  |
| M | FM/ CSA <sup>(4)</sup>        | -            | General purpose                      |
| H | FM/ CSA <sup>(4)</sup>        | Cl. I Div. 2 | Non incandive                        |
| U | FM/ CSA <sup>(4)</sup>        | Cl. I Div. 1 | Explosion Proof, Dust Ignition Proof |
| P | FM/ CSA <sup>(6)</sup>        | Cl. I Div. 1 | Intrinsically Safe                   |
| N | FM/ CSA <sup>(4)</sup>        | -            | Dust Ignition Proof                  |
| D | INMETRO                       | Zone 1       | Flameproof, Dust Ignition Proof      |

pos.3

#### Temperature extended shaft

- 1 without
- 2 with

pos.4

#### Electronic module

- E Standard: Relay SPDT/ Solid State 12 ... 250 V AC/ DC<sup>(7)</sup>
- F Digital: Profibus PA/ Solid State 12 ... 30 V DC (24 V intrinsic safe) LCD display<sup>(8)</sup>

pos.5+6

#### Process connection

- 0A Thread 3/4" NPT taper, ANSI/ ASME B1.20.1
- 0B Thread 1" NPT taper, ANSI/ ASME B1.20.1
- 0C Thread 1 1/4" NPT taper, ANSI/ ASME B1.20.1
- 0D Thread 1 1/2" NPT taper, ANSI/ ASME B1.20.1
- 1A Thread R 3/4" BSPT, EN 10226/ PT (JIS-T), JIS B 0203
- 1B Thread R 1" BSPT, EN 10226/ PT (JIS-T), JIS B 0203
- 1D Thread R 1 1/2" BSPT, EN 10226/ PT (JIS-T), JIS B 0203
- 3A Thread G 3/4" BSPP, EN ISO 228-1/ PF (JIS-P), JIS B 0202
- 3B Thread G 1" BSPP, EN ISO 228-1/ PF (JIS-P), JIS B 0202
- 3D Thread G 1 1/2" BSPP, EN ISO 228-1/ PF (JIS-P), JIS B 0202
- 5A Flange 1" 150 lbs ASME B16.5, raised face
- 5B Flange 1" 300 lbs ASME B16.5, raised face
- 5C Flange 1" 600 lbs ASME B16.5, raised face
- 5D Flange 1 1/2" 150 lbs ASME B16.5, raised face
- 5E Flange 1 1/2" 300 lbs ASME B16.5, raised face
- 5F Flange 1 1/2" 600 lbs ASME B16.5, raised face
- 5G Flange 2" 150 lbs ASME B16.5, raised face
- 5H Flange 2" 300 lbs ASME B16.5, raised face
- 5J Flange 2" 600 lbs ASME B16.5, raised face
- 5K Flange 3" 150 lbs ASME B16.5, raised face
- 5L Flange 3" 300 lbs ASME B16.5, raised face
- 5M Flange 3" 600 lbs ASME B16.5, raised face
- 5N Flange 4" 150 lbs ASME B16.5, raised face
- 5P Flange 4" 300 lbs ASME B16.5, raised face
- 5Q Flange 4" 600 lbs ASME B16.5, raised face
- 6A Flange DN25, PN16 EN 1092-1 type A flat faced
- 6B Flange DN25, PN40 EN 1092-1 type A flat faced
- 6C Flange DN40, PN16 EN 1092-1 type A flat faced
- 6D Flange DN40, PN40 EN 1092-1 type A flat faced
- 6E Flange DN50, PN16 EN 1092-1 type A flat faced
- 6F Flange DN50, PN40 EN 1092-1 type A flat faced
- 6G Flange DN80, PN16 EN 1092-1 type A flat faced
- 6H Flange DN80, PN40 EN 1092-1 type A flat faced
- 6J Flange DN100, PN16 EN 1092-1 type A flat faced
- 6K Flange DN100, PN40 EN 1092-1 type A flat faced
- 8A Triclamp 1" ISO2852<sup>(9)</sup>
- 8B Triclamp 1 1/2" ISO2852<sup>(9)</sup>
- 8C Triclamp 2" ISO2852<sup>(9)</sup>
- 8D Triclamp 2 1/2" ISO2852<sup>(9)</sup>
- 8E Triclamp 3" ISO2852<sup>(9)</sup>



## Options

|          |  |   |
|----------|--|---|
| pos.11 x | <b>Guarantee extension to 5 years</b> .....  | • |
|          | <b>Remote version</b> <sup>(1)</sup>   |   |
| pos.12 a | 2 m remote cable (both sides wired), including mounting bracket .....                          | • |
| pos.12 b | 5 m remote cable (both sides wired), including mounting bracket .....                          | • |
| pos.17 x | <b>FFKM wetted seals</b> <sup>(2)</sup> .....  | • |
| pos.19 x | <b>Sliding coupling</b> <sup>(3)</sup> .....   | • |
| pos.23 x | <b>WHG approval</b> <sup>(4)</sup> .....   | • |
| pos.24 x | <b>Functional safety SIL 2 (IEC 61508)</b> <sup>(5)</sup> .....                                | • |
|          | Overspill, Declaration of Conformity   |   |
| pos.25 x | <b>Inspection certificate</b> .....  | • |
|          | Type 3.1 (EN 10204)  |   |
| pos.26 x | <b>Manufacturer's Test Certificate</b> .....   | • |
|          | M to DIN 55350, Part 18 and to ISO 9000  |   |
| pos.30 x | <b>Stainless steel tag</b> .....   | • |
|          | Measuring point number/ identification (max. 27 characters)                                    |   |
|          | <b>Cable entry</b>   |   |
|          | Selection of the following options only necessary,<br>if a deviation from default is required: |   |
| pos.33 x | M20 x 1.5 2x screwed cable gland <sup>(6)</sup> .....  | • |
| pos.33 e | M20 x 1.5 1x screwed cable gland + 1x blind plug <sup>(7)</sup> .....                          | • |
| pos.33 a | NPT ½" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) <sup>(8)</sup> .....             | • |
|          | <b>Signal lamp</b> <sup>(9, 12)</sup>  |   |
| pos.34 a | Bulb, mounted in cable entry M20 x 1.5, 2 W green .....  | • |
| pos.34 b | Bulb, mounted in cable entry M20 x 1.5, 2 W red .....  | • |
|          | <b>Plug</b> <sup>(10, 12)</sup>  |   |
| pos.35 x | Valve connector (incl. mating plug) 4-pole (incl. PE) max. 230 V .....                         | • |
| pos.35 a | M12 (without mating plug) 4-pole max. 25 V .....   | • |
| pos.35 b | M12 (without mating plug) 5-pole (incl. PE) max. 60 V .....                                    | • |
| pos.35 c | Harting Han 4A (incl. mating plug) 5-pole (incl. PE) max. 230 V .....                          | • |
| pos.36 x | <b>Glass window in lid</b> <sup>(11)</sup> .....   | • |

(1) Dimensions see page 11.

(2) Process temperature limited to -20°C (-4°F). For sealing of cable (cable version pos.8 P,Q,Z) and sealing of sliding coupling (pos.19 x) as well PTFE sealings are used.

(3) Available with pipe version with min. length of extension L=350 mm (pos.8 C-Y), and process connection thread (pos.5+6 0A-3D). Dimensions see page 11.

(4) Available with certificate CE (pos.2 0, Q) or ATEX flameproof (pos.2 T). Only with electronic module standard (pos.4 E).

(5) Available with electronic module standard (pos.4 E).

(6) Available for all versions except flameproof/ explosion proof version (pos.2 T,U,D).

(7) Available for FM/ CSA version (pos.2 M,H,P,N) except explosion proof version (pos.2 U).

(8) Available for all versions except FM/ CSA (pos.2 M,H,U,P,N).

(9) Available for CE (pos.2 0) and electronic module standard (pos.4 E). Not in combination with cable entries pos.33 x.

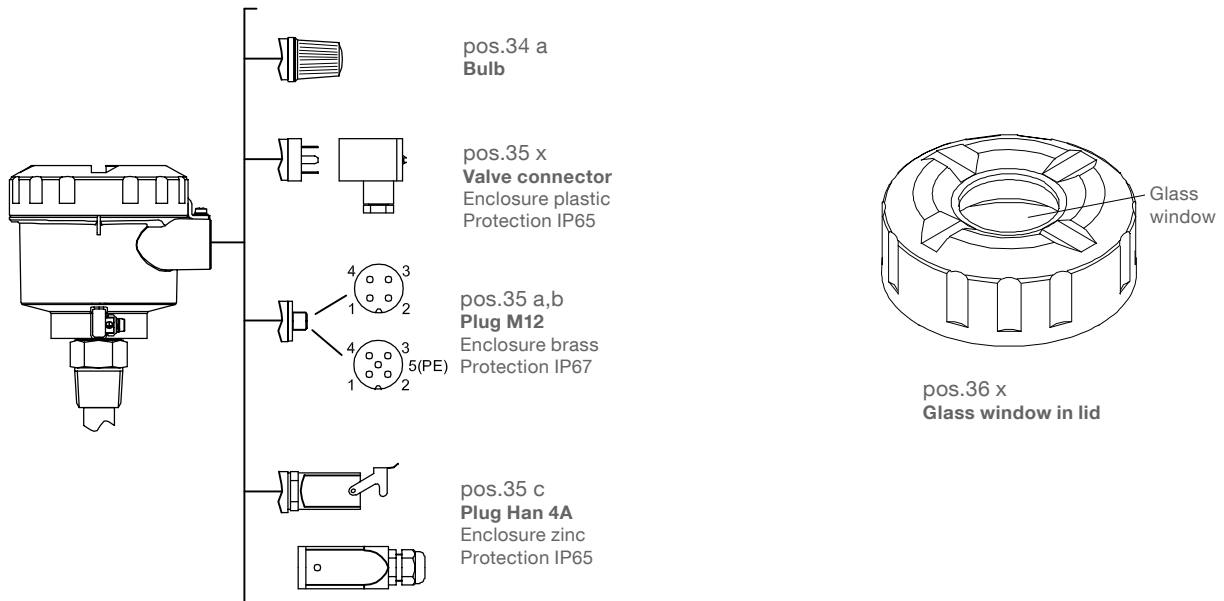
Three bulbs (24 V, 115 V and 230 V) will be delivered. Connection of bulb wires to internal terminals according to customer specification.

(10) Available for CE (pos.2 0). Not in combination with cable entries pos.33 x,e,a. Connection of plug wires to internal terminals according to customer specification.

(11) Available for electronic module digital (pos.4 F).

(12) Not available with certificate Lloyds.

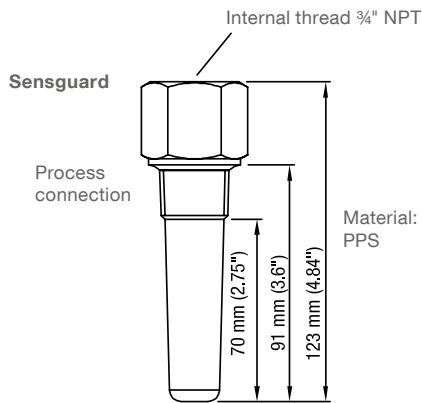
## Options/ Accessories



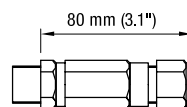
## Accessories

Minimum order value for separate orders of spare parts or accessories is 75 €.

- cl440102 Sensguard process connection 3/4" NPT (PPS) <sup>(1)</sup> ..... •
- cl440103 Sensguard process connection 1" BSPT (PPS) <sup>(1)</sup> ..... •
- em440041 Cable gland M20 x 1.5 Ex-d ..... •



**Cable gland M20 x 1.5 Ex-d**



For use with version  
 ATEX flameproof (pos.2 T).  
 Type: Stahl T3CDS 246560

(1) Requires unit with process connection 3/4" NPT (pos.5+6 0A).



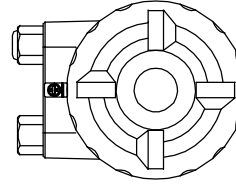
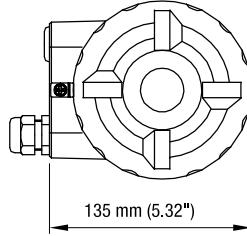
## Dimensions

### Enclosure

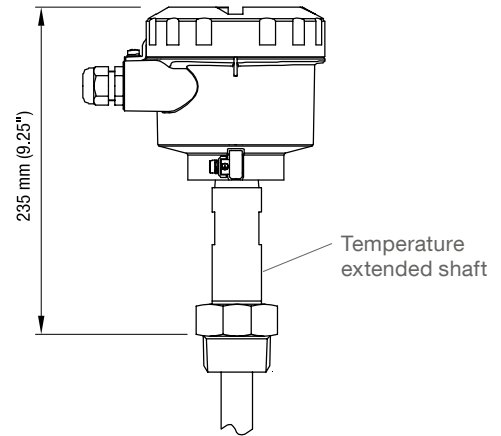
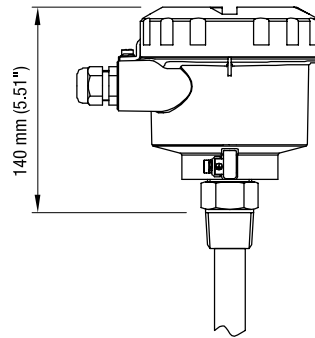
#### Top view

M20 x 1.5 cable gland

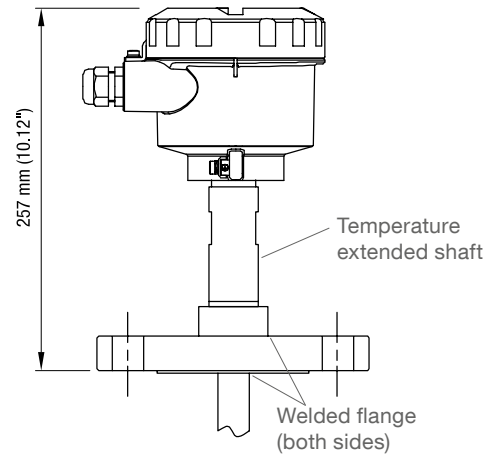
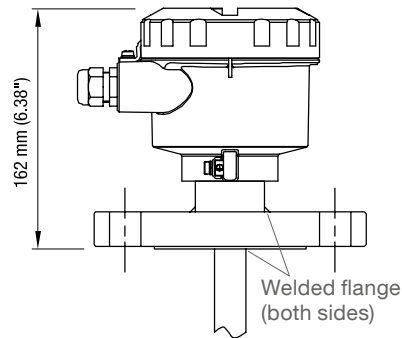
NPT ½" conduit



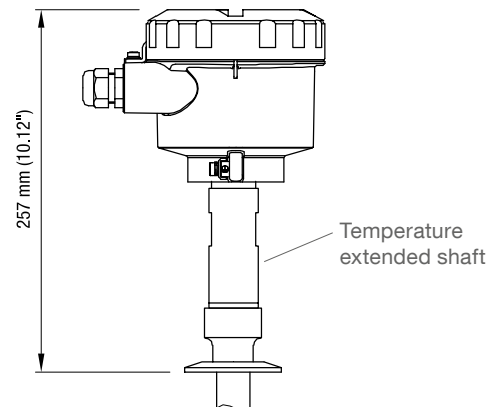
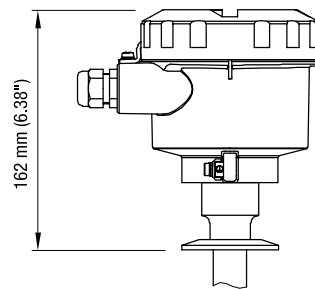
#### Threaded process connection



#### Flanged process connection



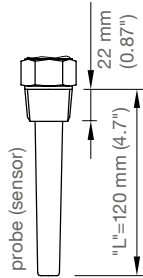
#### Triclamp process connection



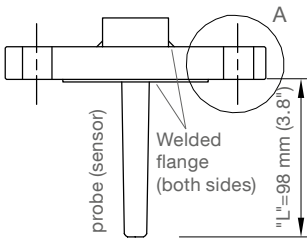
## Dimensions

### Short extension length Shortest length

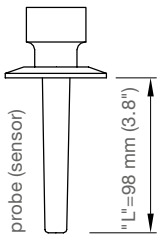
Threaded process connection



Flanged process connection

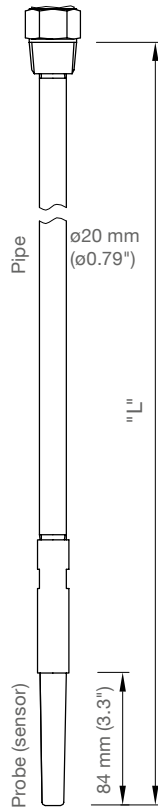


Triclamp process connection

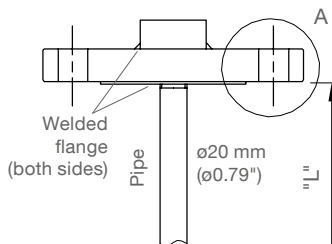


### Pipe version Extended

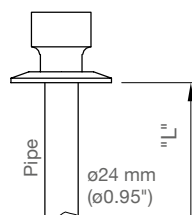
Threaded process connection



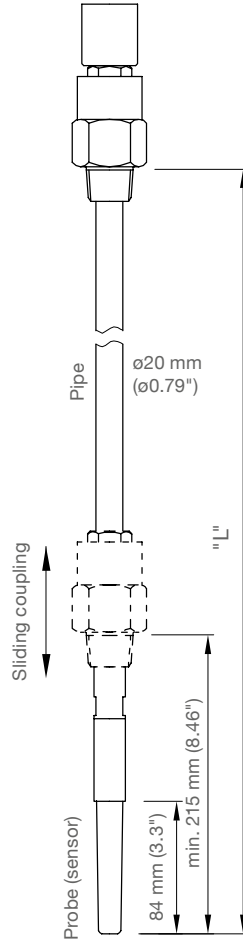
Flanged process connection



Triclamp process connection

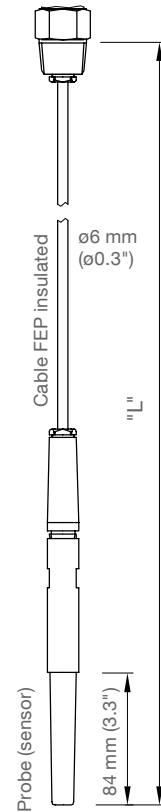


### Pipe version Extended, with sliding coupling (pos.19)

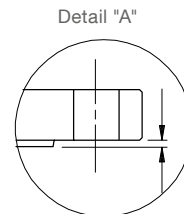
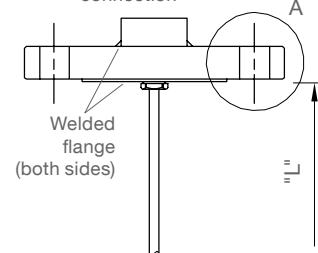


### Cable version

Threaded process connection



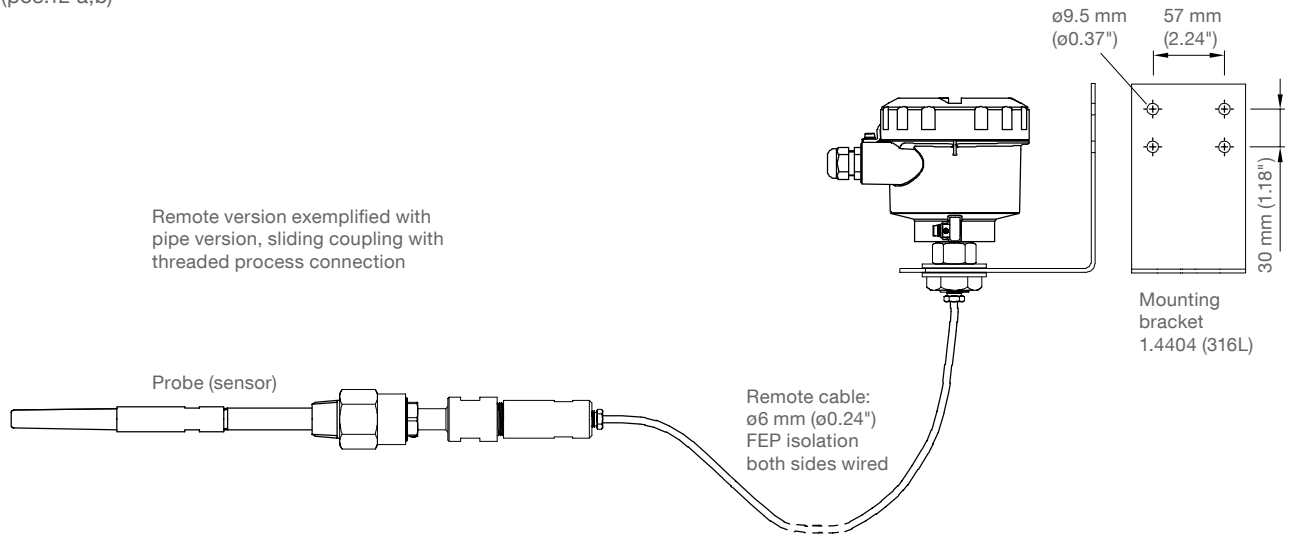
Flanged process connection



"L" does not include any raised face (see page 11)

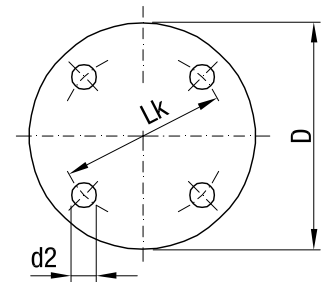
## Dimensions

### Remote version (pos.12 a,b)

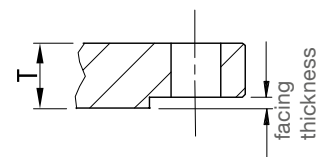


## Flanges

|                              | Code       | Type        | Number of holes | d2<br>mm (inch) | Lk<br>mm (inch) | D<br>mm (inch) | T<br>thickness<br>mm (inch) |
|------------------------------|------------|-------------|-----------------|-----------------|-----------------|----------------|-----------------------------|
| ASME B16.5, raised face      | 5A         | 1" 150 lbs  | 4               | 15.9 (0.63)     | 79.3 (3.12)     | 108.0 (4.25)   | 14.3 (0.56)                 |
|                              | 5B         | 1" 300 lbs  | 4               | 19.1 (0.75)     | 88.9 (3.5)      | 123.8 (4.87)   | 17.5 (0.69)                 |
|                              | 5C         | 1" 600 lbs  | 4               | 19.1 (0.75)     | 88.9 (3.5)      | 123.8 (4.87)   | 17.5 (0.69)                 |
|                              | 5D         | 1½" 150 lbs | 4               | 15.9 (0.63)     | 98.6 (3.88)     | 127.0 (5.0)    | 17.5 (0.69)                 |
|                              | 5E         | 1½" 300 lbs | 4               | 22.2 (0.87)     | 114.3 (4.5)     | 155.6 (6.13)   | 20.6 (0.81)                 |
|                              | 5F         | 1½" 600 lbs | 4               | 22.2 (0.87)     | 114.3 (4.5)     | 155.6 (6.13)   | 22.4 (0.88)                 |
|                              | 5G         | 2" 150 lbs  | 4               | 19.1 (0.75)     | 120.7 (4.75)    | 152.4 (6.01)   | 19.1 (0.75)                 |
|                              | 5H         | 2" 300 lbs  | 8               | 19.1 (0.75)     | 127.0 (5.0)     | 165.1 (6.5)    | 22.2 (0.87)                 |
|                              | 5J         | 2" 600 lbs  | 8               | 19.1 (0.75)     | 127.0 (5.0)     | 165.1 (6.5)    | 25.4 (1.0)                  |
|                              | 5K         | 3" 150 lbs  | 4               | 19.1 (0.75)     | 152.4 (6.01)    | 190.5 (7.5)    | 23.9 (0.94)                 |
|                              | 5L         | 3" 300 lbs  | 8               | 22.2 (0.87)     | 168.2 (6.62)    | 209.6 (8.25)   | 28.6 (1.13)                 |
|                              | 5M         | 3" 600 lbs  | 8               | 22.2 (0.87)     | 168.2 (6.62)    | 209.6 (8.25)   | 31.7 (1.25)                 |
|                              | 5N         | 4" 150 lbs  | 8               | 19.1 (0.75)     | 190.5 (7.5)     | 228.6 (9.0)    | 23.9 (0.94)                 |
| 5P                           | 4" 300 lbs | 8           | 22.2 (0.87)     | 200.0 (7.87)    | 254.0 (10.0)    | 31.7 (1.25)    |                             |
| 5Q                           | 4" 600 lbs | 8           | 25.4 (1.0)      | 215.9 (8.5)     | 273.1 (10.75)   | 38.1 (1.5)     |                             |
| EN 1092-1 type A, flat faced | 6A         | DN25 PN16   | 4               | 14.0 (0.55)     | 85.0 (3.35)     | 115.0 (4.53)   | 18.0 (0.71)                 |
|                              | 6B         | DN25 PN40   | 4               | 14.0 (0.55)     | 85.0 (3.35)     | 115.0 (4.53)   | 18.0 (0.71)                 |
|                              | 6C         | DN40 PN16   | 4               | 18.0 (0.71)     | 110.0 (4.33)    | 150.0 (5.91)   | 18.0 (0.71)                 |
|                              | 6D         | DN40 PN40   | 4               | 18.0 (0.71)     | 110.0 (4.33)    | 150.0 (5.91)   | 18.0 (0.71)                 |
|                              | 6E         | DN50 PN16   | 4               | 18.0 (0.71)     | 125.0 (4.92)    | 165.0 (6.5)    | 18.0 (0.71)                 |
|                              | 6F         | DN50 PN40   | 4               | 18.0 (0.71)     | 125.0 (4.92)    | 165.0 (6.5)    | 20.0 (0.79)                 |
|                              | 6G         | DN80 PN16   | 8               | 18.0 (0.71)     | 160.0 (6.3)     | 200.0 (7.87)   | 20.0 (0.79)                 |
|                              | 6H         | DN80 PN40   | 8               | 18.0 (0.71)     | 160.0 (6.3)     | 200.0 (7.87)   | 24.0 (0.94)                 |
|                              | 6J         | DN100 PN16  | 8               | 18.0 (0.71)     | 180.0 (7.09)    | 220.0 (8.66)   | 20.0 (0.79)                 |
|                              | 6K         | DN100 PN40  | 8               | 22.0 (0.87)     | 190.0 (7.48)    | 235.0 (9.25)   | 24.0 (0.94)                 |



Raised face



| Type                         | Facing thickness |
|------------------------------|------------------|
| ASME 150 lbs<br>ASME 300 lbs | 2 mm (0.08")     |
| ASME 600 lbs                 | 7 mm (0.28")     |

## Detailed Ex-markings

| pos.2 | Certificate   | Protection method                    |
|-------|---|--------------------------------------|
| G     | ATEX II 3G<br>Ex nA IIC T <sup>⚠</sup> Gc   | Type of protection n                 |
| T     | ATEX II 1/2G<br>ATEX II 1/2D<br>Ex ia/db [ia Ga] IIC T <sup>⚠</sup> Ga/Gb<br>Ex ia/tb [ia Da] IIIC T <sup>⚠</sup> Da/Db | Flameproof, Dust Ignition Proof      |
| Y     | ATEX II 1G<br>ATEX II 1/2D<br>Ex ia IIC T <sup>⚠</sup> Ga<br>Ex ia IIIC T <sup>⚠</sup> Da/Db                            | Intrinsically Safe                   |
| W     | ATEX II 1/2D<br>Ex ia/tb [ia Da] IIIC T <sup>⚠</sup> Da/Db  | Dust Ignition Proof                  |
| H     | FM/ CSA<br>NI Class I, Div.2, Gr. A, B, C, D<br>Class II, Div.2, Gr. F, G<br>Class III T4 or T6                         | Non incendive                        |
| U     | FM/ CSA<br>XP-AIS Class I, Div.1, Gr. A, B, C, D<br>DIP-AIS Class II, Div.1, Gr. E, F, G<br>DIP-AIS Class III T4        | Explosion Proof, Dust Ignition Proof |
| P     | FM/ CSA<br>IS Class I, Div.1, Gr. A, B, C, D<br>IS Class II, Div.1, Gr. E, F, G<br>IS Class III T4                      | Intrinsically Safe                   |
| N     | FM/ CSA<br>DIP-AIS Class II, Div.1, Gr. E, F, G<br>DIP-AIS Class III T4   | Dust Ignition Proof                  |
| D     | INMETRO<br>Ex d [ia Ga] IIC T6...T4 Gb<br>Ex tb IIIC T85°C...T100°C Db<br>IP65/IP68                                     | Flameproof, Dust Ignition Proof      |

### Deviation in Ex-markings with Remote version (pos.12 a,b)

| pos.2 | Certificate electronic housing  | Certificate probe (sensor)   | Protection method               |
|-------|---|--|---------------------------------|
| T     | ATEX II 2(1)G<br>ATEX II 2(1)D<br>Ex db ia [ia Ga] IIC T <sup>⚠</sup> Gb<br>Ex ia tb [ia Da] IIIC T <sup>⚠</sup> Db | ATEX II 1G<br>ATEX II 1D<br>ATEX II 1/2D<br>Ex ia IIC T <sup>⚠</sup> Ga<br>Ex ia IIIC T <sup>⚠</sup> Da<br>Ex ia IIIC T <sup>⚠</sup> Da/Db | Flameproof, Dust Ignition Proof |
| Y     | ATEX II 1G<br>ATEX II 2D<br>Ex ia IIC T <sup>⚠</sup> Ga<br>Ex ia IIIC T <sup>⚠</sup> Db                             | ATEX II 1G<br>ATEX II 1D<br>ATEX II 1/2D<br>Ex ia IIC T <sup>⚠</sup> Ga<br>Ex ia IIIC T <sup>⚠</sup> Da<br>Ex ia IIIC T <sup>⚠</sup> Da/Db | Intrinsically Safe              |
| W     | ATEX II 2(1)D<br>Ex ia tb [ia Da] IIIC T <sup>⚠</sup> Db  | ATEX II 1D<br>ATEX II 1/2D<br>Ex ia IIIC T <sup>⚠</sup> Da<br>Ex ia IIIC T <sup>⚠</sup> Da/Db  | Dust Ignition Proof             |
| D     | INMETRO<br>Ex d [ia Ga] IIC T6 Gb<br>Ex tb IIIC T85°C...T100°C Db<br>IP65/IP68                                      | INMETRO<br>Ex ia IIC T6 ... T4 Ga<br>Ex tb IIIC T85°C...T100°C Db<br>IP65/IP68   | Flameproof, Dust Ignition Proof |

## Electrical installation

### Standard

Relay SPDT/  
 Solid state switch

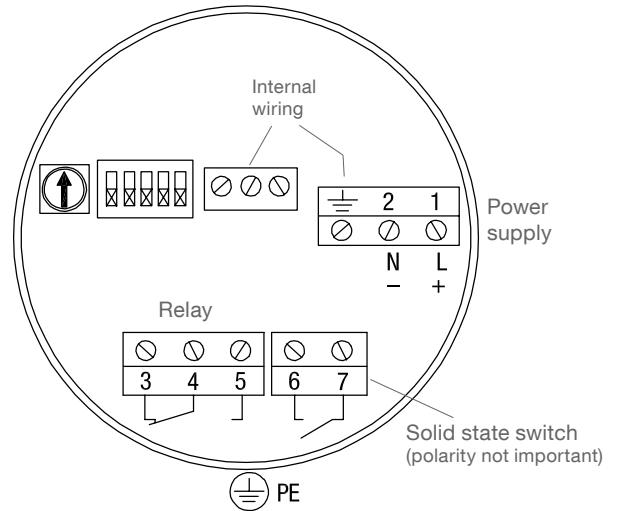
#### Power supply:

12 .. 250 V AC/ DC (0 .. 60 Hz)  
 2 W max.

#### Signal output:

Relay:  
 Floating relay SPDT  
 AC max. 250 V, 8 A, 2000 VA, non inductive  
 DC max. 30 V, 5 A, 150 W, non inductive

Solid state switch:  
 30 V DC or 30 V AC (peak), 82 mA  
 Observe protection (see below)



### Digital

Profibus PA/  
 Solid state switch

#### Power supply:

12 .. 30 V DC, 12.5 mA

#### Intrinsically Safe:

12 .. 24 V DC, 12.5 mA

Intrinsically safe barrier required

For ATEX:

$U_i=24\text{ V}$ ,  $I_i=380\text{ mA}$ ,  $P_i=5.32\text{ W}$ ,  $C_i=5\text{ nF}$ ,  $L_i=10\text{ uH}$

For FM/ CSA:

See "Connection drawing" in the Instruction Manual

#### Signal output:

Solid state switch:  
 30 V DC or 30 V AC (peak), 82 mA  
 Observe protection (see below)

#### Intrinsically safe:

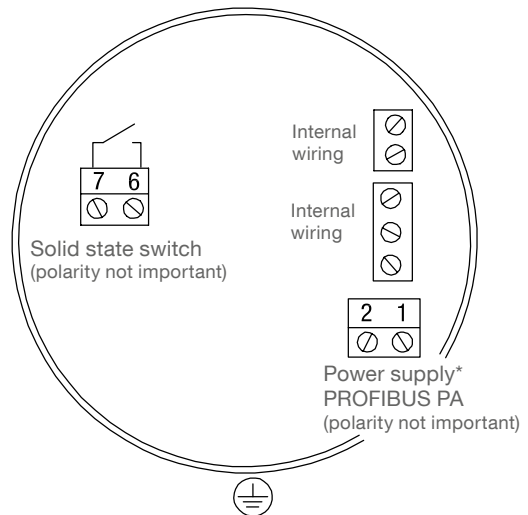
Intrinsically safe barrier required

For ATEX:

$U_i=30\text{ V}$ ,  $I_i=200\text{ mA}$ ,  $P_i=350\text{ mW}$ ,  $C_i=0$ ,  $L_i=0$

For FM/ CSA:

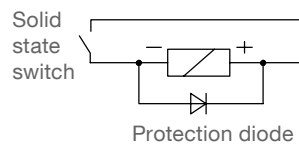
See "Connection drawing" in the Instruction Manual



\* With use of Profibus the wiring must be according to Profibus PA standards.  
 If Profibus is not used, a shielded cable is recommended to ensure stable measurement.

### Protection of Solid State Switch

Observe a protection diode in case of connecting an external relay to the Solid state switch



## Spare parts

Minimum order value for separate orders of spare parts or accessories is 75 €.

| Fitting to unit/ model code | Spare part Article number |
|-----------------------------|---------------------------|
|-----------------------------|---------------------------|

### Electronics

Split electronics is present inside probe and inside housing.  
 Please contact manufacturer.

### Sensor kit for cable units

|                                 |            |              |                           |          |   |
|---------------------------------|------------|--------------|---------------------------|----------|---|
| Fitting to: Standard electronic | PPS probe  | FKM sealing  | pos.4 E 8 P,Q,Z 10 A      | pl440100 | • |
| Fitting to: Standard electronic | PVDF probe | FKM sealing  | pos.4 E 8 P,Q,Z 10 B      | pl440110 | • |
| Fitting to: Standard electronic | PPS probe  | FFKM sealing | pos.4 E 8 P,Q,Z 10 A 17 x | pl440120 | • |
| Fitting to: Standard electronic | PVDF probe | FFKM sealing | pos.4 E 8 P,Q,Z 10 B 17 x | pl440130 | • |
| Fitting to: Digital electronic  | PPS probe  | FKM sealing  | pos.4 F 8 P,Q,Z 10 A      | pl440140 | • |
| Fitting to: Digital electronic  | PVDF probe | FKM sealing  | pos.4 F 8 P,Q,Z 10 B      | pl440150 | • |
| Fitting to: Digital electronic  | PPS probe  | FFKM sealing | pos.4 F 8 P,Q,Z 10 A 17 x | pl440160 | • |
| Fitting to: Digital electronic  | PVDF probe | FFKM sealing | pos.4 F 8 P,Q,Z 10 B 17 x | pl440170 | • |

Sensor kit for cable units

