

Relative and absolute pressure transmitter type 528

Pressure range
-1 ... 0 – 60 bar



The compact type 528 pressure transmitter is based upon the well proven ceramic technology developed by Huba Control over 20 years ago. These transmitters are suitable for applications across a broad spectrum of industries.

- Compact, rugged construction
- Negligible temperature influence on accuracy
- Saving time by quick cable mounting by the customer with swift connector
- Large selection of connections available

Technical overview

| | | | | |
|---|--|--|---|--|
| Pressure range | | | | |
| Relative | | -1 ... 0 – 60 bar | | |
| Absolute | | 0 ... 1 – 16 bar | | |
| Operating conditions | | | | |
| Medium | | Liquids and gases | | |
| | | FPM -15 ... +125 °C | | |
| | | EPDM -40 ... +125 °C | | |
| | | NBR -20 ... +100 °C | | |
| | | MVQ -40 ... +125 °C | | |
| Temperature | Medium | | | |
| | Ambient | -30 ... +85 °C | | |
| | Storage | -50 ... +100 °C | | |
| Tolerable overload / Rupture pressure | ≤ 4 bar | 3.0 x fs | | |
| | > 4 bar | 2.5 x fs | | |
| Materials | | | | |
| Pressure connection | | Stainless steel 1.4404 / AISI 316L | | |
| Plug accommodation | | Polyarylamide 50% GF VO | | |
| | Pressure connection | Stainless steel 1.4404 / AISI 316L | | |
| Materials in contact with medium | Sensor | Ceramic Al ₂ O ₃ (96%) | | |
| | Sealing material | FPM, EPDM, NBR, MVQ | | |
| Electrical overview | | | | |
| | Output | Power supply | Load | Current consumption |
| 2 wire | 4 ... 20 mA | 7 ... 33 VDC | < $\frac{\text{supply voltage} - 7 \text{ V}}{0.02 \text{ A}}$ [Ohm] | < 23 mA |
| 2 wire (Ex) | 4 ... 20 mA | 10 ... 30 VDC | < $\frac{\text{supply voltage} - 10 \text{ V}}{0.02 \text{ A}}$ [Ohm] | < 23 mA |
| | 0 ... 5 V | 7 ... 33 VDC | >10 kOhm / < 100 nF | < 7 mA |
| | 1 ... 6 V | 8 ... 33 VDC | >10 kOhm / < 100 nF | < 7 mA |
| 3 wire | 0 ... 10 V | 12 ... 33 VDC | >10 kOhm / < 100 nF | < 7 mA |
| | 0 ... 10 V | 24 VAC ± 15% | >10 kOhm / < 100 nF | < 7 mA |
| | ration. 10 ... 90% | 5 VDC ± 10% | >10 kOhm / < 100 nF | < 7 mA |
| Polarity reversal protection | Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage. | | | |
| Insulation voltage | 500 VDC | | | |
| Protection class | | | | |
| Protection class III | | | | |
| Dynamic response | | | | |
| Response time | | | | < 2 ms, 1 ms typ. |
| Load cycle | | | | < 100 Hz |
| Protection standard | | | | |
| Connector DIN EN 175301-803, Braids | | | | IP 65 |
| Connector RAST 2.5 | | | | IP 00 |
| Swift connector, Metri Pack, Connector M12x1 | | | | IP 67 |
| Braids (for oxygen applications) | | | | IP 30 |
| Electrical connection | | | | |
| Swift connector with or without cable 1.5 m (PVC spec.) | | | | |
| Connector DIN EN 175301-803-A | | | | |
| Connector DIN EN 175301-803-C (mini DIN) | | | | |
| Metri Pack Serie 150 | | | | |
| Connector M12x1 | | | | |
| Braids | | | | |
| Connector RAST 2.5 (3 wire, only) | | | | |
| Pressure connection | | | | |
| Inside thread | $\frac{7}{16}$ - 20 UNF | | | |
| | $\frac{1}{2}$ - 14 NPT | | | |
| | G $\frac{1}{4}$ | with O-Ring seal FPM spec. (-30 ... +135 °C) | | |
| Outside thread | $\frac{7}{16}$ - 20 UNF | | | |
| | $\frac{1}{4}$ - 18 NPT | | | |
| | G $\frac{1}{4}$ | sealed at back DIN 3852 form E with Profile seal ring in FPM spec. (-30 ... +135 °C) | | |
| | R $\frac{1}{4}$ | DIN 2999 | | |
| | G $\frac{1}{2}$ | sealed at back and manometer (combi) with Profile seal ring in FPM spec. (-30 ... +135 °C) | | |
| | M20x1.5 | | | |
| | G $\frac{1}{2}$ | sealed at front | | |
| Installation arrangement | | | | |
| Unrestricted | | | | |
| Tests / Admissions | | | | |
| Electromagnetic compatibility | CE conformity acc. EN 61326-2-3 | | | |
| Shock acc. IEC IEC 68-2-27 | 100 g, 11 ms half sine wave, all 6 directions, free fall from 1 m on concrete (6x) | | | |
| Constant shock acc. IEC 68-2-29 | 40 g for 6 ms, 1000x all 3 directions | | | |
| Vibration acc. IEC 68-2-6 | 20 g, 15 ... 2000 Hz, 15 ... 25 Hz with amplitude ± 15 mm, 1 Octave/min. all 3 directions, 50 constant load | | | |
| UL recognized component marks | acc. E325110 | | | |
| Protection against explosion | | | | |
| Intrinsic safety «i» (with current output only) | | | | Ex II 1/2 G Ex ia IIC T4 Ga/Gb |
| EC type examination certificate | | | | Ex II 1/2 D Ex ia IIC T125°C Da/Db |
| Connection to certified intrinsically safe resistive circuits with maximum values | | | | SEV 10 ATEX 0145 |
| Effective internal inductance and capacitance for versions with plugs complying with EN 175301-803 or M12x1 | | | | Ui = 30 VDC; li = 100 mA = Pi = 0.75 W |
| | | | | Li = 0 nH; Ci = 0 nF |
| Weight | | | | |
| ~ 90 g | | | | |
| Packaging (Please state on order) | | | | |
| Single packaging in cardboard | | | | accessories integrated |
| Multiple packaging in cardboard (25 pcs) | | | | |

| Order code selection in psi | | | 528. | X | X | X | X | X | X | X | X | X | X | X | |
|---|---|--|--|---|---|---|---|---|---|-----|---|---|---|---|--|
| Pressure range (relative) ¹⁾ | -30 ... 0"hg | | 9 | B | 0 | | | | | | | | | | |
| | 0 ... 15 psi | | 9 | B | 1 | | | | | | | | | | |
| | 0 ... 20 psi | | 9 | B | 2 | | | | | | | | | | |
| | 0 ... 30 psi | | 9 | B | 4 | 0 | | | | | | | | | |
| | 0 ... 60 psi | | 9 | B | 5 | 0 | | | | | | | | | |
| | 0 ... 100 psi | | 9 | B | 7 | 0 | | | | | | | | | |
| | 0 ... 150 psi | | 9 | C | 0 | 0 | | | | | | | | | |
| | 0 ... 200 psi | | 9 | C | 1 | 0 | | | | | | | | | |
| | 0 ... 300 psi | | 9 | C | 2 | 0 | | | | | | | | | |
| | 0 ... 500 psi | | 9 | C | 3 | 0 | | | | | | | | | |
| 0 ... 750 psi | | 9 | D | 0 | 0 | | | | | | | | | | |
| Pressure range (absolute) ¹⁾ | 0 ... 15 psi | | 8 | B | 1 | | | | | | | | | | |
| | 0 ... 20 psi | | 8 | B | 2 | | | | | | | | | | |
| | 0 ... 30 psi | | 8 | B | 4 | | | | | | | | | | |
| | 0 ... 60 psi | | 8 | B | 5 | | | | | | | | | | |
| | 0 ... 100 psi | | 8 | B | 7 | | | | | | | | | | |
| | 0 ... 150 psi | | 8 | C | 0 | | | | | | | | | | |
| | 0 ... 200 psi | | 8 | C | 1 | | | | | | | | | | |
| Sealing material | FPM | Fluoro elastomer | | | | 0 | | | | | | | | | |
| | EPDM | Ethylene propylene | | | | 1 | | | | | | | | | |
| | NBR | Butadiene Acrylonitrile | | | | 2 | | | | | | | | | |
| | MVQ ²⁾ | Silicone polymer | | | | 3 | | | | | | | | | |
| Application | standard | | | | | | | 0 | | | | | | | |
| | for oxygen applications | | | | | 0 | 1 | | | | | | | | |
| Output / power supply | 0 ... 5 V | 7 ... 33 VDC | | | | | | | 1 | | | | | | |
| | 1 ... 6 V | 8 ... 33 VDC | | | | | | | 6 | | | | | | |
| | 0 ... 10 V | 12 ... 33 VDC | | | | | | | 2 | | | | | | |
| | 0 ... 10 V | 24 VAC ±15% (not possible with M12x1 connector or metri Pack) | | | | | | | 8 | | | | | | |
| | Ratiom. 10 ... 90% | 5VDC ±10% | | | | | | | 7 | | | | | | |
| | 4 ... 20 mA | 7 ... 33 VDC | | | | | | | 3 | | | | | | |
| Electrical connection | 4 ... 20 mA | 10 ... 30 VDC | | | | | | 0 | 4 | 1,3 | | 1 | | | |
| | Swift connector | | | | | | | | | | | 0 | | | |
| | Connector DIN EN 175301-803-A ³⁾ | | | | | | | | | | | 1 | | | |
| | Connector DIN EN 175301-803-C (mini DIN) ³⁾ | | | | | | | | | | | 2 | | | |
| | Connector M12x1 ³⁾ | 2w: IN=1 / OUT=3 | 3w: IN=1 / OUT=4 / GND=3 | | | | | | | | | 3 | | | |
| | Connector M12x1 ³⁾ | 2w: IN=1 / OUT=4 | 3w: IN=1 / OUT=3 / GND=4 | | | | | | | | | M | | | |
| | Connector M12x1 ^{2),3)} | 2w: IN=1 / OUT=2 | 3w: IN=1 / OUT=2 / GND=3 | | | | | | | | | P | | | |
| | Connector RAST 2,5 ³⁾ | | | | | | | | 0 | 7 | 4 | | | | |
| | Metri Pack Serie 150 ^{3),4)} | | | | | | | | 0 | | 5 | | | | |
| | Braids | 80 ±10 mm | | | | | | | | | 6 | | | | |
| | Braids | 290 ±10 mm | | | | | | | | | 7 | | | | |
| | Braids | 480 ±10 mm | | | | | | | | | 8 | | | | |
| | Braids | 730 ±10 mm | | | | | | | | | 9 | | | | |
| | Swift connector with cable 1.5 m | | | | | | | | | | L | | | | |
| | Pressure connection ¹⁾ | Inside thread | G ¼ with O-Ring seal FPM spec. (-30 ... +135 °C) | | | | | | | | | | 1 | | |
| | | Inside thread | 7/16-20 UNF | | | | | | | | | | K | | |
| | | Inside thread | ½ -14 NPT | | | | | | | | | | D | | |
| Outside thread | | 7/16 -20 UNF | | | | | | | | | | 2 | | | |
| Outside thread | | ¼ -18 NPT | | | | | | | | | | 3 | | | |
| Outside thread | | G ¼ sealed at back DIN 3852 form E with Profile seal ring in FPM spec. (-30 ... +135 °C) | | | | | | | | | | 4 | | | |
| Outside thread | | R ¼ acc. to DIN 2999 | | | | | | | | | | 7 | | | |
| Outside thread | | G ½ sealed at back and manometer (combi) with Profile seal ring in FPM spec. (-30 ... +135 °C) | | | | | | | | | | 8 | | | |
| Outside thread | | G ½ sealed at front | | | | | | | | | | 9 | | | |
| Outside thread | | M20x1.5 ²⁾ | | | | | | | | | | E | | | |
| Version | without pressure tip orifice | | | | | | | | | | | 1 | 1 | | |
| | with pressure tip orifice ²⁾ | | | | | | | | | | | 2 | 1 | | |
| Pressure range variation (optional) | Indicate W and state range on order (e.g.: W0... + 16psi/OUT1...8V) | | | | | | | | | | | | W | | |

¹⁾ Other pressure ranges or pressure connections on request
³⁾ Delivery without female connector

²⁾ UL admission applied
⁴⁾ For pressure ranges ≤ 200 psi only possible if deaeration through the cable is assured

| Order code selection in MPa | | | 528. | X | X | X | X | X | X | X | X | X | X | X | X |
|---|--|--|--------------------------|---|---|---|---|---|---|---|-----|---|---|---|---|
| Pressure range (relative) ¹⁾ | -0.1 ... 0 MPa | | 9 | G | 0 | | | | | | | | | | |
| | 0 ... 0.1 MPa | | 9 | G | 1 | | | | | | | | | | |
| | 0 ... 0.16 MPa | | 9 | G | 2 | | | | | | | | | | |
| | 0 ... 0.25 MPa | | 9 | G | 4 | 0 | | | | | | | | | |
| | 0 ... 0.4 MPa | | 9 | G | 5 | 0 | | | | | | | | | |
| | 0 ... 0.6 MPa | | 9 | G | 7 | 0 | | | | | | | | | |
| | 0 ... 1 MPa | | 9 | H | 0 | 0 | | | | | | | | | |
| | 0 ... 1.6 MPa | | 9 | H | 1 | 0 | | | | | | | | | |
| | 0 ... 2.5 MPa | | 9 | H | 2 | 0 | | | | | | | | | |
| | 0 ... 4 MPa | | 9 | H | 3 | 0 | | | | | | | | | |
| 0 ... 6 MPa | | 9 | K | 0 | 0 | | | | | | | | | | |
| Pressure range (absolute) ¹⁾ | 0 ... 0.1 MPa | | 8 | G | 1 | | | | | | | | | | |
| | 0 ... 0.16 MPa | | 8 | G | 2 | | | | | | | | | | |
| | 0 ... 0.25 MPa | | 8 | G | 4 | | | | | | | | | | |
| | 0 ... 0.4 MPa | | 8 | G | 5 | | | | | | | | | | |
| | 0 ... 0.6 MPa | | 8 | G | 7 | | | | | | | | | | |
| | 0 ... 1 MPa | | 8 | H | 0 | | | | | | | | | | |
| | 0 ... 1.6 MPa | | 8 | H | 1 | | | | | | | | | | |
| Sealing material | FPM | Fluoro elastomer | | | | 0 | | | | | | | | | |
| | EPDM | Ethylene propylene | | | | 1 | | | | | | | | | |
| | NBR | Butadiene Acrylonitrile | | | | 2 | | | | | | | | | |
| | MVQ ²⁾ | Silicone polymer | | | | 3 | | | | | | | | | |
| Application | standard | | | | | | | 0 | | | | | | | |
| | for oxygen applications | | | | | | | 0 | 1 | | | | | | |
| Output / power supply | 0 ... 5 V | 7 ... 33 VDC | | | | | | | | 1 | | | | | |
| | 1 ... 6 V | 8 ... 33 VDC | | | | | | | | 6 | | | | | |
| | 0 ... 10 V | 12 ... 33 VDC | | | | | | | | 2 | | | | | |
| | 0 ... 10 V | 24 VAC ±15% (not possible with M12x1 connector or metri Pack) | | | | | | | | 8 | | | | | |
| | Ratiom. 10 ... 90% | 5VDC ±10% | | | | | | | | 7 | | | | | |
| | 4 ... 20 mA | 7 ... 33 VDC | | | | | | | | 3 | | | | | |
| | 4 ... 20 mA | 10 ... 30 VDC | Ex protection | | | | | | 0 | 4 | 1,3 | | 1 | | |
| Electrical connection | Swift connector | | | | | | | | | 0 | | | | | |
| | Connector DIN EN 175301-803-A ³⁾ | | | | | | | | | 1 | | | | | |
| | Connector DIN EN 175301-803-C (mini DIN) ³⁾ | | | | | | | | | 2 | | | | | |
| | Connector M12x1 ³⁾ | 2w: IN=1 / OUT=3 | 3w: IN=1 / OUT=4 / GND=3 | | | | | | | | 3 | | | | |
| | Connector M12x1 ³⁾ | 2w: IN=1 / OUT=4 | 3w: IN=1 / OUT=3 / GND=4 | | | | | | | | M | | | | |
| | Connector M12x1 ^{2),3)} | 2w: IN=1 / OUT=2 | 3w: IN=1 / OUT=2 / GND=3 | | | | | | | | P | | | | |
| | Connector RAST 2.5 ³⁾ | | | | | | | | 0 | 7 | 4 | | | | |
| | Metri Pack Serie 150 ^{3),4)} | | | | | | | | 0 | | 5 | | | | |
| | Braids | 80 ±10 mm | | | | | | | | | 6 | | | | |
| | Braids | 290 ±10 mm | | | | | | | | | 7 | | | | |
| | Braids | 480 ±10 mm | | | | | | | | | 8 | | | | |
| | Braids | 730 ±10 mm | | | | | | | | | 9 | | | | |
| | Swift connector with cable 1.5 m | | | | | | | | | | L | | | | |
| Pressure connection ¹⁾ | Inside thread | G ¼ with O-Ring seal FPM spec. (-30 ... +135 °C) | | | | | | | | | | | | 1 | |
| | Inside thread | 7/16-20 UNF | | | | | | | | | | | | K | |
| | Inside thread | ½ -14 NPT | | | | | | | | | | | | D | |
| | Outside thread | 7/16 -20 UNF | | | | | | | | | | | | 2 | |
| | Outside thread | ¼ -18 NPT | | | | | | | | | | | | 3 | |
| | Outside thread | G ¼ sealed at back DIN 3852 form E with Profile seal ring in FPM spec. (-30 ... +135 °C) | | | | | | | | | | | | 4 | |
| | Outside thread | R ¼ acc. to DIN 2999 | | | | | | | | | | | | 7 | |
| | Outside thread | G ½ sealed at back and manometer (combi) with Profile seal ring in FPM spec. (-30 ... +135 °C) | | | | | | | | | | | | 8 | |
| | Outside thread | G ½ sealed at front | | | | | | | | | | | | 9 | |
| | Outside thread | M20x1.5 ²⁾ | | | | | | | | | | | | E | |
| Version | without pressure tip orifice | | | | | | | | | | | | | 1 | 1 |
| | with pressure tip orifice ²⁾ | | | | | | | | | | | | | 2 | 1 |
| Pressure range variation (optional) | Indicate W and state range on order (e.g.: W0... + 0.3MPa/OUT1...8V) | | | | | | | | | | | | | | W |

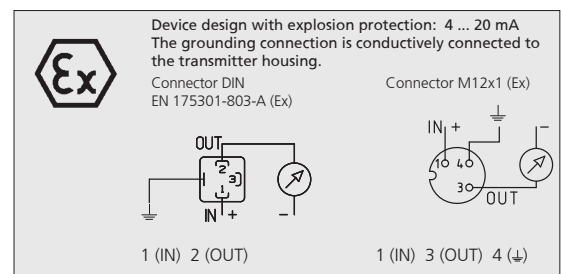
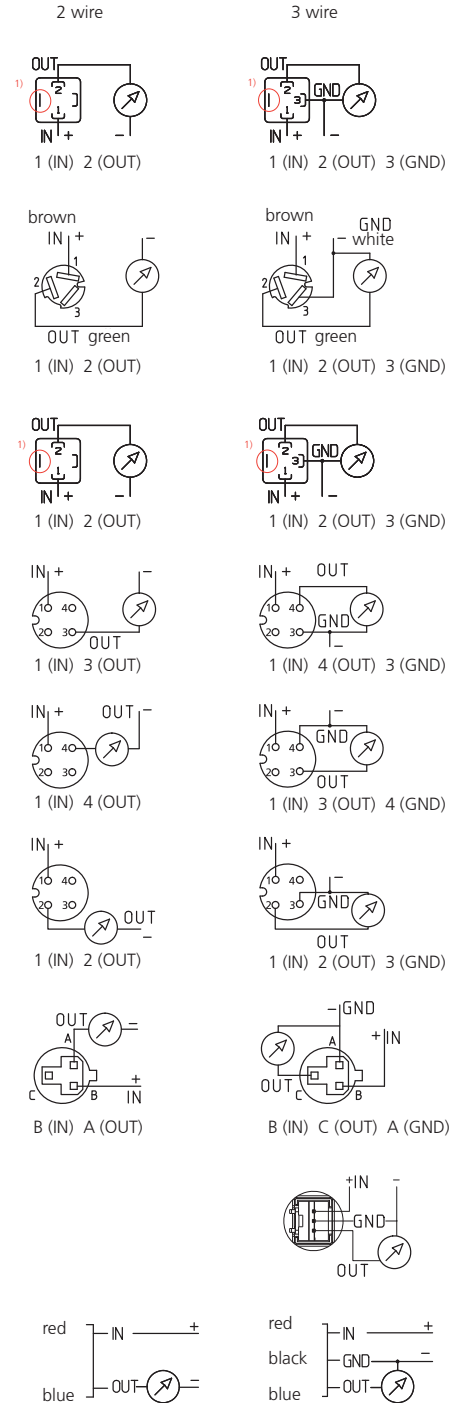
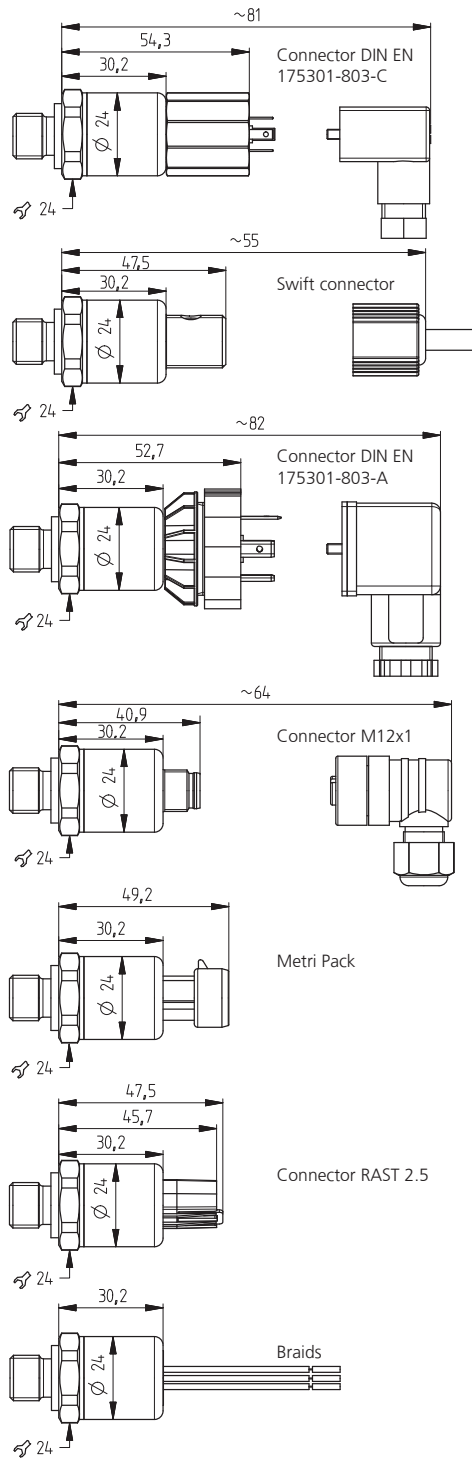
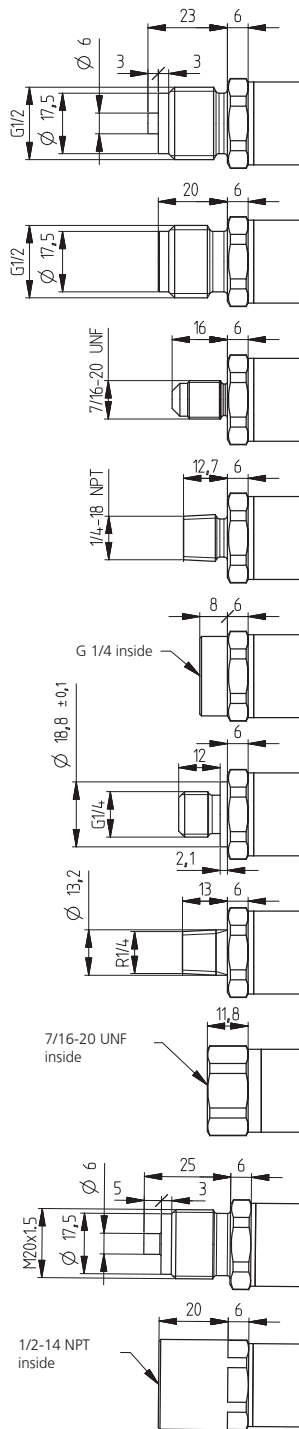
Accessories

| | Order number |
|---|--------------|
| Swift connector | 107359 |
| Female connector DIN EN 175301-803-A with seal | 103510 |
| Female connector DIN EN 175301-803-C (mini DIN) with seal | 104244 |
| Female connector for connector M12x1 | 106975 |
| Calibration certificate | 104551 |

¹⁾ Other pressure ranges or pressure connections on request
³⁾ Delivery without female connector

²⁾ UL admission applied
⁴⁾ For pressure ranges ≤ 1.6 MPa only possible if deaeration through the cable is assured

Dimensions in mm / Electrical connections



¹⁾ Not connected with transmitter housing