

# Relative and differential pressure transmitter type 692

Pressure range  
0 ... 0.1 – 25 bar



Type 692 pressure transmitters have a unique, well proven ceramic technology. There are variety of pressure and electrical connections available, together with several standardised output signals. The wide variety of options makes these transmitters ideal for applications across a broad spectrum of industries.

- Very low temperature sensitivity
- High resistance to extreme temperatures
- No mechanical creepage
- Modular system and choice of materials to suit individual applications

**Technical overview**

**Pressure range**

|                           |                    |
|---------------------------|--------------------|
| Relative and differential | 0 ... 0.1 – 25 bar |
|---------------------------|--------------------|

**Operating conditions**

|                                |                  |                                |
|--------------------------------|------------------|--------------------------------|
| Medium                         |                  | Liquids and neutral gases      |
| Temperature                    | Medium / ambient | -15 ... +85 °C                 |
|                                | Storage          | -40 ... +85 °C                 |
| Tolerable overload on one side |                  | See order code selection table |
| System pressure                | ≤ 6 bar          | 25 bar                         |
|                                | ≥ 10 bar         | 50 bar                         |
| Rupture pressure               |                  | 1.5x fs                        |

**Materials**

|                                      |                     |   |
|--------------------------------------|---------------------|---|
| Case                                 |                     | Stainless steel 1.4305 / AISI 303                           |
| Materials in contact with the medium | Pressure connection | Stainless steel 1.4305 / AISI 303, PVDF, CuZn nickel plated |
|                                      | Sensor              | ceramic Al <sub>2</sub> O <sub>3</sub> (96%)                |
|                                      | Sealing material    | FPM, EPDM, NBR, MVQ   |

**Electrical overview**

|                              | Output   | Power supply                | Load  | Current consumption (at nominal pressure) |
|------------------------------|--|-----------------------------|---|---|
| 2 wire                       | 4 ... 20 mA  | 11 ... 33 VDC               | $\frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}}$ [Ohm] | < 20 mA                                   |
|                              | 0 ... 5 V  | 11 ... 33 VDC / 24 VAC ±15% | >10 kOhm  | < 5 mA                                    |
| 3 wire                       | 0 ... 10 V   | 18 ... 33 VDC / 24 VAC ±15% | >10 kOhm  | < 5 mA                                    |
|                              | ration. 10 ... 90%   | 5 VDC ±5%                   | >10 kOhm  | < 5 mA                                    |
| Polarity reversal protection | Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage. |                             |   |   |

**Dynamic response**

|               |         |
|---------------|---------|
| Response time | < 5 ms  |
| Load cycle    | < 50 Hz |

**Protection standard**

|       |
|-------|
| IP 65 |
|-------|

**Electrical connection**

|                               |     |
|-------------------------------|-----|
| Connector DIN EN 175301-803-A |     |
| Connector DIN EN 60130-9      |     |
| Cable 1.5 m                   | PG7 |

**Pressure connection**

|                   |              |
|-------------------|--------------|
| Pressure tube tip | ∅ 4 mm       |
|                   | ∅ 6 mm       |
| Screw fitting     | ∅ 6 mm       |
|                   | ∅ 8 mm       |
| Outside thread    | 7/16"-20 UNF |
|                   | G 1/8        |
| Inside thread     | 1/8"-27 NPT  |
|                   | G 1/8        |

**Mounting instruction**

|                          |                  |
|--------------------------|------------------|
| Installation arrangement | Unrestricted     |
| Mounting                 | Mounting bracket |

**Tests / Admissions**

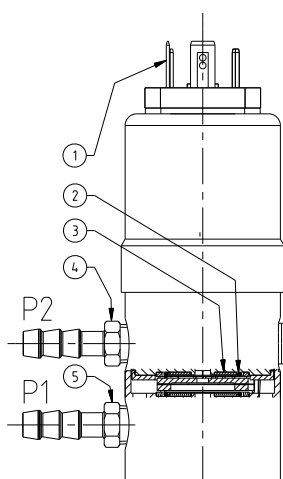
|                               |                                 |
|-------------------------------|---------------------------------|
| Electromagnetic compatibility | CE conformity acc. EN 61326-2-3 |
|-------------------------------|---------------------------------|

**Weight**

|         |
|---------|
| ~ 430 g |
|---------|

**Packaging**

|                               |                      |
|-------------------------------|----------------------|
| Single packaging in cardboard | accessories included |
|-------------------------------|----------------------|



Legend to cross-section drawing

- 1 Electrical connection
- 2 Seals
- 3 Ceramic element
- 4 P2 Pressure connection (lower pressure)
- 5 P1 Pressure connection (higher pressure)

| Parameter  | Unit          | Versions with overload on one side ≤ 2x nominal pressure | Versions with overload on one side ≤ 3x nominal pressure | Versions with overload on one side ≤ 7.5x nominal pressure |
|--|---------------|--|--|--|
| Tolerance zero point                             | max. % fs     | ± 0.4  | ± 0.75   | ± 1.25   |
| Tolerance full scale                             | max. % fs     | ± 0.4  | ± 0.75   | ± 1.25   |
| Resolution                                       | % fs          | 0.1  | 0.15   | 0.25   |
| Total of linearity, hysteresis and repeatability | max. % fs     | ± 0.5  | ± 0.75   | ± 1.25   |
| Long term stability acc. to DIN EN 60770         | % fs          | ± 0.5  | ± 0.5  | ± 0.5  |
| TC zero point <sup>1)</sup>                      | max. % fs/10K | See order code selection table                           | See order code selection table                           | See order code selection table                             |
| TC sensitivity <sup>1)</sup>                     | max. % fs/10K | ± 0.15   | ± 0.23   | ± 0.38   |

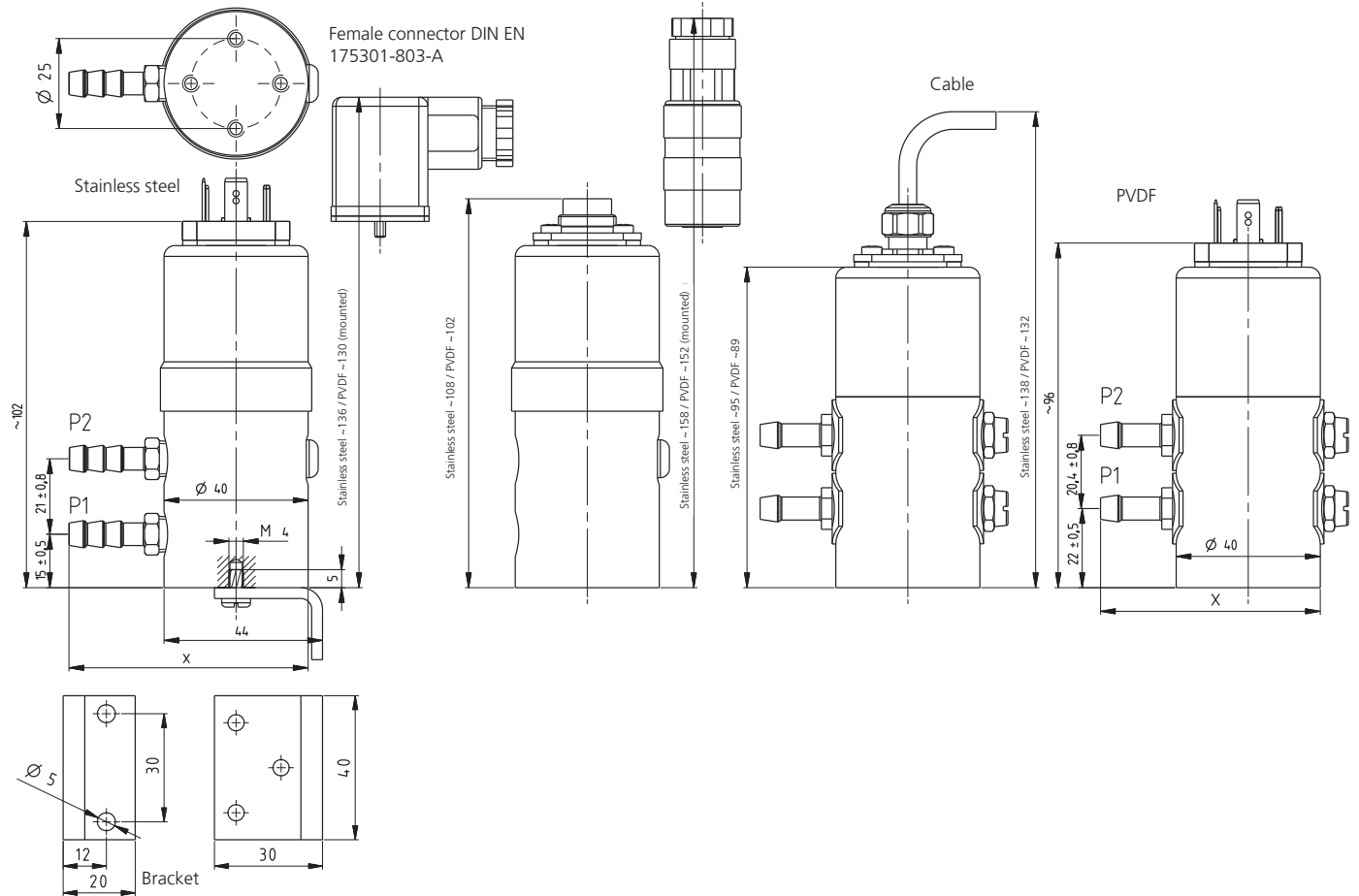
Test conditions: 25 °C, 45% RH, Power supply 24 VDC  
TC z.p. / TC s. -15 ... +80 °C

| Order code selection table            |  |  | 692.9 X X X X X X X X X X |   |   |  |  |  |  |  |  |  |  |  |   |
|---------------------------------------|--|--|---------------------------|---|---|--|--|--|--|--|--|--|--|--|---|
| Pressure range <sup>2)</sup>          | Tolerable overload on one side   |  | TC z.p. (fs/10K)          |   |   |  |  |  |  |  |  |  |  |  |   |
|                                       | P1   | P2   |                           |   |   |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.1 bar                       | max. 0.6 bar (6 x Nominal pressure)  | 0.6 bar                                    | ± 1.2 %                   | 0 | 0 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.2 bar                       | max. 1.2 bar (6 x Nominal pressure)  | 1.2 bar                                    | ± 1.2 %                   | 0 | 2 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.2 bar                       | max. 0.6 bar (3 x Nominal pressure)  | 0.6 bar                                    | ± 0.6 %                   | 4 | 0 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.25 bar                      | max. 1.2 bar (4.8 x Nominal pressure)  | 1.2 bar                                    | ± 1.0 %                   | 0 | 3 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.25 bar                      | max. 0.6 bar (2.4 x Nominal pressure)  | 0.6 bar                                    | ± 0.5 %                   | 4 | 1 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.3 bar                       | max. 0.6 bar (2 x Nominal pressure)  | 0.6 bar                                    | ± 0.4 %                   | 0 | 1 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.4 bar                       | max. 1.2 bar (3 x Nominal pressure)  | 1.2 bar                                    | ± 0.6 %                   | 0 | 4 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.4 bar                       | max. 2 bar (5 x Nominal pressure)  | 2 bar                                      | ± 1.0 %                   | 0 | 5 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.5 bar                       | max. 1.2 bar (2.4 x Nominal pressure)  | 1.2 bar                                    | ± 0.5 %                   | 0 | 6 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.5 bar                       | max. 3 bar (6 x Nominal pressure)  | 3 bar                                      | ± 0.8 %                   | 0 | 7 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.6 bar                       | max. 1.2 bar (2 x Nominal pressure)  | 1.2 bar                                    | ± 0.4 %                   | 0 | 8 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 0.6 bar                       | max. 3 bar (5 x Nominal pressure)  | 3 bar                                      | ± 0.7 %                   | 0 | 9 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 1 bar                         | max. 2 bar (2 x Nominal pressure)  | 2 bar                                      | ± 0.4 %                   | 1 | 1 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 1 bar                         | max. 5 bar (5 x Nominal pressure)  | 5 bar                                      | ± 1.0 %                   | 1 | 2 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 1.6 bar                       | max. 3.2 bar (2 x Nominal pressure)  | 3.2 bar                                    | ± 0.4 %                   | 1 | 3 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 1.6 bar                       | max. 12 bar (7.5 x Nominal pressure)   | 12 bar                                     | ± 1.0 %                   | 1 | 4 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 2.5 bar                       | max. 5 bar (2 x Nominal pressure)  | 5 bar                                      | ± 0.4 %                   | 1 | 5 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 2.5 bar                       | max. 12 bar (4.8 x Nominal pressure)   | 12 bar                                     | ± 0.6 %                   | 1 | 6 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 4 bar                         | max. 8 bar (2 x Nominal pressure)  | 8 bar                                      | ± 0.4 %                   | 1 | 7 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 4 bar                         | max. 12 bar (3 x Nominal pressure)   | 12 bar                                     | ± 0.5 %                   | 1 | 8 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 6 bar                         | max. 12 bar (2 x Nominal pressure)   | 12 bar                                     | ± 0.4 %                   | 1 | 9 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 10 bar                        | max. 20 bar (2 x Nominal pressure)   | 20 bar                                     | ± 0.4 %                   | 3 | 0 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 16 bar                        | max. 32 bar (2 x Nominal pressure)   | 32 bar                                     | ± 0.4 %                   | 3 | 1 |  |  |  |  |  |  |  |  |  |   |
| 0 ... + 25 bar                        | max. 50 bar (2 x Nominal pressure)   | 50 bar                                     | ± 0.4 %                   | 3 | 2 |  |  |  |  |  |  |  |  |  |   |
| ▲ Fullscale signal at these pressures |  |  |                           |   |   |  |  |  |  |  |  |  |  |  |   |
| Sealing material                      | FPM  | Fluoro elastomer                           |                           |   |   |  |  |  |  |  |  |  |  |  | 0 |
|                                       | EPDM   | Ethylene propylene                         |                           |   |   |  |  |  |  |  |  |  |  |  | 1 |
|                                       | NBR  | Butadiene Acrylonitrile                    |                           |   |   |  |  |  |  |  |  |  |  |  | 2 |
|                                       | MVQ  | Silicone polymer                           |                           |   |   |  |  |  |  |  |  |  |  |  | 3 |
| Adjustment                            | Factory  |  |                           |   |   |  |  |  |  |  |  |  |  |  | 0 |
| Output / power supply                 | 0 ... 5 V  | 11 ... 33 VDC / 24 VAC ±15%                |                           |   |   |  |  |  |  |  |  |  |  |  | 0 |
|                                       | 0 ... 10 V   | 18 ... 33 VDC / 24 VAC ±15%                |                           |   |   |  |  |  |  |  |  |  |  |  | 1 |
|                                       | 4 ... 20 mA  | 11 ... 33 VDC                              |                           |   |   |  |  |  |  |  |  |  |  |  | 7 |
|                                       | ration. 10 ... 90%   | 5 VDC ±5%                                  |                           |   |   |  |  |  |  |  |  |  |  |  | 9 |
| Electrical connection                 | Cable 1.5 m, PG7   |  |                           |   |   |  |  |  |  |  |  |  |  |  | 0 |
|                                       | Connector <sup>3)</sup>  | DIN EN 175301-803-A                        |                           |   |   |  |  |  |  |  |  |  |  |  | 1 |
|                                       | Connector <sup>3)</sup>  | DIN EN 60130-9                             |                           |   |   |  |  |  |  |  |  |  |  |  | 3 |
| Pressure connection                   | Inside thread  | Stainless steel 1/8"-27 NPT or PVDF G 1/8" |                           |   |   |  |  |  |  |  |  |  |  |  | 0 |
|                                       | Hose connection  | CuZn nickel plated                         | for tube inside Ø 4 mm    |   |   |  |  |  |  |  |  |  |  |  | 1 |
|                                       | Hose connection  | Stainless steel 1.4571 / AISI 316Ti        | for tube inside Ø 4 mm    |   |   |  |  |  |  |  |  |  |  |  | E |
|                                       | Hose connection  | CuZn nickel plated                         | for tube inside Ø 6 mm    |   |   |  |  |  |  |  |  |  |  |  | 2 |
|                                       | Hose connection  | PVDF                                       | for tube inside Ø 6 mm    |   |   |  |  |  |  |  |  |  |  |  | 3 |
|                                       | Hose connection  | Stainless steel 1.4571 / AISI 316Ti        | for tube inside Ø 6 mm    |   |   |  |  |  |  |  |  |  |  |  | 2 |
|                                       | Screw fitting  | CuZn nickel plated                         | for pipe outside Ø 6 mm   |   |   |  |  |  |  |  |  |  |  |  | 4 |
|                                       | Screw fitting  | Stainless steel 1.4305 / AISI 303          | for pipe outside Ø 6 mm   |   |   |  |  |  |  |  |  |  |  |  | 5 |
|                                       | Screw fitting  | PVDF                                       | for pipe outside Ø 6 mm   |   |   |  |  |  |  |  |  |  |  |  | 8 |
|                                       | Screw fitting  | CuZn nickel plated                         | for pipe outside Ø 8 mm   |   |   |  |  |  |  |  |  |  |  |  | 2 |
|                                       | Screw fitting  | Stainless steel 1.4305 / AISI 303          | for pipe outside Ø 8 mm   |   |   |  |  |  |  |  |  |  |  |  | 6 |
|                                       | Screw fitting  | PVDF                                       | for pipe outside Ø 8 mm   |   |   |  |  |  |  |  |  |  |  |  | 7 |
|                                       | Screw fitting  | PVDF                                       | for pipe outside Ø 8 mm   |   |   |  |  |  |  |  |  |  |  |  | 9 |
|                                       | Outside thread   | 7/16"-20 UNF CuZn nickel plated            |                           |   |   |  |  |  |  |  |  |  |  |  | A |
|                                       | Adapter inside   | G 1/8" Stainless steel 1.4305 / AISI 303   |                           |   |   |  |  |  |  |  |  |  |  |  | B |
|                                       | Adapter outside  | G 1/8" CuZn nickel plated                  | with union nut            |   |   |  |  |  |  |  |  |  |  |  | C |
| Case                                  | Stainless steel  | 1.4305 / AISI 303                          |                           |   |   |  |  |  |  |  |  |  |  |  | 1 |
|                                       | PVDF all ranges up to 6 bar max., overload on one side and system pressure max. 12 bar |  |                           |   |   |  |  |  |  |  |  |  |  |  | 2 |
|                                       | Stainless steel with pressure tip orifice  |  |                           |   |   |  |  |  |  |  |  |  |  |  | 4 |
| Pressure range variation              | Indicate W and state range on order (e.g.: W0... + 8bar/OUT1...6V)                     |  |                           |   |   |  |  |  |  |  |  |  |  |  | W |

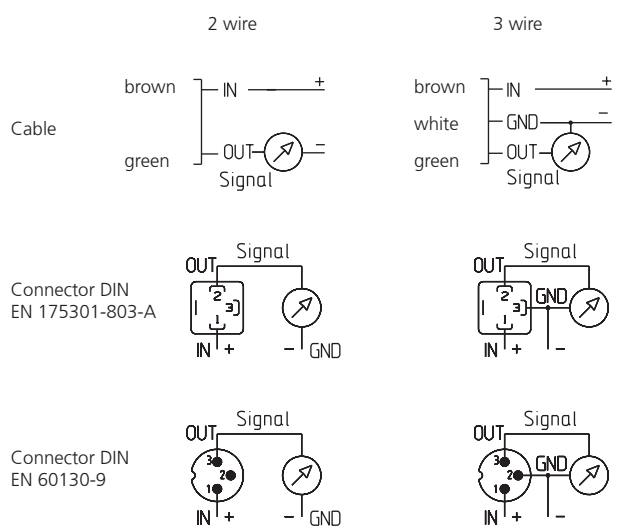
## Accessories

|  | Order number                                |
|--|---|
| Female connector DIN EN 175301-803-A with seal | IP 65, when installed and screwed<br>103510 |
| Female connector DIN EN 60130-9                | IP 65, when installed and screwed<br>103524 |
| Mounting bracket incl. screws                  | 101999                                      |
| Calibration certificate                        | 104551                                      |

Female Connector  
DIN EN 60130-9



|  |                                      |  |              |              |
|--|--------------------------------------|--|--------------|--------------|
|  | Stainless steel 1.4305<br>AISI 303   | Screw fitting for pipe outside $\varnothing 6$ | L~24<br>X~65 | a=10<br>b=12 |
|  | Stainless Steel 1.4305<br>AISI 303   | Screw fitting for pipe outside $\varnothing 8$ | L~26<br>X~67 | a=12<br>b=14 |
|  | Stainless Steel 1.4305<br>AISI 303   | Inside thread G $\frac{1}{4}$                  | L~12<br>X~53 | a=14         |
|  | CuZn nickel plated                   | Screw fitting for pipe outside $\varnothing 6$ | L~24<br>X~65 | a=10<br>b=12 |
|  | CuZn nickel plated                   | Screw fitting for pipe outside $\varnothing 8$ | L~25<br>X~66 | a=12<br>b=14 |
|  | CuZn nickel plated                   | Hose connection for tube $\varnothing 4$       | L~20<br>X~61 | a=10         |
|  | Stainless steel 1.4571<br>AISI 316Ti | Hose connection for tube $\varnothing 6$       | L~25<br>X~66 | a=10         |
|  | CuZn nickel plated                   | Outside thread G $\frac{1}{4}$                 | L~20<br>X~61 | a=10<br>b=12 |
|  | CuZn nickel plated                   | Outside thread $\frac{7}{16}$ -20 UNF          | L~18<br>X~59 | a=14         |
|  | PVDF                                 | Screw fitting for pipe $\varnothing 6$         | L~20<br>X~61 | a=12         |
|  | PVDF                                 | Screw fitting for pipe $\varnothing 8$         | L~23<br>X~64 | a=14         |
|  | PVDF                                 | Hose connection for tube $\varnothing 6$       | L~20<br>X~61 | a=10         |





FOR FINE PRESSURE AND FLOW MEASUREMENT

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