# Pressure transmitter
# For general industrial applications
# Model A-10



For further approvals, see Page 10

## Applications

- Machine building
- Measurement and control technology
- Hydraulics and pneumatics
- Pumps and compressors
- Shipbuilding

## Special features

- Excellent quality and proven technology
- Exceptionally large variety covers almost all applications
- All configurable variants are available at short notice from quantities of 1 upwards
- Particularly cost-efficient




**Pressure transmitter, model A-10**

Configurator

Standard articles

## Description

The field-proven model A-10 pressure transmitter (pressure sensor) is the all-rounder for pressure measurement in industrial environments. Compactly built, it can be integrated into a wide range of machine designs. The many measuring ranges, and special measuring ranges, contribute to its universal applicability.

**Excellent quality and proven technology**
Our many years of experience and precise knowledge of customer needs have been incorporated into the development of the model A-10. It has been proving itself in countless applications for over ten years. The consistently high quality and its reliable function are appreciated worldwide and regularly confirmed by both internal and external audits. This bestseller can tolerate up to 100 million load cycles with almost constant precision.

**Exceptionally large variety covers almost all applications**
Depending on the requirement, the model A-10 measures gauge pressure, vacuum and absolute pressure. It can be flexibly configured into over 2 million variants and can thus be effortlessly integrated into almost any plant concept.

**All configurable variants are available at short notice from quantities of 1 upwards**
Every custom-configured model A-10 will be ready for shipment, starting from a batch size of 1, no later than five working days after the order is placed. Large quantities can also be delivered quickly. The short delivery times help both OEMs to meet short production times and distributors to procure the right product for their customers quickly.

**Particularly cost-efficient**
The model A-10 is particularly cost-efficient and offers very good performance, matched to the majority of applications in terms of precision and robustness. The high reliability and long service life ensure low maintenance and replacement costs.



Smart in sensing

Data sheets showing similar products:
Pressure transmitter for demanding industrial applications; model S-20; see data sheet PE 81.61
Pressure sensor with IO-Link; model A-1200; see data sheet PE 81.90

## Specifications

Optionally the model A-10 is available with an improved non-linearity. Depending on the selected non-linearity the following values result:

| Accuracy specifications | Non-linearity ≤ ±0.5 % of span | Non-linearity ≤ ±0.25 % of span |
|---|---|---|
| **Non-linearity per BFSL per IEC 61298-2** | | |
| Measuring range ≤ 0.1 bar [≤ 1.45 psi] | ≤ ±0.5 % of span | - |
| Measuring range > 0.1 bar [> 1.45 psi] | ≤ ±0.5 % of span | ≤ ±0.25 % of span [1] |
| **Accuracy** | → See “Max. measured error per IEC 61298-2” | |
| **Max. measured error per IEC 61298-2** | | |
| Measuring range ≥ 0.6 bar [≥ 8.7 psi] | ≤ ±1 % of span | ≤ ±0.5 % of span |
| Measuring range ≥ 0.4 bar [≥ 5.8 psi] | ≤ ±1.2 % of span | ≤ ±0.7 % of span |
| Measuring range ≥ 0.25 bar [≥ 3.6 psi] | ≤ ±1.3 % of span | ≤ ±0.8 % of span |
| Measuring range ≥ 0.16 bar [≥ 2.3 psi] | ≤ ±1.5 % of span | ≤ ±1 % of span |
| Measuring range ≥ 0.1 bar [≥ 1.45 psi] | ≤ ±1.8 % of span | - |
| Measuring range ≥ 0.05 bar [≥ 0.73 psi] | ≤ ±2.4 % of span | - |
| **Zero point error [2] [3]** | | |
| 4 ... 20 mA / DC 1 ... 5 V / DC 0.5 ... 4.5 V / DC 0.5 ... 4.5 V ratiometric | ≤ ±0.3 % of span | ≤ ±0.2 % of span |
| DC 0 ... 10 V | ≤ ±0.5 % of span | ≤ ±0.4 % of span |
| DC 0 ... 5 V [4] | ≤ ±0.6 % of span | - |

1) Not possible with output signal DC 0 ... 5 V.
2) Measuring ranges ≤ 0.1 bar [≤ 1.45 psi] (or equivalent) only possible with ≤ ±0.5 % of span.
3) Outside reference conditions, add the temperature hysteresis for measuring ranges < 0.6 bar [< 8.7 psi].
4) Not possible with measuring ranges ≤ 0.1 bar [≤ 1.45 psi] (or equivalent).

| Further details on: accuracy specifications | | |
|---|---|---|
| **Signal noise** | ≤ 0.2 % of span | |
| **Non-repeatability per IEC 61298-2** | | |
| Measuring range < 0.1 bar [< 1.45 psi] | ≤ 0.2 % of span | |
| Measuring range > 0.1 bar [> 1.45 psi] | ≤ 0.1 % of span | |
| **Temperature error at 0 ... 80 °C [32 ... 176 °F]** | | |
| - | Typical | ≤ ±1 % of span |
| Measuring range < 1 bar [< 14.5 psi] | Maximum | ≤ ±2.5 % of span |
| Measuring range ≥ 1 bar [≥ 14.5 psi] | Maximum | ≤ ±1.5 % of span |
| Measuring range ≥ 10 bar [≥ 145 psi] | Maximum | ≤ ±2 % of span |
| Measuring range > 25 bar [> 360 psi] | Maximum | ≤ ±1.5 % of span |
| **Temperature hysteresis -30 ... +100°C [-22 ... +212 °F] for measuring ranges < 0.6 bar [< 8.7 psi]** | | |
| Measuring range < 0.6 bar [< 8.7 psi] | Gauge pressure | ≤ 0.2 % of span |
| | Absolute pressure | ≤ 0.2 % of span |
| Measuring range < 0.4 bar [< 5.8 psi] | Gauge pressure | ≤ 0.3 % of span |
| | Absolute pressure | ≤ 0.3 % of span |
| Measuring range < 0.25 bar [< 3.6 psi] | Gauge pressure | ≤ 0.5 % of span |
| | Absolute pressure | ≤ 0.5 % of span |
| Measuring range < 0.16 bar [< 2.3 psi] | Gauge pressure | ≤ 0.7 % of span |
| | Absolute pressure | ≤ 0.8 % of span |
| Measuring range < 0.1 bar [< 1.45 psi] | Gauge pressure | ≤ 1.4 % of span |

| Further details on: accuracy specifications | |
|---|---|
| **Long-term drift per IEC 61298-2** | |
| Measuring range ≤ 0.1 bar [≤ 1.45 psi] | ≤ ±0.5 % of span [1] |
| Measuring range ≤ 0.4 bar [≤ 5.8 psi] | ≤ ±0.2 % of span |
| Measuring range > 0.4 bar [> 5.8 psi] | ≤ ±0.1 % of span |
| **Additional zero point error depending on the mounting position for measuring ranges ≤ 1 bar [≤ 15 psi]** | |
| Mounting position 180°, vertical, top process connection | ≤ 1 mbar [≤ 0.015 psi] |
| Mounting position 90°, horizontal | ≤ 0.6 mbar [≤ 0.009 psi] |
| **Reference conditions** | Per IEC 61298-1 |

1) Outside reference conditions, add the temperature hysteresis for measuring ranges ≤ 0.1 bar [≤ 1.45 psi].

### Measuring ranges, gauge pressure

| bar | |
|---|---|
| 0 ... 0.05 | 0 ... 10 [1] |
| 0 ... 0.1 | 0 ... 16 [1] |
| 0 ... 0.16 | 0 ... 25 [1] |
| 0 ... 0.25 | 0 ... 40 |
| 0 ... 0.4 | 0 ... 60 |
| 0 ... 0.6 | 0 ... 100 |
| 0 ... 1 | 0 ... 160 |
| 0 ... 1.6 | 0 ... 250 |
| 0 ... 2.5 | 0 ... 400 |
| 0 ... 4 | 0 ... 600 |
| 0 ... 6 | 0 ... 1,000 |

1) If the medium is water, the “increased stability” option should be used.

| psi | |
|---|---|
| 0 ... 1 | 0 ... 300 [1] |
| 0 ... 5 | 0 ... 500 |
| 0 ... 15 | 0 ... 1,000 |
| 0 ... 25 | 0 ... 1,500 |
| 0 ... 30 | 0 ... 2,000 |
| 0 ... 50 | 0 ... 3,000 |
| 0 ... 100 | 0 ... 5,000 |
| 0 ... 160 [1] | 0 ... 10,000 |
| 0 ... 200 [1] | 0 ... 15,000 |

1) If the medium is water, the “increased stability” option should be used.

| inWC | |
|---|---|
| 0 ... 20 | 0 ... 120 |
| 0 ... 40 | 0 ... 150 |
| 0 ... 60 | 0 ... 200 |
| 0 ... 80 | 0 ... 250 |
| 0 ... 100 | 0 ... 400 |

### Measuring ranges, absolute pressure

| bar abs. | |
|---|---|
| 0 ... 0.1 | 0 ... 2.5 |
| 0 ... 0.16 | 0 ... 4 |
| 0 ... 0.25 | 0 ... 6 |
| 0 ... 0.4 | 0 ... 10 |
| 0 ... 0.6 | 0 ... 16 |
| 0 ... 1 | 0 ... 25 |
| 0 ... 1.6 | - |

| psi abs. | |
|---|---|
| 0 ... 5 | 0 ... 100 |
| 0 ... 15 | 0 ... 150 |
| 0 ... 25 | 0 ... 200 |
| 0 ... 30 | 0 ... 300 |
| 0 ... 50 | - |

| inWC abs. | |
|---|---|
| 0 ... 40 | 0 ... 150 |
| 0 ... 60 | 0 ... 200 |
| 0 ... 80 | 0 ... 250 |
| 0 ... 100 | 0 ... 400 |
| 0 ... 120 | - |

### Vacuum and compound measuring ranges

| bar | |
|---|---|
| -0.025 ... +0.025 | -0.3 ... +0.3 |
| -0.05 ... 0 | -0.4 ... 0 |
| -0.05 ... +0.05 | -0.5 ... +0.5 |
| -0.05 ... +0.15 | -0.6 ... 0 |
| -0.05 ... +0.2 | -1 ... 0 |
| -0.05 ... +0.25 | -1 ... +0.6 |
| -0.1 ... 0 | -1 ... +1.5 |
| -0.1 ... +0.1 | -1 ... +3 |
| -0.15 ... +0.15 | -1 ... +5 |
| -0.16 ... 0 | -1 ... +9 [1] |
| -0.2 ... +0.2 | -1 ... +15 [1] |
| -0.25 ... 0 | -1 ... +24 [1] |

1) If the medium is water, the “increased stability” option should be used.

→ Other measuring ranges on request.

| psi | |
|---|---|
| -1 ... 0 | -30 inHg ... +100 |
| -30 inHg ... 0 | -30 inHg ... +160 [1] |
| -30 inHg ... +15 | -30 inHg ... +200 [1] |
| -30 inHg ... +30 | -30 inHg ... +300 [1] |
| -30 inHg ... +60 | - |

1) If the medium is water, the “increased stability” option should be used.

| inWC | |
|---|---|
| -10 ... +10 | -80 ... 0 |
| -20 ... 0 | -100 ... 0 |
| -20 ... +20 | -100 ... +100 |
| -40 ... 0 | -120 ... 0 |
| -40 ... +40 | -125 ... +125 |
| -50 ... +50 | -150 ... 0 |
| -60 ... 0 | -200 ... +200 |
| -75 ... +75 | -250 ... 0 |

| Further details on: measuring range | | |
|---|---|---|
| **Units** | ■ bar<br>■ psi<br>■ inWC<br>■ mbar<br>■ kg/cm²<br>■ MPa<br>■ kPa | |
| **Maximum working pressure** | → Corresponds to the upper measuring range value / measuring range full scale value<br>→ Any permanent operation above the maximum working pressure is not permissible | |
| **Overpressure limit** | The overpressure limit is based on the measuring range. Depending on the selected process connection and the seal, restrictions in overpressure limit can result. | |
| bar | Measuring ranges ≤ 0.1 bar | 0.2 bar |
| | Measuring ranges ≤ 0.4 bar | 1 bar |
| | Measuring ranges < 1.6 bar | 3 bar |
| | Measuring ranges ≥ 1.6 bar | 2 times |
| | Measuring range 1,000 bar | 1.43 times |
| bar abs. | Measuring ranges ≤ 0.4 bar abs. | 1 bar abs. |
| | Measuring ranges < 1.6 bar abs. | 3 bar abs. |
| | Measuring ranges ≥ 1.6 bar abs. | 2 times |
| psi | Measuring ranges ≤ 1 psi | 3 psi |
| | Measuring ranges ≤ 5 psi | 14.5 psi |
| | Measuring ranges < 25 psi | 45 psi |
| | Measuring ranges ≥ 25 psi | 2 times |
| | Measuring ranges 160 psi, 1,000 psi, 1,500 psi and 10,000 psi | 1.7 times |
| | Measuring range 15,000 psi | 1.43 times |
| psi abs. | Measuring ranges ≤ 5 psi abs. | 14.5 psi abs. |
| | Measuring ranges < 25 psi abs. | 45 psi abs. |
| | Measuring ranges ≥ 25 psi abs. | 2 times |

| Further details on: measuring range | | |
|---|---|---|
| inWC | Measuring ranges ≤ 40 inWC | 80 inWC |
| | Measuring ranges ≤ 200 inWC | 400 inWC |
| | Measuring ranges ≤ 400 inWC | 1,200 inWC |
| inWC abs. | Measuring ranges ≤ 200 inWC abs. | 400 inWC abs. |
| | Measuring ranges ≤ 400 inWC abs. | 1,200 inWC abs. |
| **Vacuum resistance** | Yes<br>(restriction with measuring ranges ≤ 0.1 bar [≤ 1 psi, 40 inWC]: -0.2 bar [-3 psi, -80 inWC]) | |
| **Leakage rate** | ■ < $5*10^{-3}$ mbar*l/s<br>■ < $1*10^{-6}$ mbar*l/s 1) 2) | |

1) With hydrogen applications
2) With applications of hazardous fluids, liquids and gases in accordance with directive 2014/68/EU article 13, regulation (EC) no. 1272/2008 or GHS1.

→ Further overpressure limits on request

| Process connection | | | | |
|---|---|---|---|---|
| **Standard** | **Thread size** | **Max. measuring range** | **Overpressure limit** | **Seal** |
| **EN 837** | G ⅛ B | 400 bar [5,000 psi] | 572 bar [8,290 psi] | Copper |
| | G ¼ B | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | ■ Copper<br>■ Stainless steel |
| | G ¼ female thread | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | Without |
| | G ⅜ B | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | ■ Copper<br>■ Stainless steel |
| | G ½ B | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | ■ Copper<br>■ Stainless steel |
| **DIN EN ISO 1179-2** | G ¼ A | 600 bar [8,000 psi] | 858 bar [12,440 psi] | ■ NBR<br>■ EPDM |
| | | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | FPM/FKM |
| | G ½ A | 600 bar [8,000 psi] | 858 bar [12,440 psi] | ■ NBR<br>■ FPM/FKM |
| **DIN EN ISO 9974-2** | M14 x 1.5 | 600 bar [8,000 psi] | 858 bar [12,440 psi] | ■ NBR<br>■ FPM/FKM<br>■ EPDM |
| **ANSI/ASME B1.20.1** | ⅛ NPT | 400 bar [5,000 psi] | 572 bar [8,290 psi] | - |
| | ¼ NPT | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | |
| | ¼ NPT, female thread | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | |
| | ½ NPT | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | |
| **DIN 16288** | M20 x 1.5 | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | ■ Copper<br>■ Stainless steel |
| **ISO 7** | R ¼ | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | - |
| | R ⅜ | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | |
| | R ½ | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | |
| **KS** | PT ¼ | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | - |
| | PT ½ | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | |
| | PT ⅜ | 1,000 bar [15,000 psi] | 1,480 bar [21,400 psi] | |
| **SAE J514** | 7/16-20 UNF O-ring BOSS | 600 bar [8,000 psi] | 858 bar [12,440 psi] | FPM/FKM |
| **-** | Flange connection | 100 bar [1,000 psi] | 143 bar [2,070 psi] | Without |

Details must be tested separately in the respective application. The specified values for the overpressure limit serve only as a rough orientation. The values depend on the temperature, the seal used, the selected torque, the type and material of the mating thread and the prevailing operating conditions.

| Further details on: process connection | |
|---|---|
| **Max. measuring range** | → See table “Process connection” on page 5 |
| **Overpressure limit** | → See table “Process connection” on page 5 |
| **Seal** | → See table “Process connection” on page 5 |
| **Pressure port diameter** | ■ 3.5 mm (standard for all process connections)<br>■ 0.6 mm (compatible with all male threads)<br>■ 0.3 mm (compatible with all male threads)<br>■ 6 mm (compatible with G ¼ A, others on request)<br>■ T-restrictor possible (for process connections G ¼ B, G ⅜ B, G ½ B and M20 x 1.5) |
| **Possible restrictions** | Depending on the choice of seal on the process connection, there may be restrictions in the permissible temperature range. |
| NBR | -30 … +100 °C [-22 ... +212 °F] |
| FPM/FKM | ■ -20 … +100 °C [-4 ... +212 °F]<br>■ -40 … +100 °C [-40 ... +212 °F] |
| EPDM | -40 … +100 °C [-40 ... +212 °F] |
| Copper | -40 … +100 °C [-40 ... +212 °F] |
| Stainless steel | -40 … +100 °C [-40 ... +212 °F] |

| Output signal | | |
|---|---|---|
| **Signal type** | | |
| Current (2-wire) | 4 ... 20 mA | |
| Voltage (3-wire) | ■ DC 0 ... 10 V<br>■ DC 0 ... 5 V<br>■ DC 1 ... 5 V<br>■ DC 0.5 ... 4.5 V | |
| Ratiometric (3-wire) | DC 0.5 ... 4.5 V | |
| **Load Ω** | | |
| Current (2-wire) | ≤ (auxiliary power - 8 V) / 0.02 A | |
| Voltage (3-wire) | > Maximum output signal / 1 mA | |
| Ratiometric (3-wire) | > 10k | |
| **Voltage supply** | | |
| Auxiliary power | Output signal 4 ... 20 mA | ■ DC 8 ... 30 V<br>■ DC 8 ... 35 V [1) 2)] |
| | Output signal DC 0 ... 5 V [1) 3)] | ■ DC 8 ... 30 V<br>■ DC 8 ... 35 V |
| | Output signal DC 1 ... 5 V | ■ DC 8 ... 30 V<br>■ DC 8 ... 35 V |
| | Output signal DC 0.5 ... 4.5 V | ■ DC 8 ... 30 V<br>■ DC 8 ... 35 V |
| | Output signal DC 0 ... 10 V | ■ DC 14 ... 30 V<br>■ DC 14 ... 35 V |
| | Output signal DC 0.5 ... 4.5 V, ratiometric | DC 5 V ±10 % |
| Current supply | Current (2-wire) | Signal current, max. 25 mA |
| | Voltage (3-wire) | 8 mA |
| | Ratiometric (3-wire) | 8 mA |

| Output signal | | |
|---|---|---|
| **Dynamic behaviour** | | |
| Settling time per IEC 61298-2 | Measuring range ≥ 0.4 bar [≥ 5.8 psi] | < 1 ms [4] |
| | Measuring range < 0.4 bar [< 5.8 psi] | < 1 min |
| Switch-on time | Measuring range ≥ 0.4 bar [≥ 5.8 psi] | < 15 ms |
| | Measuring range < 0.4 bar [< 5.8 psi] | < 1 min |

1) Not possible with non-linearity 0.25 % BFSL.
2) Only possible for temperatures to 80 °C [176 °F].
3) Not possible with measuring ranges ≤ 0.1 bar [≤ 1.45 psi] (or equivalent).
4) < 300 ms with DNV approval and measuring range ≥ 0.4 bar [≥ 5.8 psi] ... ≤ 0.6 bar [≤ 8.7 psi].

→ Other output signals on request.

| Electrical connection | | | | |
|---|---|---|---|---|
| **Connection type** | **IP code** [1] | **Wire cross-section** | **Cable diameter** | **Cable material** |
| **Angular connector DIN EN 175301-803 A** | | | | |
| With mating connector, PG9 (standard) | IP65 | To max. 1.5 mm² | 6 ... 8 mm | - |
| With mating connector, PG11 | IP65 | To max. 1.5 mm² | 8 ... 10 mm | |
| With mating connector, PG13.5 [2] | IP65 | To max. 1.5 mm² | 10 ... 14 mm | |
| With moulded cable [3] | IP65 | 3 x 0.75 mm² | 6 mm | PUR |
| **Angular connector DIN EN 175301-803 C** [3] | | | | |
| With mating connector | IP65 | To max. 0.75 mm² | 4.5 ... 6 mm | - |
| **Circular connector M12 x 1 (4-pin)** | | | | |
| Without mating connector | IP67 | - | - | - |
| Straight with moulded cable [3] | IP67 | 3 x 0.34 mm² | 4.3 mm | PUR |
| Angled with moulded cable [3] | IP67 | 3 x 0.34 mm² | 4.3 mm | PUR |
| **Cable outlet** | | | | |
| Unshielded [3] | IP67 | 3 x 0.34 mm² | 4 mm | PUR |
| OEM version, unshielded [4] | IP67 | 3 x 0.14 mm² | 2.85 mm | TPU |

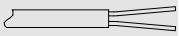
1) The stated IP codes only apply when plugged in using mating connectors that have the appropriate IP code.
2) Not feasible with cULus approval.
3) Not feasible with DNV approval.
4) To max. 90 °C [194 °F].

| Further details on: electrical connection | |
|---|---|
| **Connection type** | → See table “Electrical connection” on page 7 |
| **Wire cross-section** | → See table “Electrical connection” on page 7 |
| **Cable diameter** | → See table “Electrical connection” on page 7 |
| **Pin assignment** | → See table “Pin assignment” |
| **Ingress protection (IP code) per IEC 60529** | → See table “Electrical connection” on page 7 |
| **Short-circuit resistance** | S+ vs. U- |
| **Reverse polarity protection** | U+ vs. U-<br>No reverse polarity protection with ratiometric output signal |
| **Insulation voltage** | DC 500 V |

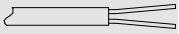
**Pin assignment**

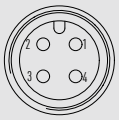
All connectors with moulded cable have the same colour assignment as the unshielded cable outlet.

| Angular connector DIN 175301-803 A | | | |
|---|---|---|---|
| | | 2-wire | 3-wire |
|  | $U_+$ | 1 | 1 |
| | U- | 2 | 2 |
| | S+ | - | 3 |

| Cable outlet, unshielded | | | |
|---|---|---|---|
| | | 2-wire | 3-wire |
|  | $U_+$ | Brown | Brown |
| | U- | Blue | Blue |
| | S+ | - | Black |

| Angular connector DIN 175301-803 C | | | |
|---|---|---|---|
| | | 2-wire | 3-wire |
|  | $U_+$ | 1 | 1 |
| | U- | 2 | 2 |
| | S+ | - | 3 |

| Cable outlet, OEM version, unshielded | | | |
|---|---|---|---|
| | | 2-wire | 3-wire |
|  | $U_+$ | Brown | Brown |
| | U- | Blue | Blue |
| | S+ | - | Black |

| Circular connector M12 x 1 (4-pin) | | | |
|---|---|---|---|
| | | 2-wire | 3-wire |
|  | $U_+$ | 1 | 1 |
| | U- | 3 | 3 |
| | S+ | - | 4 |

**Legend**

$U_+$ Positive power supply terminal
U- Negative power supply terminal
S+ Analogue output

| Material | |
|---|---|
| **Material (wetted)** | |
| < 10 bar [< 150 psi] | Stainless steel 316L |
| ≥ 10 bar [≥ 150 psi] | Stainless steel 316L and PH grade steel |
| ≤ 25 bar abs. [≤ 400 psi abs.] | Stainless steel 316L |
| **Material (in contact with the environment)** | ■ Stainless steel 316L<br>■ HNBR<br>■ PA and PBT<br>■ TPU and PUR (cable outlet) |
| **Pressure transmission medium** | |
| < 10 bar [< 150 psi] | Synthetic oil |
| ≥ 10 bar [≥ 150 psi] | Dry measuring cell |
| ≤ 25 bar abs. [≤ 400 psi abs.] | Synthetic oil |

| Operating conditions | | | |
|---|---|---|---|
| | **Medium temperature limit** | **Ambient temperature limit** [2) 5)] | **Storage temperature limit** |
| **Temperature ranges** [1)] | | | |
| Voltage signal, current signal and ratiometric | 0 ... 80 °C [32 ... 176 °F] | 0 ... 80 °C [32 ... 176 °F] | -40 ... +70 °C<br>[-40 ... +158 °F] |
| **Extended temperature ranges** [1)] | | | |
| Voltage signal | -30 ... +100 °C<br>[-22 ... +212 °F] | -30 ... +100 °C<br>[-22 ... +212 °F] | -40 ... +70 °C<br>[-40 ... +158 °F] |
| Current signal [3) 4)] | -40 ... +100 °C<br>[-40 ... +212 °F] | -40 ... +100 °C<br>[-40 ... +212 °F] | -40 ... +70 °C<br>[-40 ... +158 °F] |

1) For restrictions of the temperature ranges due to the seal used, see “Further details on: process connection”.
2) Restrictions and derating of the ambient temperature depend on the medium temperature.
3) With cULus approval the minimum ambient and medium temperature is -30 °C [-22 °F].
4) Only with auxiliary power DC 8 ... 30 V.
5) Only with housed mounting location that is protected from condensation.

| Further details on: operating conditions | | |
|---|---|---|
| **Humidity** | 0 ... 90 % relative humidity (non-condensing) | |
| **Operating altitude** | ≤ 2,000 m above seal level | |
| **Pollution degree** | 2 | |
| **Overvoltage category** | I | |
| **Vibration resistance per IEC 60068-2-6** | ■ 10g<br>■ 20g (≥ -30 °C [-22 °F]) [1)] (on request) | |
| **Shock resistance per IEC 60068-2-27** | With ≥ -30 °C [-22 °F] | 500g |
| | With < -30 °C [-22 °F] | 100g |
| **Ingress protection (IP code) per IEC 60529** | → See “Electrical connection” | |
| **Service life** | | |
| Measuring range ≥ 600 bar [≥ 8,000 psi] | 10 million load cycles | |
| Measuring range > 0.1 bar [> 1 psi] | 100 million load cycles | |
| Measuring range ≤ 0.1 bar [≤ 1 psi] | 10 million load cycles | |

1) With DNV approval only feasible for measuring range ≥ 0 ... 1.6 bar [≥ 0 ... 25 psi].

| Options for special media | |
|---|---|
| **Oil- and grease-free** | |
| Residual hydrocarbon | < 1,000 mg/m² |
| Water (increased stability) | |
| Measuring ranges | 10 ... 25 bar [150 ... 360 psi] |

| Packaging and instrument labelling | |
|---|---|
| **Packaging** | ■ Individual packaging<br>■ Multiple packaging (up to 20 pieces possible) |
| **Instrument labelling** | ■ WIKA product label, glued<br>■ Customised product label on request |

## Approvals

| Logo | Description | Region |
|---|---|---|
| CE | **EU declaration of conformity** | European Union |
| | EMC Directive<br>EN 61326 emission (group 1, class B) and immunity (industrial application) | |
| | Pressure Equipment Directive | |
| | RoHS directive | |
| EAC | **EAC** | Eurasian Economic Community |
| | EMC Directive | |
| c UL us LISTED | **UL**<br>Safety (e.g. electr. safety, overpressure, ...) | USA and Canada |

### Optional approvals

| Logo | Description | Region |
|---|---|---|
| | **PAC Kazakhstan**<br>Metrology, measurement technology | Kazakhstan |
| - | **MChS**<br>Permission for commissioning | Kazakhstan |
| | **PAC Ukraine**<br>Metrology, measurement technology | Ukraine |
| | **PAC Uzbekistan**<br>Metrology, measurement technology | Uzbekistan |
| DNV | **DNV** [1]<br>Ships, shipbuilding (e.g. offshore) | Germany |
| - | **CRN**<br>Safety (e.g. electr. safety, overpressure, ...) | Canada |
| NSF | **NSF**<br>NSF/ANSI/CAN 61<br>Drinking Water System Components – Health Effects | USA and Canada |

1) Not for measuring ranges < 0.16 bar [< 2.3 psi] and not for medium temperature range -40 ... +100 °C [-40 ... +212 °F].

## Manufacturer's declaration

| Logo | Description |
|---|---|
| - | **China RoHS directive** |
| **MTTF** | > 100 years |

## Test report

| Test report | |
|---|---|
| **Non-linearity 0.5 %** | 3 measuring points |
| **Non-linearity 0.25 %** | 5 measuring points |

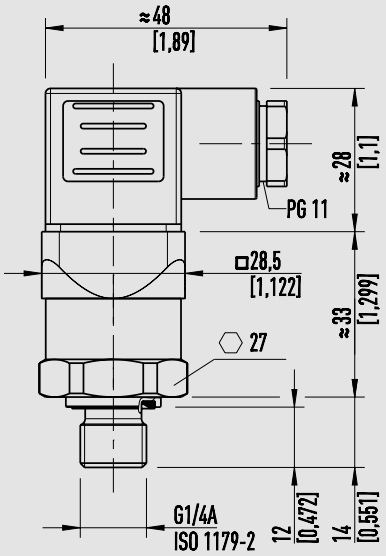
## Certificates

| Certificates | |
|---|---|
| **Certificate** | 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy) |

→ For approvals and certificates, see website

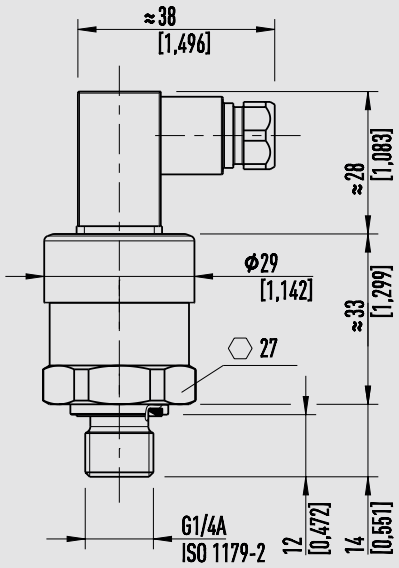
## Dimensions in mm [in]

With angular connector form A



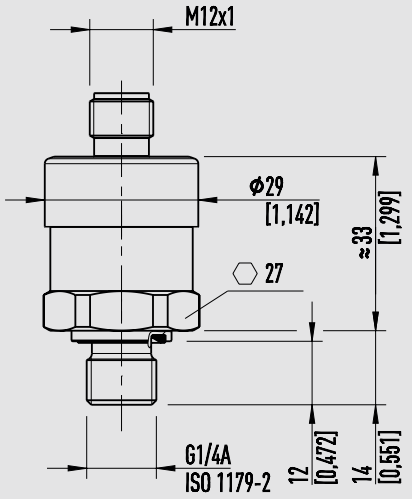

Weight: approx. 80 g [0.18 lb]

With angular connector form C



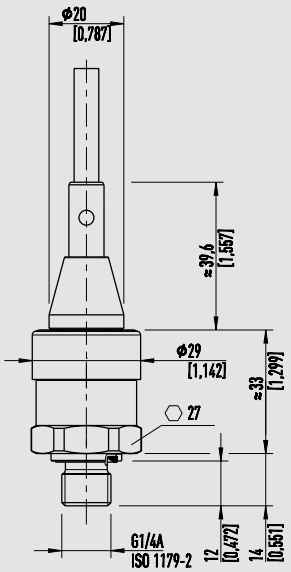

Weight: approx. 80 g [0.18 lb]

With circular connector M12 x 1



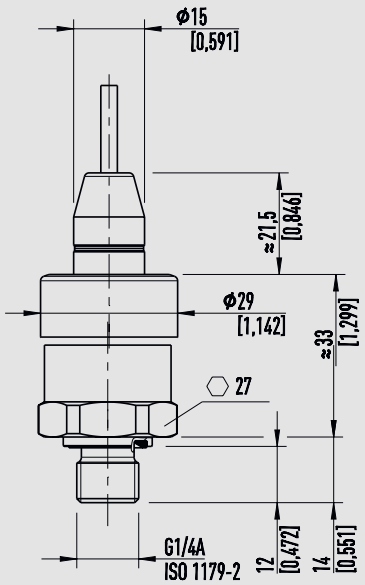

Weight: approx. 80 g [0.18 lb]

With standard cable outlet, unshielded



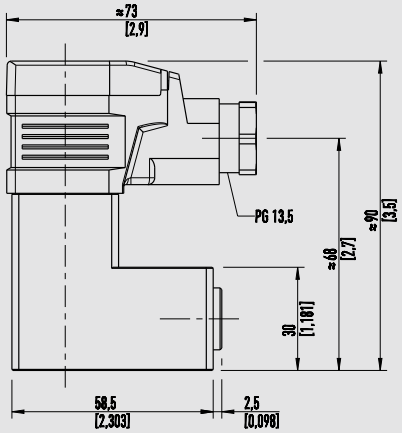

Weight: approx. 80 g [0.18 lb]

With cable outlet, OEM version, unshielded



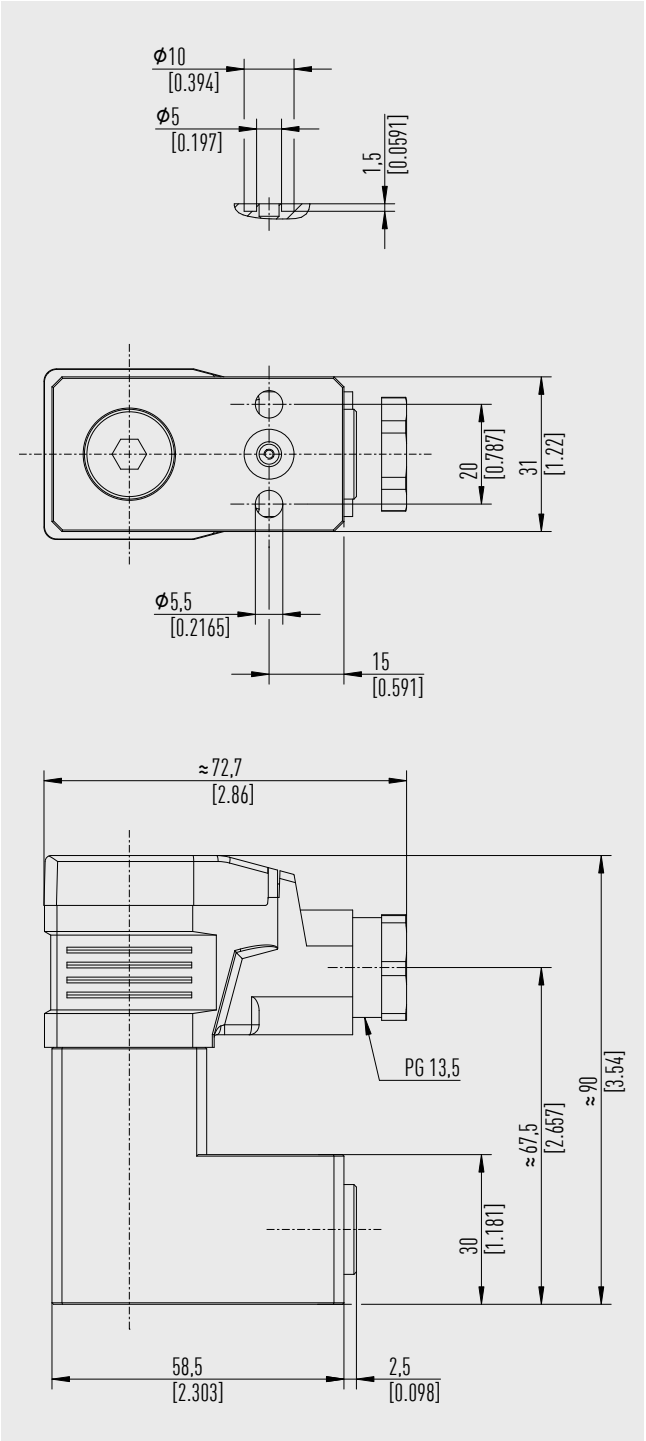

Weight: approx. 80 g [0.18 lb]

With angular connector form A and flange connection




Weight: approx. 350 g [0.77 lb]

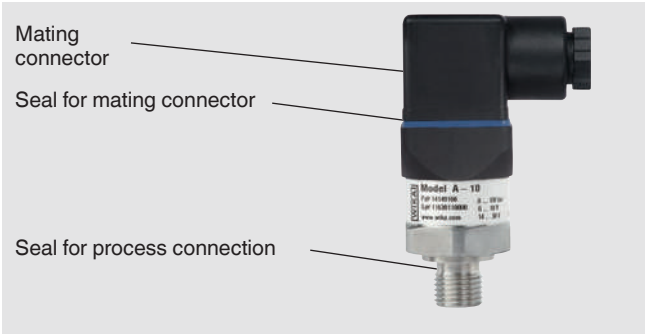
**Process connections**




| | |
|---|---|
| **Flange connection** | For dimensions, see drawing |

→ For further process connections, see technical information IN 00.14.

## Accessories and spare parts




| Description | Version | Order number |
|---|---|---|
| **Mating connector** | | |
| Angular connector DIN EN 175301-803 A | Gland PG9 | 11427567 |
| | Gland PG11 | 14243778 |
| | Gland PG13.5 | 1604627 |
| | With 2 m cable [1] | 11225793 |
| | With 5 m cable [1] | 11250186 |
| Angular connector DIN EN 175301-803 C [1] | Gland PG7 | 1439081 |
| Circular connector M12 x 1, 4-pin, straight | Without cable | 2421262 |
| | With 2 m cable [1] | 11250780 |
| | With 5 m cable [1] | 11250259 |
| Circular connector M12 x 1, 4-pin, angled | Without cable | 2421270 |
| | With 2 m cable [1] | 11250798 |
| | With 5 m cable [1] | 11250232 |
| **Seals for process connection** | | |
| G ⅛ EN 837 | Copper | 11251051 |
| G ¼ B EN 837 | Copper | 11250810 |
| | Stainless steel | 11250844 |
| G ⅜ B EN 837 | Copper | 11250861 |
| | Stainless steel | 11251042 |
| G ½ B EN 837 | Copper | 11250861 |
| | Stainless steel | 11251042 |
| M14 x 1.5 DIN EN ISO 9974-2 | NBR | 1537857 |
| | FPM/FKM | 14045531 |
| | EPDM | 14110827 |
| M20 x 1.5 DIN 16288 | Copper | 11250861 |
| | Stainless steel | 11251042 |
| 7/16-20 UNF O-ring BOSS SAE J514 | FPM/FKM | 14146066 |
| G ¼ A DIN EN ISO 1179-2 | NBR | 1537857 |
| | FPM/FKM | 14045531 |
| | EPDM | 14110827 |
| G ½ A DIN EN ISO 1179-2 | NBR | 1039067 |
| | FPM/FKM | 1039075 |
| **Seals for mating connectors, blue (WIKA)** | | |
| Angular connector DIN 175301-803 A | | 1576240 |
| Angular connector DIN 175301-803 C | | 11169479 |

1) Connector not permissible for model A-10 with DNV approval.

→ Only use the accessories listed above, otherwise it could lead to the loss of the approval.

**Ordering information**

Model / Non-linearity / Measuring range / Process connection / Seal / Permissible medium temperature range / Output signal / Auxiliary power / Electrical connection / Certificates / Approvals

Standard articles

Configurator

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