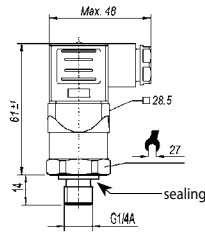


PRESSURE TRANSMITTER



A 10

Pressure transmitter (relative pressure, zero output at atmospheric pressure)

Application:

Suitable for all applications in machine and systems engineering, automotive technology as well as cooling and air conditioning technology.

Specifications:

Measuring range (MR), Overload limit (OL), Burst pressure (BP):

<b>MB:</b>	1, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600
<b>ÜL:</b>	2 3.2 5 8 12 20 32 50 80 120 200 320 500 800 1200
<b>BD:</b>	5 10 10 17 34 34 100 100 400 550 800 1000 1200 1700 2400

**Output signal:** 4 ... 20 mA, 2-wire,  $R_A [\Omega] < (U_V [V] - 8V) / 0.02 A$   
0 ... 10 V, 3-wire,  $R_L > 10 k\Omega$   
(other output signals upon request)

**Auxiliary energy  $U_v$ :** 8 ... 30 V DC (for output 4 ... 20 mA)  
14 ... 30 V DC (for output 0 ... 10 V)

**Accuracy: \***  $\leq 1.0 \% FS$  (optional:  $\leq 0.5 \% FS$ )  
\* = including non-linearity, hysteresis, zero point and scale error. Corresponds to error of measurement per IEC 61298-2. Sensor adjusted in vertical mounting position with lower pressure connection.

**Non-Linearity:**  $\leq 0.5 \% FS$  (optional:  $\leq 0.25 \% FS$ )

**Zero Offset:**  $\leq 0.5 \% FS$  (typ.),  $\leq 0.8 \% FS$  (max.),  
(Optional:  $\leq 0.15 \% FS$  (typ.),  $\leq 0.4 \% FS$  (max.))

**Hysteresis:**  $\leq 0.16 \% FS$

**Repeatability:**  $\leq 0.1 \% FS$

**Long-term drift:**  $\leq 0.1 \% FS$  (according to IEC 61298-3)

**Response time:  $T_{90}$**   $\leq 4 ms$

**Permitted temperature of measurement media:** 0 ... +80 °C (optional: -30 ... +100 °C)

**Ambient temperature:** 0 ... +80 °C (optional: -20 ... +100 °C)

**Storage temperature:** -20 ... +80 °C

**Temperature compensated area:** 0 ... +80 °C

**Temperature error in compensated area:**  $\leq 1.0 \% FS$  (typ.),  $\leq 2.5 \% FS$  (max.)

**Material:** Parts coming into contact with pres. media

**Pressure connection:** 316 L

**Pressure sensor:** 316 L (as of 10 bar rel. 13 ... 8 PH)

**Housing:** 316 L

**Pressure connection:** G 1/4 A, DIN 3852-E with NBR sealing

**Protection rating:** IP65 or IP67 with cable

**Electric connection:** elbow-type plug acc. to EN 175301-803/A or connection cable, cable length 2 m

**Electric protections:** reverse voltage and short-circuit protection

**Weight:** approx. 80 g

Options:

**Absolute pressure:** (0 ... 1 bar abs. to 0 ... 25 bar abs.)

**Under pressure:** (-1.0 ... +1.5 bar, -1.0 ... +3.0 bar, -1.0 ... +9.0 bar)

**G2:** Higher sensor accuracy (class 0.5)

**T2:** Extended temperature range: -30 ... +100 °C

**V2:** Output signal 0 ... 10 V

**Fixed connecting cable:**

2 m with bend protection (instead of elbow-type plug, protection rating: IP67)

PRESSURE MEASURING TRANSDUCER FOR OVER/UNDER AND ABSOLUTE PRESSURE



S10



S11



S20



S10 REL

Pressure measuring transducer (Standard, zero output at ambient pressure)

S11 REL

Pressure measuring transducer (Flush, zero output at ambient pressure)

S20 REL

Pressure measuring transducer (Standard, zero output at ambient pressure)

S10 ABS

Pressure measuring transducer (Standard, absolute, zero output at vacuum)

S11 ABS

Pressure measuring transducer (Flush, absolute, zero output at vacuum)

S20 ABS

Pressure measuring transducer (Standard, absolute, zero output at vacuum)

General:

Piezoresistive pressure sensor with temperature compensation. Completely welded and stainless steel design, filled food safe (up to 16 bar), thin film strain (above 25 bar).

Specifications:

**Measuring ranges:** in bar (other values upon request)

**S10 / S11 REL:** 0.1, 0.16, 0.25,

**S11 / S20 REL:** 0.4, 0.6, 1, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600, **S20 REL only:** 1000, 1600

**S10 / S11 ABS:** 0.25,

**S11 / S20 ABS:** 0.4, 0.6, 1, 1.6, 2.5, 4, 6, 10, 16, **S20 ABS only:** 20, 40

**S10 ABS:** 0.8 ... 1.2,

**Available overload pressure limits:** 3-fold at measuring range <10 bar (150 psi)  
2-fold at measuring range  $\geq 10$  bar (150 psi)

**Output signal:** 4 ... 20 mA (0 ... 10 V - refer to options; others upon request)

**Permissible impedance:**  $R_A [\Omega] \leq (U_V [V] - 10 V) / 0.02 A$  (for output 4 ... 20 mA)

**Permissible load:**  $R_L > 10 k\Omega$  (for output 0 ... 10 V)

**Auxiliary energy:** 10 ... 30 V DC (14 ... 30 V DC for output 0 ... 10 V)

**Accuracy:**

**deviation from parameter (% of span):**  $\leq 0.5$  (setting of cut-off point)

$\leq 0.25$  (setting of tolerance band, BFSL)

**Repeatability (% of Span):**  $\leq 0.1 \%$

**Stability/year (% of Span):**  $\leq 0.2$  (at reference conditions)

**Hysteresis (% of Span):**  $\leq 0.1$

**Permissible temperature of media:** -30 ... +100 °C (refer to options)

**Operating temperature ambient:** -30 ... +100 °C

**Compensated temperature range:** 0 ... +80 °C

**Temperature coefficient:**  $\leq 0.02 \% FS / K$  (or  $\leq 0.04 \% FS$  for MB  $\leq 0.25$  bar)

**Housing:** stainless steel 1.4435 (IP65)

**Pressure connection:** (other upon request)

**Type S10 / 20...:** G 1/2 B, other upon request

**Type S11...:** G 1 B (up to 1.6 bar), G 1/2 B (from 2.5 ... 600 bar)

**Mounting position:** any

**Electric connection:** standard via elbow-type plug EN 175301-803/A

**Electric protections:** reverse voltage protection, over voltage and short-circuit

**Options:**

**Special measuring range**

**Media temperature: -40 ... +125 °C** (S10 / 20 only)

**Media temperature: -30 ... +125 °C** (S11 only)

**Media temperature: -20 ... +150 °C** (S-11 only with cooling section)

**Output signal 0 ... 10 V** (other upon request)

**Ex-protection upon request**