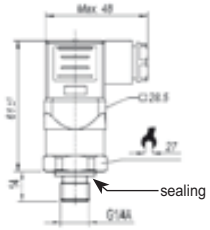
Pressure transmitter



A10

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

Output signal:	4 ... 20 mA, 2-wire, R_A [Ω] < (Uv [V] - 8V) / 0.02 A 0-10 V, 3-wire, R_L > 10 kΩ (other output signals upon request)
Auxiliary energy Uv:	8 ... 30 VDC (for output 4 ... 20 mA) 14 ... 30 VDC (for output 0 ... 10 V)
Accuracy: *	≤1.0 % FS (optional: ≤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:	≤0.5 % FS (optional: ≤0.25 % FS)
Zero Offset:	≤0.5 % FS (typ.), ≤0.8 % FS (max.), (Optional: ≤0.15 % FS (typ.), ≤0.4 % FS (max.))
Hysteresis:	≤0.16 % FS
Repeatability:	≤0.1 % FS
Long-term drift:	≤0.1 % FS (according to IEC 61298-3)
Response time: T_{90}	≤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:	≤1.0 % FS (typ.), ≤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 ¼ 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, 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)
S-10 / S-11 REL: **S-11 / S-20 REL:**	0.1, 0.16, 0.25, 0.4, 0.6, 1, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600, **only S-20 REL:** 1000, 1600
S-10 / S-11 ABS: **S-11 / S-20 ABS:** **S-10 ABS:**	0.25, 0.4, 0.6, 1, 1.6, 2.5, 4, 6, 10, 16, **only S-20 ABS:** 20, 40 0.8 ... 1.2,
Available overload pressure limits:	3-fold at measuring range <10 bar (150 psi) 2-fold at measuring range ≥10 bar (150 psi)
Output signal:	4 ... 20 mA (0 ... 10 V - refer to options; others upon request)
Permissible impedance:	R_A [Ω] ≤ (Uv [V] - 10 V) / 0.02 A (for output 4 ... 20 mA)
Permissible load:	R_L > 10 kOhm (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):	≤0.5 (setting of cut-off point) ≤0.25 (setting of tolerance band, BFSL)
Repeatability (% of Span):	≤0.1 %
Stability/year (% of Span):	≤0.2 (at reference conditions)
Hysteresis (% of Span):	≤0.1
Permissible temperature of media:	-30 ... +100 °C (refer to options)
Operating temperature ambient:	-20 ... +80 °C
Compensated temperature range:	0 ... +80 °C
Temperature coefficient:	≤0.02 % FS / K (or ≤0.04 % FS for MB ≤0.25 bar)
Housing:	stainless steel 1.4435 (IP65)
Pressure connection:	(other upon request)
Type S10 / 20... :	G½B, other upon request
Type S11... :	G1B (up to 1.6 bar), G½B (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 protection.

Options:

Special measuring range

Media temperature: -40 ... +125 °C (S-10/-20 only)

Media temperature: -30 ... +125 °C (S-11 only)

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

Output signal 0-10 V
(other upon request)

Ex-protection