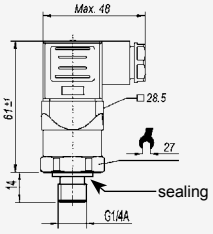
Pressure transmitter



A-10

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

Option: Absolute Pressure

(0 ... 1 bar abs. to 0 ... 25 bar abs.)

Option: Under Pressure

(-1.0 ... +1.5 bar, -1.0 ... +3.0 bar, -1.0 ... +9.0 bar)

Application:

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

Specification:

Measuring range (MR), Overload limit (OL), Burst pressure (BD):								
MR:	1, 40,	1.6, 60,	2.5, 100,	4, 160,	6, 250,	10, 400,	16, 600	25,
OL:	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 wirh 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 ... +85 °C)							
Ambient temperature:	0 ... +80 °C (optional: -20 ... +80 °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							

Accessories and spare parts:

Higher sensor accuracy (class 0.5)

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

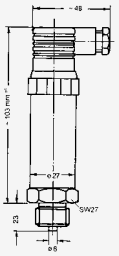
Output signal 0-10 V

Fixed connecting cable
2 m with bend protection (instead of elbow-type plug, IP67)

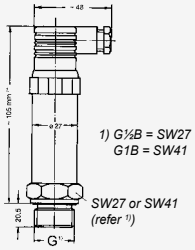
GWA1214
V4A thread adapter G½“ with internal thread G¼“ and external thread G½“

Pressure measuring transducer for over/under and absolute pressure

Types:
S-10 REL, S-10 ABS



Types:
S-11 REL, S-11 ABS



1) G½B = SW27
G1B = SW41

SW27 or SW41
(refer 1))

S-10 REL

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

S-11 REL

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

S-10 ABS

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

S-11 ABS

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

Description:

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).

Specification:

Measuring ranges:	in bar (other values upon request)					
S-10 REL and S-11REL:	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, 1000					
S-10 ABS and S-11ABS:	0.25, 0.4, 0.6, 1, 1.6, 2.5, 4, 6, 10, 16					
Measuring range (MB), Overload limit (ÜL):						
MB (bar):	0.1, 1.6, 25 ... 600,	0.16, 2.5,	0.25, 4, 1000	0.4, 6,	0.6, 10,	1, 16,
ÜL (bar):	1 10 2 x MB	1.5 10	2 17 1500	2 35	4 35	5 80
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):	≤ 0.05					
Stability/year (% of Span):	≤ 0.2 (bei Referenzbedingungen)					
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)					
Filling:	KN77, food safe					
Housing:	stainless steel 1.4435 (IP65)					
Pressure connection:	(other upon request)					
Type S-10... :	G ½B					
Type S-11... :	G 1B (up to 1.6 bar), G ½B (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.					

Accessories and spare parts:

Special measuring range

Media temperature: -40 ... +125 °C (S-10 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 **upon request**