



18.601 G

OEM Pressure Transmitter Low Pressure

Applications

- ▶ general industrial applications

Characteristics

- ▶ piezoresistive stainless steel sensor
- ▶ accuracy 0.5 % FSO according to IEC 61298-2
- ▶ nominal pressure ranges from 0 ... 100 mbar up to 0 ... 6 bar



Technical Data



Input pressure range											
Nominal pressure gauge	[bar]	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6
Overpressure	[bar]	1	1	1	1	3	3	6	10	10	21
Burst pressure $\geq$	[bar]	1.5	1.5	1.5	1.5	5	5	10	17.5	17.5	35
Vacuum resistance		unlimited									

Output signal / Supply			
Standard	2-wire:	4 ... 20 mA	/ $V_S = 8 \dots 32 V_{DC}$
Options 3-wire	3-wire:	0 ... 10 V	/ $V_S = 14 \dots 30 V_{DC}$
	3-wire ratiometric:	10 ... 90 % of V_S	/ $V_S = 2.7 \dots 5 V_{DC}$

Performance	
Accuracy ¹	$p_N > 160 \text{ mbar: } \leq \pm 0.5 \% \text{ FSO}$ $p_N \leq 160 \text{ mbar: } \leq \pm 1 \% \text{ FSO}$
Permissible load	2-wire: $R_{max} = [(V_S - V_{S \min}) / 0.02 A] \Omega$ 3-wire: $R_{min} = 10 \text{ k}\Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / $k\Omega$
Response time	2-wire: $\leq 10 \text{ msec}$ 3-wire: $\leq 3 \text{ msec}$
Long term stability	$\leq \pm 0.2 \% \text{ FSO / year}$ at reference conditions
Measuring rate	1 kHz

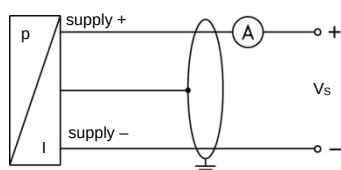
¹ accuracy according to IEC 61298-2 – limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (offset and span) / Permissible temperatures			
Thermal error	± 0.3 % FSO / 10 K	in compensated range 0 ... 70 °C	
Permissible temperatures	medium: -25 ... 125 °C	electronics / environment: -25 ... 85 °C	storage: -40 ... 85 °C
Electrical protection			
Short-circuit protection	permanent	3-wire ratiometric: none	
Reverse polarity protection	no damage, but also no function		
Electromagnetic compatibility	emission and immunity according to EN 61326		
Mechanical stability			
Vibration	20 g RMS / 10 ... 2000 Hz	according to DIN EN 60068-2-6	
Shock	500 g / 1 msec half sine	according to DIN EN 60068-2-27	

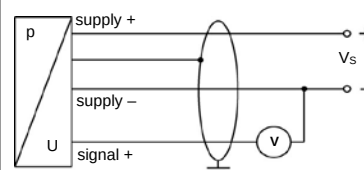
Materials	
Pressure port / housing	stainless steel 1.4301 (304)
Seals	FKM
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, seals, diaphragm
Miscellaneous	
Weight	approx. 120 g
Current consumption	2-wire: max. 25 mA 3-wire ratiometric: typ. 1.5 mA 3-wire voltage: max. 7 mA (short circuit current: max. 20 mA)
Operational life	100 million load cycles
CE-conformity	EMC Directive: 2014/30/EU

Wiring diagrams

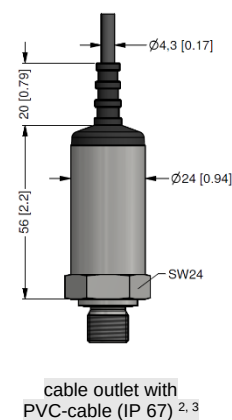
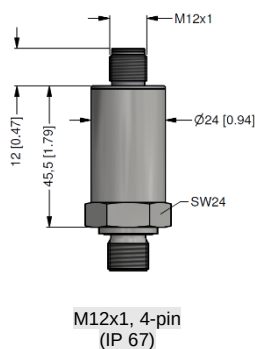
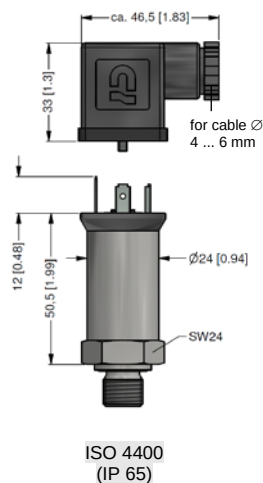
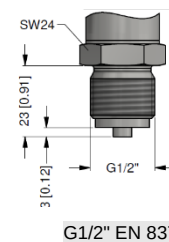
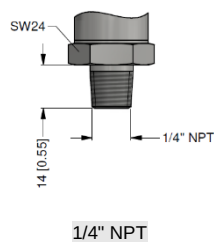
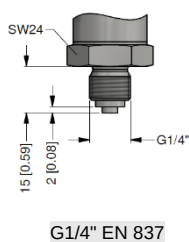
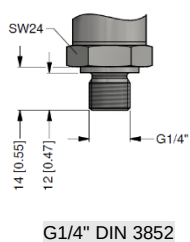
2-wire-system (current)



3-wire-system (voltage)

**Pin configuration**

Electrical connections	ISO 4400	M12x1 (4-pin), metal	cable colours (IEC 60757)
Supply +	1	1	WH (white)
Supply -	2	2	BN (brown)
Signal + (for 3-wire)	3	3	GN (green)
Shield	ground pin	4	GNYE (green-yellow)

Electrical connections (dimensions mm / in)² standard: 2 m PVC cable without ventilation tube (permissible temperatur: -5 ... 70 °C)³ different cable types and lengths available, permissible temperatur depends on kind of cable**Mechanical connection (dimensions mm / in)**

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Input	[bar]																		
	0.10	1	0	0	0														
	0.16	1	6	0	0														
	0.25	2	5	0	0														
	0.40	4	0	0	0														
	0.60	6	0	0	0														
	1.0	1	0	0	1														
	1.6	1	6	0	1														
	2.5	2	5	0	1														
	4.0	4	0	0	1														
	6.0	6	0	0	1														
	customer	9	9	9	9														consult
Pressure	gauge					R													
Output																			
	4 ... 20 mA / 2-wire					1													
	0 ... 10 V / 3-wire					3													
	10 ... 90 % of V _S / 3-wire ratiometric					R													
	customer					9													consult
Accuracy																			
p _N > 160 mbar:	≤ ± 0.5 % FSO					5													
p _N ≤ 160 mbar:	≤ ± 1 % FSO					8													
	customer					9													consult
Electrical connection																			
	male and female plug ISO 4400								1	0	0								
	male plug M12x1 (4-pin), metal								M	2	0								
	cable outlet with 2 m PVC cable ¹								T	M	0								
	customer								9	9	9								consult
Mechanical connection																			
	G1/4" DIN 3852								3	0	0								
	G1/4" EN 837								4	0	0								
	1/4" NPT								N	4	0								
	G1/2" EN 837								2	0	0								
	customer								9	9	9								consult
Seals																			
	FKM										1								
	customer										9								consult
Special version																			
	standard												0	0	0				
	customer												9	9	9				consult

¹ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)