

18.601 G

OEM Pressure Transmitter Low Pressure

Applications

- ▶ general industrial applications

Characteristics

- ▶ piezoresistive stainless steel sensor
- ▶ accuracy 0.5 % FSO according to IEC 60770
- ▶ 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: $R_{max} = [(V_S - V_{S min}) / 0.02 \text{ A}] \Omega$ 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

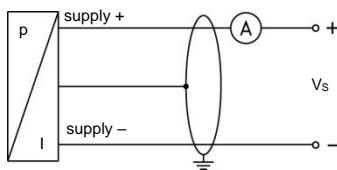
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (offset and span) / Permissible temperatures	
Thermal error	$\leq \pm 0.3 \% \text{ FSO / } 10 \text{ K}$ 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	10 g, 25 Hz ... 2 kHz according to DIN EN 60068-2-6
Shock	100 g / 1 msec according to DIN EN 60068-2-27

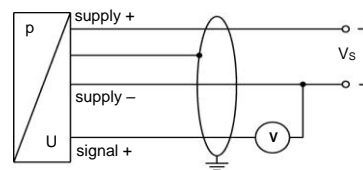
Materials	
Pressure port / housing	stainless steel 1.4301 (304)
Seals	FKM
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, seals, diaphragm
Miscellaneous	
Weight	approx. 120 g
Current consumption	2-wire: max. 25 mA 3-wire ratiometric: typ. 1.5 mA 3-wire voltage: max. 7 mA (short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

Wiring diagrams

2-wire-system (current)



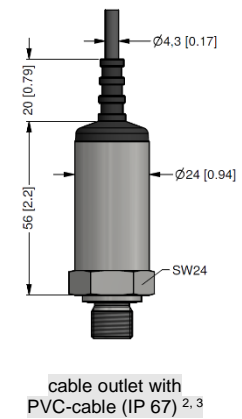
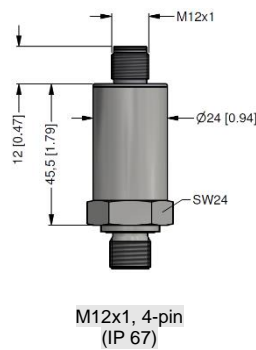
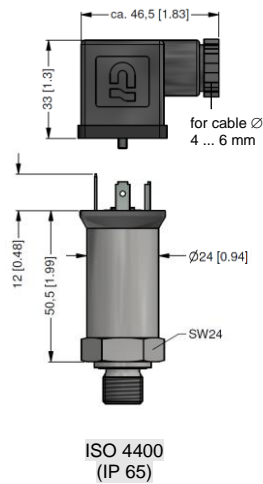
3-wire-system (voltage)



Pin configuration

Electrical connections	ISO 4400	M12x1 (4-pin), metal	
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)

