

18.600 G

OEM Pressure Transmitter Pneumatics

Applications

- ▶ compressed air network
- ▶ general mechanical engineering

Characteristics

- ▶ silicon sensor without media isolation
- ▶ 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]	-1 ... 0	0,1	0,25	0,4	0,6	1	1,6	2,5	4	6
Overpressure	[bar]	3	0,5	1	1	3	3	6	10	10	20
Burst pressure	[bar]	5	1,5	3	3	3	7,5	7,5	15	25	25

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / $V_S = 8 \dots 32 V_{DC}$
Options	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	$\leq \pm 0.5 \%$ FSO
Permissible load	2-wire: $R_{max} = [(V_S - V_{Smin}) / 0.02 A] \Omega$ 3-wire: $R_{min} = 10 k\Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / $k\Omega$
Response time	2-wire: ≤ 10 msec 3-wire: ≤ 3 msec
Long term stability	$\leq \pm 0.2 \%$ 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)			
Nominal pressure p_N	[bar]	-1 ... 0	≤ 0.4
Tolerance band	[% FSO]	$\leq \pm 1$	$\leq \pm 0.75$
In compensated range	[°C]	0 ... 70	-20 ... 85

Permissible temperatures			
Permissible temperatures	medium: -25 ... 125 °C	electronics / environment: -25 ... 85 °C	storage: -40 ... 85 °C

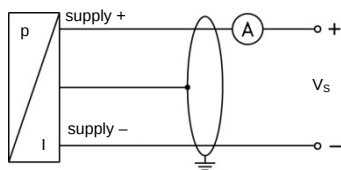
Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326

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

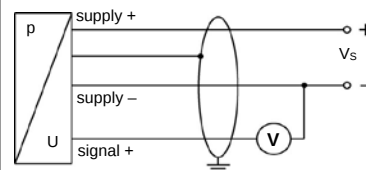
Materials	
Pressure port / housing	stainless steel 1.4301 (304)
Seals	FKM
Sensor	stainless steel 1.4404 (316L), silicon, glass, epoxy or RTV
Media wetted parts	pressure port, seals, sensor
Miscellaneous	
Weight	approx. 120 g
Permissible media	pressurized air, non-aggressive gases
Current consumption	2-wire: max. 25 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

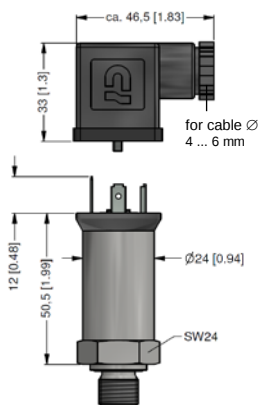
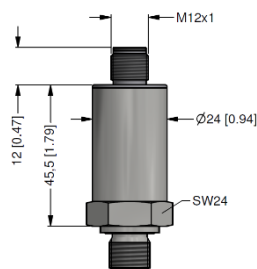
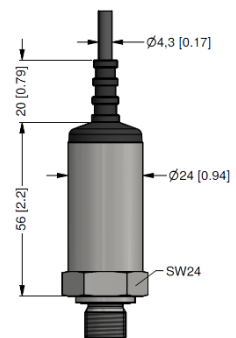
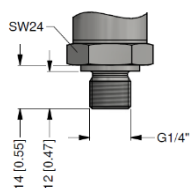
2-wire-system (current)



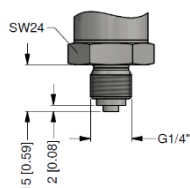
3-wire-system (voltage)

**Pin configuration**

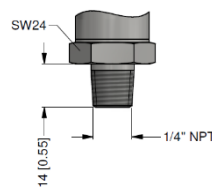
Electrical connections	ISO 4400	M12x1 (4-pin), metal	cable colours (IEC 60757)
Supply +	1	1	WH (white)
Supply -	2	2	BN (brown)
Signal + (for 3-wire)	3	3	GN (green)
Shield	ground pin	4	GNYE (green-yellow)

Electrical connections (dimensions mm / in)ISO 4400
(IP 65)M12x1, 4-pin
(IP 67)cable outlet with
PVC-cable (IP 67) ^{2, 3}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)**

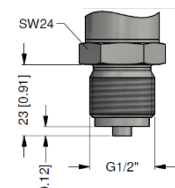
G1/4" DIN 3852



G1/4" EN 837



1/4" NPT



G1/2" EN 837

other mechanical connections on request

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Ordering code 18.600 G

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Input		[bar]																	
		0.10	1	0	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													
	-1 ... 0	X	1	0	2														
	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																			
	0.5 % FSO					5													
	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 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								
	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)