



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 60770
- ▶ 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 / $V_S = 8 \dots 32 V_{DC}$
Option	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	$\leq \pm 0.5 \% \text{ FSO}$
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 Ω
Response time	2-wire: $\leq 10 \text{ msec}$ 3-wire: $\leq 3 \text{ msec}$
Long term stability	$\leq \pm 0.2 \% \text{ FSO} / \text{year}$ 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)			
Nominal pressure P_N	[bar]	-1 ... 0	≤ 0.4
Tolerance band	[% FSO]	$\leq \pm 1$	$\leq \pm 1$
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	10 g, 25 Hz ... 2 kHz according to DIN EN 60068-2-6
Shock	100 g / 11 msec according to DIN EN 60068-2-27

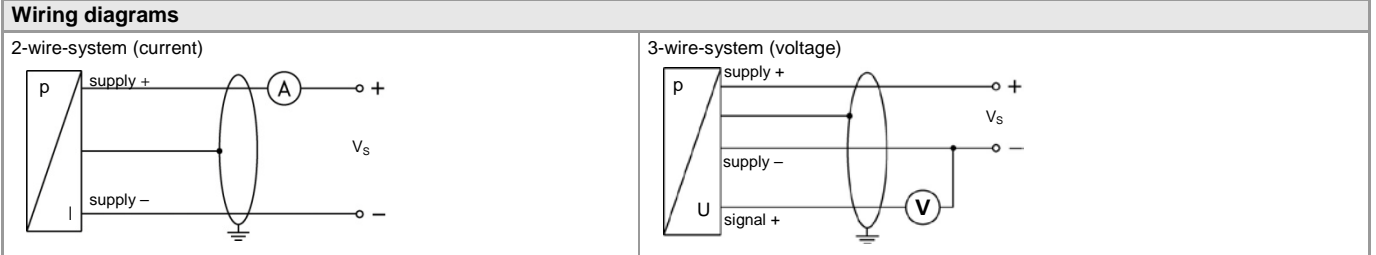
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Technical Data

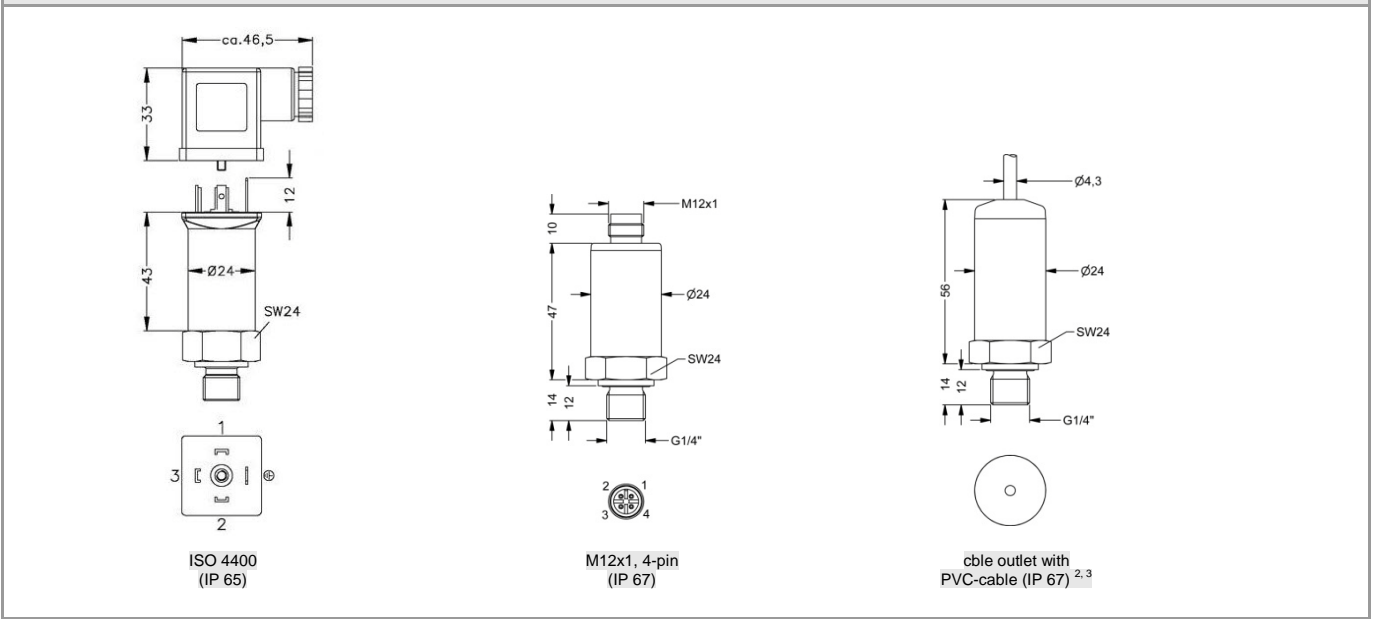
Materials	
Pressure port / housing	stainless steel 1.4301 (304)
Seals	FKM
Sensor	stainless steel 1.4404 (316L), silicon, glass, epoxy or RTV
Media wetted parts	pressure port, seals, sensor
Miscellaneous	
Permissible media	pressurized air, non-aggressive gases
Current consumption	2-wire: max. 25 mA 3-wire voltage: max. 7 mA (short circuit current: max. 20 mA)
CE-conformity	EMC Directive: 2004/108/EC



Pin configuration

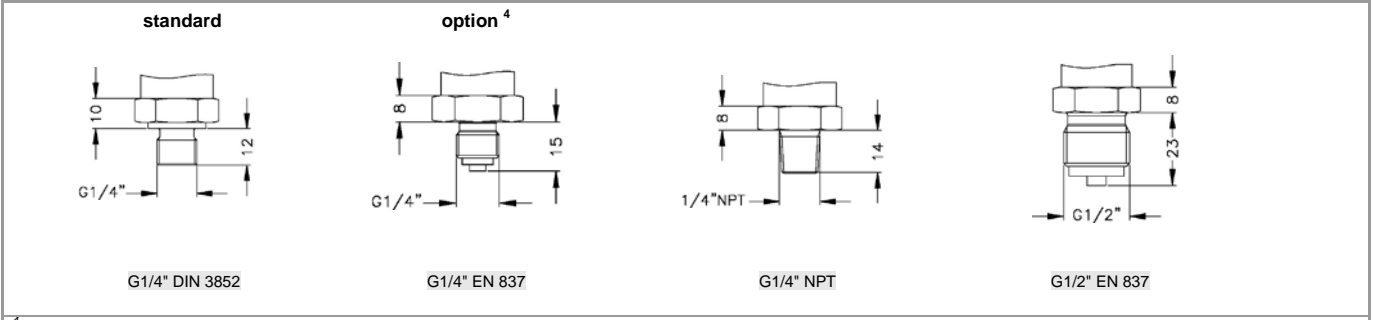
Electrical connections	ISO 4400	M12x1 (4-pin)	cable colours (DIN 47100)
Supply +	1	1	wh (white)
Supply -	2	2	bn (brown)
Signal + (for 3-wire)	3	3	gn (green)
Shield	ground pin	4	ye/gn (yellow / green)

Electrical connections (dimensions in mm)



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 in mm)



⁴ other mechanical connections on request

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Ordering code 18.600 G

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Input	[bar]	1	0	0	0															
	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), plastic					M	0	0												
	Cable outlet with PVC-cable ¹					T	A	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)