

## 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 / $V_S = 8 \dots 32 V_{DC}$
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 <sup>1</sup>	$\leq \pm 0.5 \% \text{ FSO}$
Permissible load	2-wire: $R_{max} = [(V_S - V_{Smin}) / 0.02 A] \Omega$ 3-wire: $R_{min} = 10 \text{ k}\Omega$
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

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

Thermal effects (Offset and Span)			
Nominal pressure $P_N$	[bar]	-1 ... 0	$\leq 0.4$
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

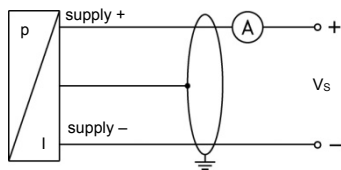
Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326

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

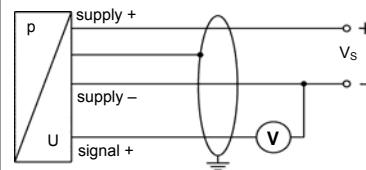
<b>Materials</b>	
Pressure port / housing	stainless steel 1.4301 (304)
Seals	FKM
Sensor	stainless steel 1.4404 (316L), silicon, glass, epoxy or RTV
Media wetted parts	pressure port, seals, sensor
<b>Miscellaneous</b>	
Weight	approx. 120 g
Permissible media	pressurized air, non-aggressive gases
Current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



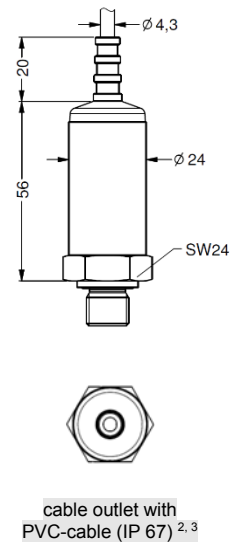
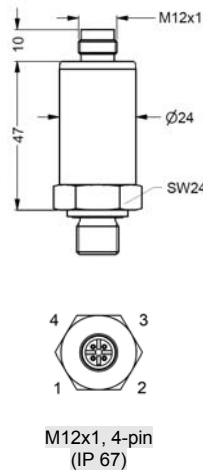
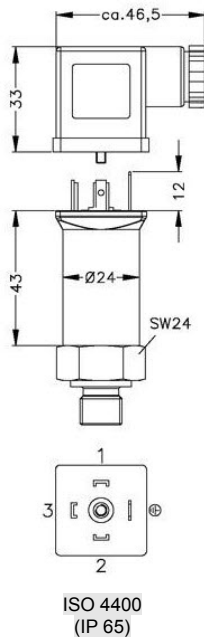
3-wire-system (voltage)



**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 $\oplus$	4	GNYE (green-yellow)

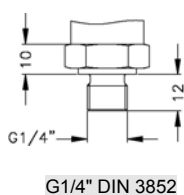
**Electrical connections (dimensions in mm)**



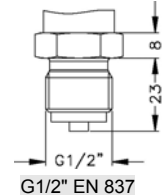
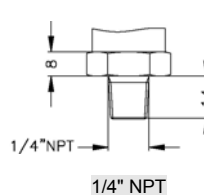
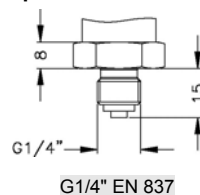
<sup>2</sup> standard: 2 m PVC cable without ventilation tube (permissible temperatur: -5 ... 70 °C)  
<sup>3</sup> different cable types and lengths available, permissible temperatur depends on kind of cable

**Mechanical connection (dimensions in mm)**

**standard**



**option<sup>4</sup>**



<sup>4</sup> other mechanical connections on request

© 2020 BD|SENSORS GmbH – The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.

