

## 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		0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6
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 / $V_S = 2.7 \dots 5 V_{DC}$

Performance	
Accuracy <sup>1,2</sup>	$\leq \pm 0.5 \% \text{ FSO}$
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

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

<sup>2</sup> for pressure ranges  $\leq 160 \text{ mbar}$  accuracy is  $\leq \pm 1\% \text{ FSO}$

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

<b>Materials</b>			
Pressure port / housing	stainless steel 1.4301 (304)		
Seals	FKM		
Diaphragm	stainless steel 1.4435 (316 L)		
Media wetted parts	pressure port, seals, diaphragm		
<b>Miscellaneous</b>			
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)		
CE-conformity	EMC Directive: 2004/108/EC		
<b>Wiring diagrams</b>			
2-wire-system (current)		3-wire-system (voltage)	
<b>Pin configuration</b>			
Electrical connection	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)
<b>Electrical connections (dimensions in mm)</b>			
<p><sup>3</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)</p> <p><sup>4</sup> different cable types and lengths available, permissible temperature depends on kind of cable</p>			
<b>Mechanical connection (dimensions in mm)</b>			

## Ordering code 18.601 G

18.601 G -  -  -  -  -  -  -  -  -  -  -

<b>Input</b>		[bar]													
	0.10	<sup>1</sup>	1	0	0	0									
	0.16	<sup>1</sup>	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
<b>Pressure</b>															
	gauge						R								
<b>Output</b>															
	4 ... 20 mA / 2-wire							1							
	0 ... 10 V / 3-wire							3							
	2.7 ... 5 V / 3-wire ratiometric							R							
	customer							9							consult
<b>Accuracy</b>															
	0.5 % FSO							5							
	customer							9							consult
<b>Electrical connection</b>															
	Male and female plug ISO 4400							1	0	0					
	Male plug M12x1 (4-pin), plastic							M	0	0					
	Cable outlet with 2 m PVC cable <sup>2</sup>							T	A	0					
	customer							9	9	9					consult
<b>Mechanical connection</b>															
	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
<b>Seals</b>															
	FKM									1					
	customer									9					consult
<b>Special version</b>															
	standard										0	0	0		
	customer										9	9	9		consult

<sup>1</sup> for pressure ranges ≤ 160 mbar accuracy is ≤ ± 1 % FSO

<sup>2</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)