

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

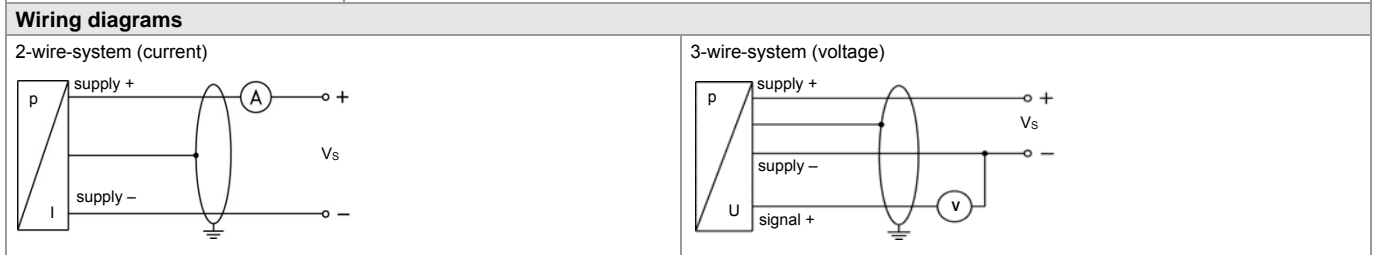


Technical Data



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: $R_{max} = [(V_S - V_{S \text{ min}}) / 0.02 \text{ A}] \Omega$				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							

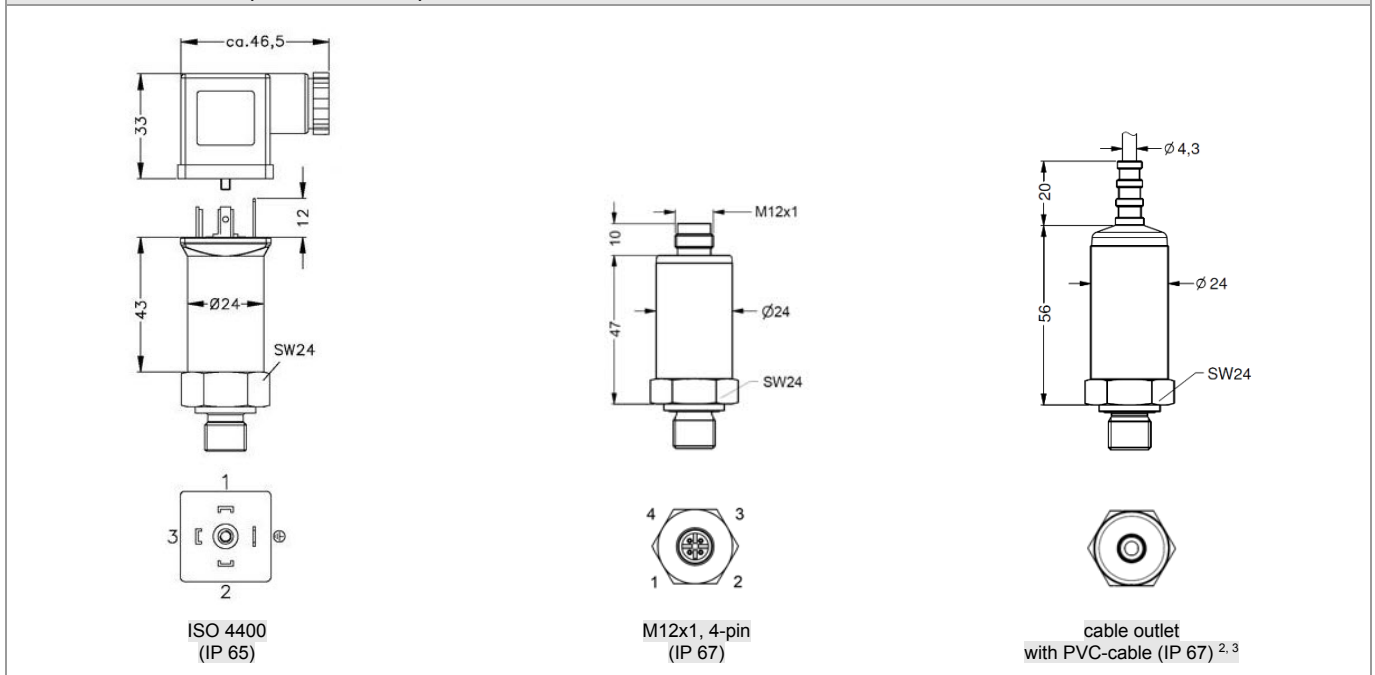
Materials	
Pressure port / housing	stainless steel 1.4301 (304)
Seals	FKM
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, seals, diaphragm
Miscellaneous	
Weight	approx. 120 g
Current consumption	2-wire: max. 25 mA 3-wire ratiometric: typ. 1.5 mA 3-wire voltage: max. 7 mA (short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



Pin configuration

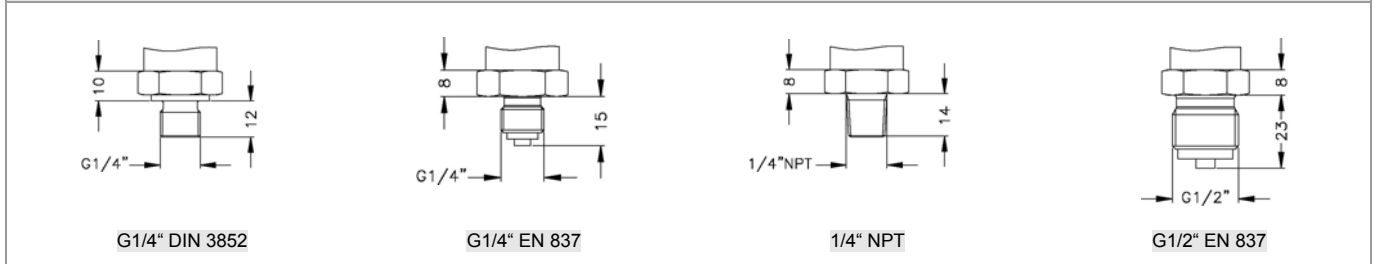
Electrical connection	ISO 4400	M12x1 (4-pin), metal	cable colours (IEC 60757)
Supply +	1	1	WH (white)
Supply -	2	2	BN (brown)
Signal + (for 3-wire)	3	3	GN (green)
Shield	ground pin	4	GNYE (green-yellow)

Electrical connections (dimensions in mm)



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

Mechanical connection (dimensions in mm)



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Ordering code 18.601 G

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Input	[bar]																		
	0.10	1	0	0	0														
	0.16	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
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																			
	$P_N > 160$ mbar:	$\leq \pm 0.5$ % FSO			5														
	$P_N \leq 160$ mbar:	$\leq \pm 1$ % FSO			8														
	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 2 m 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											
	G1/2" EN 837					2	0	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)