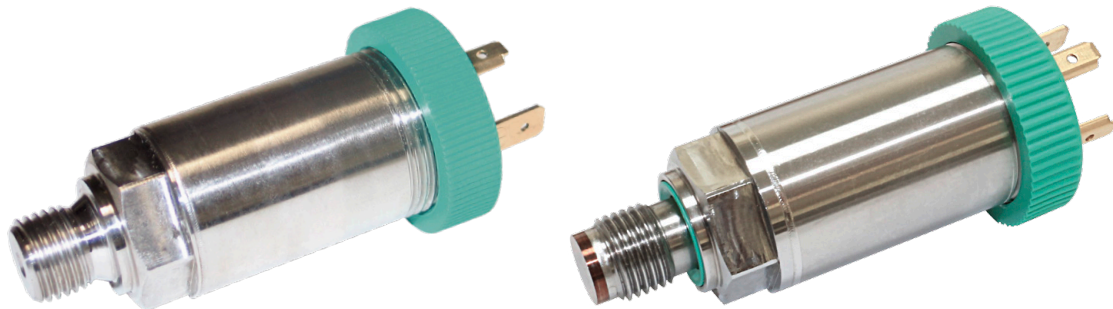


# Pressure Transmitter

## Model 8227

Code:	8227 EN
Delivery:	ex stock
Warranty:	24 months



**NEW**  
Option front flush diaphragm  
in G 1/4 and M10 x 1

- Measuring ranges between 0 ... 0.05 bar to 0 ... 500 bar and -1 ... 1 bar to -1 ... 10 bar
- Accuracy 0.25 %
- Output 0 ... 10 V, optional 0 ... 5 V or 4 ... 20 mA
- Suitable for liquid and gaseous media
- For dynamic and static measurements
- Option: absolute measurement
- Very economic price

### Application

This sensor is designed specifically for industrial use: industry-standard signal outputs and connectors, standard measurement ranges, rugged design and low cost.

With its rugged housing, high-quality electrical connector and a stainless steel sensor element, the transducer is particularly robust and ideally suited to the harshest environments. This also means that the sensor can be installed anywhere with no effect on the measurement signal. The built-in instrumentation amplifier converts the sensor signals into noise-immune voltage signals that can be transmitted over relatively long distances (current-signal output available as an option). For high viscose materials, a front-level membrane is available, and with this disruptive dead volumes can be expelled.

#### Areas of use:

- ▶ Controlling and monitoring of production facilities
- ▶ Cooling and air-conditioning systems
- ▶ Hydraulic or pneumatic machinery
- ▶ Monitoring of compressors and pumps
- ▶ Manufacturing systems
- ▶ Plastics processing industry

### Description

The sensor element located inside the transducer comprises a diaphragm that measures the applied pressure with respect to the current atmospheric pressure (relative reading). For the front-level option, the measuring element is situated directly behind the very stable membrane manufactured from stainless steel. The sensor has a small protected hole on the rear to allow measurement of atmospheric pressure. For the absolute measurement option, the applied pressure is measured with respect to an enclosed vacuum.

As an electrical connection, a DIN 43650A valve connector or an M12 x 1 connection is available. A process connection can be chosen from several alternatives.

The built-in instrumentation amplifier outputs a voltage or current according to the pressure. The output is protected against short-circuit and polarity reversal of the supply voltage.

**Technical Data**

Order Code	Measuring Range 0 ... [bar]	Size in connection with option			
		relative -V1XX	absolute -V2XX	- 1 ... (bar) -V3XX	front flush -VXXX1
8227-4050-VXXX	0.05	A	-	-	-
8227-4100-VXXX	0.1	A	-	-	-
8227-4250-VXXX	0.25	A	-	-	-
8227-4500-VXXX	0.5	A	-	-	-
8227-5001-VXXX	1	A	A	B	-
8227-5002-VXXX	2	A	A	B	-
8227-5005-VXXX	5	B	A	B	-
8227-5010-VXXX	10	B	A	B	-
8227-5020-VXXX	20	B	A	-	-
8227-5030-VXXX	30	B	A	-	B
8227-5050-VXXX	50	B	A	-	B
8227-5100-VXXX	100	B	-	-	B
8227-5200-VXXX	200	B	-	-	B
8227-5500-VXXX	500	B	-	-	B

**Size A:** L 82 mm, D 22 mm; **Size B:** L 72 mm, D 26.5 mm

**Electrical values**

<b>Excitation voltage:</b>		
voltage output 10 V		15 ... 30 VDC
voltage output 5 V		10 ... 30 VDC
current output 4 ... 20 mA		10 ... 30 VDC
<b>Current consumption:</b>		
voltage output		< 13 mA
current output		< 32 mA
<b>Insulation resistance:</b>	at 50 V DC	> 1000 MΩ
<b>Load resistance:</b>	at 30 V DC excitation	max. 750 Ω
<b>Cut-off frequency:</b>		(-3dB) 250 Hz
<b>Reaction time:</b>		(10 ... 90 % F.S.) < 1 ms

**Environmental conditions**

<b>Operating temperature:</b>		
measuring range	≤ 0 ... 2 bar	- 20 °C ... 85 °C
measuring range	≥ 0 ... 5 bar	- 40 °C ... 105 °C
<b>Rated temperature range:</b>		- 10 °C ... 85 °C
<b>Temperature effect on zero signal:</b>		± 0.02 % F.S./K
<b>Temperature effect on characteristic value:</b>		± 0.02 % F.S./K

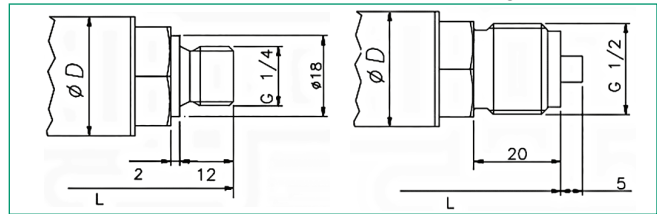
**Mechanical values**

<b>Combined error consisting of non-linearity, hysteresis and non-repeatability:</b>		± 0.25 % F.S. relative ± 0.5 % F.S. absolute
<b>Measuring Ranges:</b>		see table
<b>Dead volume at restored diaphragm:</b>		0.5 cm³
<b>Overpressure limit:</b>		
measuring range	≤ 0 ... 2 bar	400 % over capacity
measuring range	≥ 0 ... 5 bar	100 % over capacity
<b>Burst pressure:</b>		
measuring range	≤ 0 ... 2 bar	900 % over capacity
measuring range	≥ 0 ... 5 bar	300 % over capacity, max. 1200 bar
<b>Dynamic performance:</b>		recommended 70 % of capacity maximum 100 % of capacity
<b>Dimensions:</b>		refer to drawing and table
<b>Weight:</b>		110 g
<b>Protection class acc. to EN 60529:</b>		connector EN 175301 IP65 connector M12 x 1 IP67
<b>Mechanical shock:</b>		100 g/1 ms, according to IEC 68-2-6
<b>Vibration:</b>		max. 20 g at 15-2000 Hz according to IEC 68-2-6
<b>Mounting torque:</b>		max. 3 Nm
<b>Material:</b>		
measuring range 0 ... 2 bar		
measuring chamber	stainless steel AISI 316, AISI 304, NBR, Viton	
housing	stainless steel AISI 304, Nylon 66F35VO	
measuring range 0 ... 5 bar		
measuring chamber	stainless steel AISI 430 F	
housing	stainless steel AISI 304, Nylon 66F35VO	

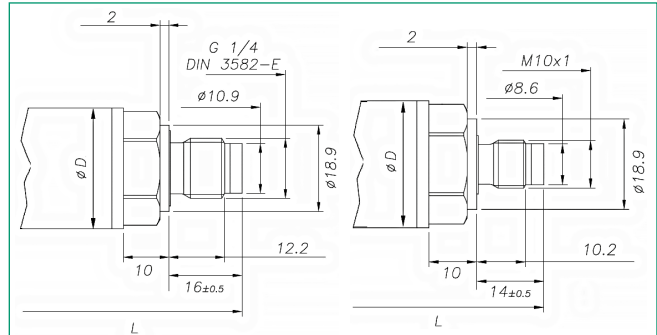
**Connection setting**

pin	voltage output	current output (2 wire)
1	signal +	connection +
2	common ground (GND)	connection
3	power +	NC
E	housing	housing

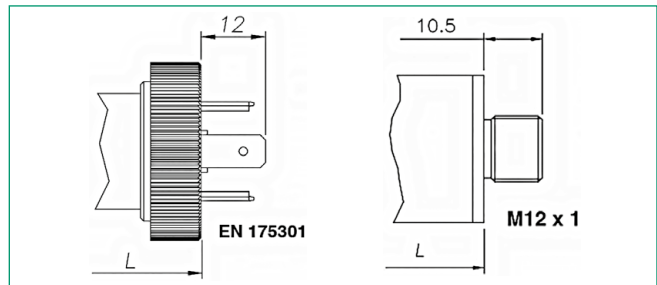
**Process connection G 1/4, G 1/2 internal diaphragm**



**Process connection G 1/4, M10 x 1 front flush diaphragm**



**Electrical connections**



**The CAD drawing (3D/2D) for this sensor can be imported online directly into your CAD system.**

Download via [www.burster.com](http://www.burster.com) or directly at [www.traceparts.com](http://www.traceparts.com). For further information about the burster traceparts cooperation refer to data sheet 80-CAD-EN.

**Accessories**

- Connecting cable with coupling plug EN 175301; shielded; bending radius > 5 mm; PVC insulation, length 3 m with color coded open and tinned cable ends **Model 99654-000C-0090030**
- Connecting cable with coupling plug M12 x 1, series 713; shielded; bending radius > 5 mm; PVC insulation, length 3 m with color coded open and tinned cable ends **Model 9900-K304**
- Sealing ring or 1/4" connection **Model 8227-Z001**
- Mating connector coupling plug EN 175301: (included in scope of delivery) **Model 9900-V654**
- Mating connector coupling plug M12 x 1, series 713: (included in scope of delivery) **Model 9900-V624**

**Test and Calibration Certificate**

Included in delivery, et al. with specification of zero output, sensitivity and shunt calibration factor.

**Order Code**

<b>Pressure sensor</b>	<b>Model 8227-XXXX-V</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
option relative measurement		1			
option absolute measurement		2			
option measuring range start - 1 bar		3			
4 pin EN 175301-803/DIN 43650A			3		
4 pin connector M12 x 1, 4 pin, series 713			4		
voltage output 0 ... 5 V				3	
voltage output 0 ... 10 V				4	
current output 4 ... 20 mA, 2 wire				8	
external thread G 1/4" (DIN 3852 A)					0
external thread G 1/2" (DIN 16288)					1
front flush diaphragm external thread G 1/4" (DIN 3852 A)					2
front flush diaphragm external thread M 10 x 1					3

**SIL2/ATEX certification on request.**