Pressure Transmitter

Model 8227

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

CAD data 2D/3D for this sensor:
Download directly at www.traceparts.com
Info: refer to data sheet 80-CAD-EN

Improved accuracy and extended measurement ranges

- **Measuring ranges between 0 ... 50 mbar to 0 ... 500 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**

8227 EN

Application

This pressure transducer is especially designed for industrial use in production facilities, for monitoring the system pressure on hydraulic or pneumatic handling equipment, and for measuring the operating pressure in circuits of cooling and air-conditioning systems.
The transducer is available at particularly low cost thanks to large production volumes. With its rugged body, high-quality connector and a stainless steel sensor element, the transducer is particular robust and ideally suited to very harsh environments. Critical media may result in damage around the welded seams inside the transducer. Please contact us.
The built-in instrumentation amplifier converts the sensor signals into noise-immune current and voltage signals that can be transmitted over lengthy distances.

Description

The sensor element located inside the transducer consists of a diaphragm that measures the applied pressure with respect to the actual atmospheric pressure or a sealed vacuum. The transducers measuring with respect to atmospheric pressure have a small protected hole at the rear for pressure equalization. The transducer should therefore be used in dry and clean atmospheres.
The DIN mating connector is angled through 90° and can be adjusted in four radial positions; its strain relief is suitable for all cable diameters between 4.5 mm and 14 mm.
The pressure connection through which the medium accesses the sensor element has a G 1/4" external thread. Strain gauges are applied to the rear face of the diaphragm by a thick-film process, and are connected into a Wheatstone bridge.
The built-in instrumentation amplifier outputs a voltage or current according to the pressure. The output signal is short-circuit protected and protected against polarity reversal of the excitation cable.

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Technical Data

Order Code	Measurement Range
8227-4050-V134	0 ... 50 mbar
8227-4100-V134	0 ... 100 mbar
8227-4250-V134	0 ... 250 mbar
8227-4500-V134	0 ... 500 mbar
8227-5001-V134	0 ... 1 bar
8227-5002-V134	0 ... 2 bar
8227-5005-V134	0 ... 5 bar
8227-5010-V134	0 ... 10 bar
8227-5020-V134	0 ... 20 bar
8227-5050-V134	0 ... 50 bar
8227-5100-V134	0 ... 100 bar
8227-5200-V134	0 ... 200 bar
8227-5500-V134	0 ... 500 bar

Electrical values

Excitation voltage:
- voltage output: 15 ... 30 V DC
- current output: 10 ... 30 V DC

Current consumption:
- voltage output: 13 mA
- current output: 32 mA

Insulation resistance: at 50 V DC > 1000 MΩ

Load resistance: at 30 V DC excitation max. 750 Ω

Signal output:
Integrated measurement amplifier with voltage output 0 ... 10 V

Cut-off frequency: (-3dB) 250 Hz

Reaction time: (10 ... 90 % F.S.) 1 ms

Environmental conditions

Range of operating temperature:
- measuring range ≤ 0 ... 2 bar: - 20 °C ... 85 °C
- measuring range ≥ 0 ... 5 bar: - 40 °C ...105 °C

Nominal temperature range: - 10 °C ... 85 °C

Range of storage temperature:
- measuring range ≤ 0 ... 2 bar: - 30 °C ... 95 °C
- measuring range ≥ 0 ... 5 bar: - 40 °C ...125 °C

Influence of temperature on zero: 0.02 % F.S./K

Influence of temperature on sensitivity: 0.02 % Rdg./K

Mechanical values

Combined error consisting of non-linearity, hysteresis and non-repeatability: < 0.25 % F.S.

Kind of measurement: against atmosphere

Ranges: see table

Dead volume: 0.5 cm^3

Overload:
- measuring range ≤ 0 ... 2 bar: 400 % over capacity
- measuring range ≥ 0 ... 5 bar: 100 % over capacity

Burst pressure:
- measuring range ≤ 0 ... 2 bar: 900 % over capacity
- measuring range ≥ 0 ... 5 bar: 300 % over capacity, max. 1200 bar

Dynamic performance:
- recommended: 70 % of capacity
- maximum: 100 % of capacity

Design:
measuring range ≤ 0 ... 2 bar pressure transducer with inserted measuring element, sealing per O-ring

measuring range ≥ 0 ... 5 bar pressure transducer with hermetically sealed measuring chamber, diaphragm and housing are welded.

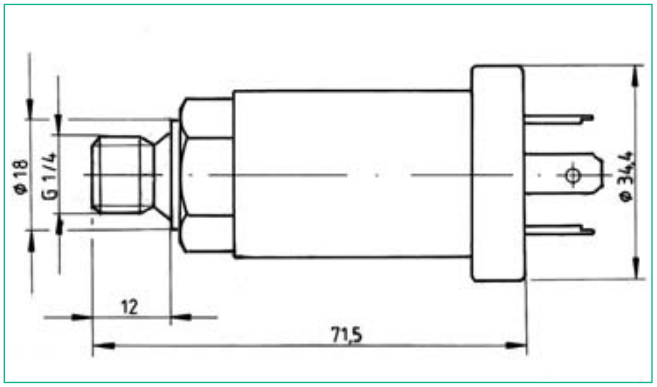
Material:
measuring range ≤ 0 ... 2 bar
- measuring chamber: stainless steel AISI 316, AISI 304, NBR, Viton
- housing: stainless steel AISI 304, Nylon 66F35VO

measuring range ≥ 0 ... 5 bar
- measuring chamber: stainless steel 1.4542
- housing: stainless steel 1.4301, Nylon 66F350

Pressure connection: external thread G 1/4"

Mounting torque: max. 3 Nm

Dimensional drawing model 8227



The CAD drawing (3D/2D) for this sensor can be imported online directly into your CAD system.
Download via www.burster.com or directly at www.traceparts.com. For further information about the burster traceparts cooperation refer to data sheet 80-CAD-EN.

Electrical connection:
4 pin DIN 43650 - Plug-in connector, protected against splash water, for cable diameter between 4.5 mm and 14 mm.

Wiring code:

	voltage output	current output	
pin 1	connection positive	signal output	positive
pin 2	connection negative	common ground	
pin 3	not connected	excitation supply	positive
pin ■	not connected	not connected	

Mating connector: model 9900-V654 included in scope of delivery

Dimensions: refer to drawing

Weight: 110 g

Protection class: acc. to EN 60529 IP65

Accessories

Connecting cable with coupling plug; shielded; bending radius > 5 mm; PVC insulation, standard length 3 m with color coded open and tinned cable ends **Model 99654-000C-0090030**

Threaded adapter, material 1.4571 up female thread M 16 x 1.5 **Model 8200-G001**

Sealing ring or 1/4" connection **Model 8227-Z001**

Options

Different from the standard: Analog outputs of the internal amplifiers

Internal amplifier
with voltage output 0 ... 5V **... - V133**

Internal amplifier
with current output 4 ... 20 mA, 2 wire technology **... - V138**

Option absolute measurement
for measuring ranges from 0 ... 500 mbar to 0 ... 20 bar **... - V234**

Option DKD
DKD calibration certificate according to guideline DKD-R 6-1 with 21 points in 10 % increments, for raising and falling pressure.

Option Manufacturer calibration
Manufacturer calibration certificate with 11 points in 20 % increments for raising and falling pressure, done twice.