

IPS pressure sensor

For harsh operating conditions



Product description



The IPS pressure sensor is used in applications where high demands are placed on the robustness and fluid compatibility of a sensor. Under harsh operating conditions, with rough handling and severe vibrations, the IPS proves to be a reliable solution, delivering precise and stable measurements over the entire life cycle.

Made of stainless steel, the pressure sensor elements and pressure connections are designed for absolute and relative pressures up to 600 bar and are ideally suited for use in oil, fuel, diesel, H₂, CNG and LPG applications.

The flexible design of the sensor with numerous electrical connections and output signals also permits custom adaptation to the respective system.

Fields of application

- Mobile hydraulics
- Mechanical engineering
- Alternative drives, especially H₂, CNG and LPG applications

Features

Robust design

- High vibration resistance
- Particularly suitable for harsh environmental conditions and rough handling

Use of materials with proven fluid compatibility

- Very good fluid compatibility, especially suitable for H₂, CNG and LPG applications
- Approval according to corresponding ECE regulations possible
- Reliable, stable measurements over the entire service life

Numerous options for connections and output signals available

- Simple and flexible integration, even into existing systems

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Technical Specifications

Measurement range

Nominal pressure	0.2–50 bar, absolute 0.2–600 bar, relative ¹⁾
Over pressure	2 × nominal pressure
Burst pressure	3 × nominal pressure
Pressure type	Relative and absolute pressure

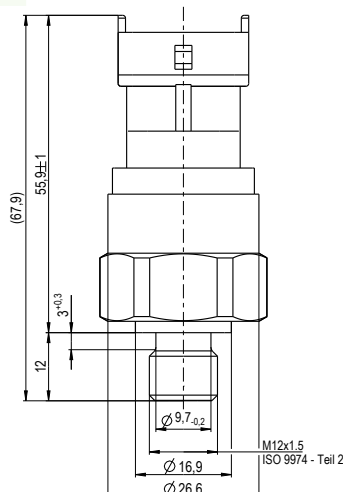
Electrical characteristics

Supply voltage	9–30 V, 12–30 V, 5 ± 0.5 V
Current consumption	typ. 10 mA
Output signals	4–20 mA, 2-wire technology 0–5 V, 1–6 V, 0–10 V 0.5–4.5 V (ratiometric)
Overvoltage protection ²⁾	± 30 V
Reverse-polarity resistance ²⁾	± 30 V

Mechanical characteristics

Measuring element	Stainless steel silicon with stainless-steel membrane and oil reservoir
Housing material	Stainless steel
Pressure connection	SW 27, G1/4", M12×1.5
Thread	Male thread ³⁾

Dimensions



Electrical connection	Bosch compact plug, MQS plug, Packard plug, M12×1 plug ³⁾
Installation position	Any
Weight	approx. 55 g

Accuracy

Total error (default) ⁴⁾	± 1% FS (0–90 °C) ± 2% FS (–40–125 °C)
Total error (high accuracy) ⁴⁾	± 0.2% FS

Environmental conditions

Operating temperature range	–40–90 °C (125 °C)
Media temperature range	–40–90 °C (125 °C)
Media compatibility	Oils, fuel, diesel, H ₂ , CNG, LPG

- ¹⁾ –1 bar as initial value of relative pressure possible
- ²⁾ Depending on the output signal and the application
- ³⁾ Other pressure connections and electrical connections available on request
- ⁴⁾ Includes repeatability, hysteresis, non-linearity (TBL), calibration and temperature effects; depending on the pressure and temperature range

