

## IPS pressure sensor

### For heavy-duty applications

#### DESCRIPTION

The IPS pressure sensor is used in applications requiring a sensor with a high degree of robustness and media compatibility. The IPS is a reliable partner and provides precise and stable measurements over its entire life, even when used in tough conditions, when handled roughly and when exposed to high levels of vibration. The pressure sensor elements and pressure connectors are made of stainless steel and designed for absolute and relative pressures of up to 600 bar. The IPS is excellently suited for use in oil, petrol, diesel, H<sub>2</sub>, CNG and LPG applications. The sensor's flexible design with a wide range of electrical connectors and output signals also means it can be adapted to fit any system perfectly.



#### FIELDS OF APPLICATION

- Mobile hydraulics
- Mechanical engineering
- Alternative drives, especially H<sub>2</sub>, CNG and LPG applications



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#### KEY FEATURES

Robust design

#### BENEFITS

- High resistance to vibration
- Specially designed for adverse environmental conditions and harsh handling situations

Use of media-tested materials

- High level of media compatibility, particularly suitable for H<sub>2</sub>, CNG, LPG applications
- Approval according to the respective ECE regulations possible
- Reliable, stable measurements over the entire life cycle

Plenty of options available for connections and output signals

- Simple and flexible integration, also in existing systems

## Technical specification

IPS pressure sensor



Pressure ranges		Accuracy	
Nominal pressure	0.2 ... 50 bar, absolute 0.2 ... 600 bar, relative <sup>1)</sup>	Total error <sup>4)</sup> (Standard version)	± 1% FS (0 ... 90 °C) ± 2% FS (-40 ... 125 °C)
Pressure reference type	Relative and absolute pressure	Total error <sup>4)</sup> (High-precision version)	± 0.2% FS
Overpressure	2x nominal pressure		
Bursting pressure	3x nominal pressure		
Electrical characteristics		Environmental conditions	
Supply voltage	9 ... 30 V 12 ... 30 V 5 ± 0.5 V	Operating temperature range	-40 ... 90 °C (125 °C)
Supply current	typ. 10 mA	Media temperature range	-40 ... 90 °C (125 °C)
Output signal	4 ... 20 mA, 2 wire system 0 ... 5 V, 1 ... 6 V, 0 ... 10 V 0.5 ... 4.5 V, ratiometric	Media compatibility	Oils, petrol, diesel, H <sub>2</sub> , CNG, LPG
Overvoltage protection <sup>2)</sup>	± 30 V	ESD (DIN EN 61000-4-2) <sup>2)</sup>	± 8 kV to contacts ± 15 kV to case
Reverse polarity protection <sup>2)</sup>	± 30 V	EMC (ISO 11452) <sup>2)</sup>	250 V/m 200 mA (BCI)
Mechanical characteristics			
Measurement element	Stainless steel Silicon sensing element with stainless steel membrane and oil filled	Dimension	
Case material	Stainless steel		
Pressure connection	HEX 27, G1/4", M12x1.5 male thread <sup>3)</sup>		
Electrical connection	Bosch Compact plug, MQS plug, Packard plug, M12x1 plug <sup>3)</sup>		
Installation position	Arbitrary		
Weight	Approx. 85 g		

1) Initial value of -1 bar possible for relative pressure

2) Depending on the output signal and application

3) Other pressure connections and electrical connections available on request

4) Covers repeatability, hysteresis, non-linearity (TBL), calibration and temperature effects; depending on the pressure and temperature range