H$_2$-Low Pressure Sensor LPS

For fuel cell systems

Product description

Our low pressure sensor LPS was specially developed for use in hydrogen (H$_2$) applications, such as fuel cells.

With its variants for pressure ranges up to 6 bar, the sensor is designed for measuring low pressures in stationary and mobile applications.

Materials that come into contact with fluids have been selected in accordance with the requirements for use with hydrogen and withstand the high stresses of use in hydrogen environments, even over long service lives. For an optimal integration in systems, the sensor is available with analog or digital (SENT) output signal.

Fields of application

- Industrial and automobile application on fuel cell systems

Features

MEMS-Si measuring element with oil reservoir

Very good hydrogen compatibility

- Use of fluid-compatible materials
- Burst-proof and long service life

Several design variants available

- Analog output voltage as well as SENT output
- Flange connector for direct contact to the system

Technical Specifications

Measurement range

Nominal pressure	0–6 bar
Over pressure	2 × nominal pressure
Burst pressure	3 × nominal pressure
Pressure type	Absolute

Electrical characteristics

Supply voltage	5 V±0.25 V
Current consumption	max. 10 mA
Output signals	SENT, analog

Mechanical characteristics

Measuring element	MEMS-Si element with oil reservoir
Housing material	Plastics
Pressure connection	Flange with o-ring

Thread	None
Electrical connection	3-pin MLK connector
Installation position	Any [1]
Weight	approx. 38 g

Accuracy

Total error	Standard accuracy ±1.0 % FS @ 0–50 °C, ±1.5 % FS @ −40–120 °C

Environmental conditions

Operating temperature range	−40–120 °C
Media temperature range	−40–120 °C
Media compatibility	Hydrogen, air, nitrogen, coolant (DI-water, ethylene glycol)

[1] Except freeze resistant installation

Dimensions

Stecker MLK, 3-polig Code A
Connector MLK, 3-pole Code A

O-Ring, 13x2,5

34.8±1
19.8±0.5
⌀ 12.6±0.2
⌀ 16.95±0.07