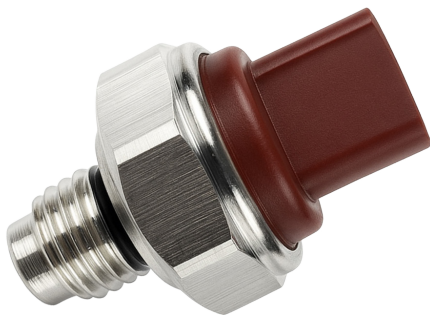


Oil pressure sensor (OPS)

For oil-pressure measurements in the transmission



Product description



Our oil pressure sensor OPS measures the oil pressure in transmissions of e. g. electric vehicles, in order to optimise the use of the engine power. It was designed to measure the absolute pressure inside the transmission housing, and is robust enough to be used with oil in the surrounding areas.

The electronics with digital output signal (SENT) transmit measurements precisely, safely and quickly. It was developed following the regulations of functional safety (ASIL / ISO 26262).

Fields of application

- Oil pressure measuring in transmissions
- Engine oil pressure measurement

Features

Robust and minimal design

- Submersible, oil-proof design
- Compatible with standard automotive transmission oils
- Can be integrated into systems where space is critical
- Lightweight due to its aluminum body

Digital evaluation electronics

- ASIL capable SENT interface is available
- Reliable and stable measurements over the entire service life
- Can be used at temperatures of up to 140 °C
- Tried-and-tested automotive EMC/ESD resistance

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Technical Specifications

Measurement range

Nominal pressure 0.5–5 to 0.5–50 bar

Over pressure 2 × nominal pressure

Burst pressure 3 × nominal pressure

Pressure type Absolute

Thread Male thread

Electrical connection 3-pin Yazaki or RD plug ¹⁾

Installation position Any

Weight Approx. 15 g

Electrical characteristics

Supply voltage 5 V ± 0.25 V

Current consumption max. 12 mA

Output signals SENT (SAE J2716)
10 % to 90 % Vs (ratiometric)

Accuracy

Total pressure error ± 1 % FS (0–100 °C)

± 2.5 % FS (–40–140 °C)

Environmental conditions

Operating temperature range –40–140 °C

Media temperature range –40–140 °C

Media compatibility Engine and transmission oils, various liquid and gaseous media

Mechanical characteristics

Measuring element Silicon measuring element with resistive measuring bridge (MEMS)

Housing material Aluminium

Pressure connection Hex 24, M10 × 1.25 ¹⁾

¹⁾ Other pressure and electrical connections available on request

Dimensions

