

# 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

## 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

# Oil pressure sensor (OPS)

For oil-pressure measurements in the transmission



## Technical Specifications

### Measurement range

Nominal pressure	0.5–10 to 0.5–25 bar
Over pressure	2 × nominal pressure
Burst pressure	3 × nominal pressure
Pressure type	Absolute

### Electrical characteristics

Supply voltage	5 V±0.5 V
Current consumption	max. 12 mA
Output signals	SENT

### Mechanical characteristics

Measuring element	Silicon measuring element with resistive measuring bridge (MEMS)
Housing material	Aluminium

Pressure connection	Hex 24, M10×1.25
Thread	Male thread
Electrical connection	4-pin RD plug or Yazaki <sup>1)</sup>
Installation position	Any
Weight	approx. 15 g

### Accuracy

Total pressure error	±2% 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	Transmission oil

### Dimensions

<sup>1)</sup> Other pressure and electrical connections available on request

