

PTM pressure sensor module

For system integration

DESCRIPTION

The pressure transmitter module (PTM) responds to the general trend towards miniaturisation and cost efficiency. Its ideal construction size ensures that the sensors of the PTM series are easy to use and versatile in applications where installation space is scarce. The modular design with a wide range of possibilities for electrical and mechanical interfaces also permits easy integration in existing customer systems. The use of highly accurate evaluation electronics directly on the ceramic pressure cell permits the output of a temperature-compensated analogue signal or digital signal. Stable, exact measurements are generated over a broad temperature range in the process, also under adverse conditions.



FIELDS OF APPLICATION

Integration in control units (ECU) for

- braking systems
- clutches

Mobile hydraulics
Pneumatic systems



© iStockphoto.com - josemorales

KEY FEATURES

Minimised construction size

Integrated evaluation electronics

Numerous electrical and mechanical connections available

Ceramic measurement element

BENEFITS

- Affordable
- Can be integrated in applications where installation space is scarce

- Stable and exact measurements over a broad temperature range
- Customer-specific output signal, temperature-compensated (analogue, LIN)
- Diagnosis and protective functions

- Easy adaptation to existing systems

- Excellent media compatibility

Technical specification

PTM pressure sensor module



Pressure ranges

Nominal pressure	10 ... 100 bar
Overpressure	2 x nominal pressure
Bursting pressure	3 x nominal pressure

Electrical characteristics

Supply voltage	5 V
Output signal	0.5 ... 4.5 V, ratiometric LIN PWM
Overvoltage protection	up to 33 V
Reverse polarity protection	up to 33 V

Mechanical characteristics

Measurement element	Ceramic cell with resistive measuring bridge
Pressure connection	According to customer's wishes
Electrical connection	Flex conductor connection, strand, soldering contacts ¹⁾
Installation position	Arbitrary
Weight	Approx. 5 g

Accuracy

Total error ²⁾	± 0.5 % FS (25 °C) ± 1 % FS (0 ... 90 °C) ± 3 % FS (-40 ... 125 °C)
---------------------------	---

Environmental conditions

Operating temperature range	-40 ... 125 °C
Media temperature range	-40 ... 125 °C
Media compatibility	Hydraulic oils, ATF, exhaust gas, brake fluid
ESD (ISO 10605)	8 kV
EMC (ISO 11452)	200 V/m (Stripline) ³⁾

Design example



¹⁾ Other connections available on request

²⁾ Covers repeatability, hysteresis, non-linearity (TBL), calibration and temperature effects

³⁾ Depending on the system