

Air management

Manifold air-pressure and temperature sensor



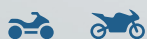
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Invented for life



Product benefits

- ▶ Compact, lightweight sensor
- ▶ High EMC (electromagnetic compatibility)
- ▶ Customized connector and mounting
- ▶ High accuracy, long-term durability
- ▶ Fast response time

Vehicle segments



- 1** Connector
- 2** Temperature sensor
- 3** Mounting flange
- 4** Pressure sensing unit

high precision

The sensor ensures an **optimized air-fuel mixture** for more efficient combustion.

Task The manifold air-pressure sensor with optional temperature sensor measures the air pressure and temperature in the intake manifold. The volume of air that reaches the engine cylinder can be calculated from the measured air pressure and the engine speed. This input variable is used to calculate the amount of fuel that needs to be injected.

The temperature sensor measures the intake air temperature, allowing the engine management system to adjust the injected fuel mass.

Function The micromechanical sensor contains a piezoresistive sensor element that generates a measurable electrical voltage when pressure is applied. The air pressure can be measured via the voltage.

Technical characteristics

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|-----------------------|--|
| Measurement of | Intake air pressure, boost pressure |
| Pressure range | 115, 250, 300, and 400 kPa |
| Technology | Silicon micromechanics, 1-chip concept |
| Optional | Integrated temperature sensor |
| Operating temperature | -40 °C to +140 °C |
| Output | Analog |
