

机油压力传感器 Oil Pressure Sensor

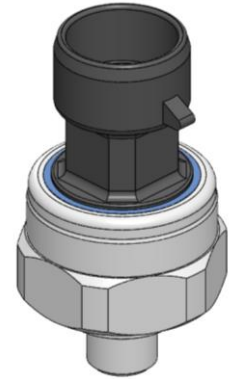
产品介绍 Product Description

机油压力传感器是对车辆发动机的机油压力进行检测的重要装置。

OPS is an important device to detect the oil pressure of the vehicle engine.

产品特征及优势 Feature and benefits

- ◆ OPS 可以提供模拟信号或者数字信号。
The OPS sensor provides analog signal or digital signal.
- ◆ 采用陶瓷电容技术，兼具高精度和优良的稳定性,对几乎所有汽车压力介质均有极佳的兼容性。
With ceramic capacity technology, with both high accuracy and long-term stability. Ceramic has excellent compatibility with almost all automotive pressure media.
- ◆ 0~8MPa 范围内，压力量程可定制。
Pressure can be customized in the range of 0~8MPa.
- ◆ 0.5V~4.5V 范围内电压输出，提供适当诊断。
Output with 0.5V~4.5V voltage single, with diagnosis function.
- ◆ 防护等级可达到 IP69。
Protection degree with IP69.
- ◆ 接插件及压力接头可定制。
Connector and pressure port can be customized.



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产品作用 Application

机油压力传感器检测的是发动机机油主油道的压力，并将信号传递给ECU，帮助控制发动机正常运转。

当机油压力低于期望值时，仪表上的发动机故障灯和机油灯常亮，发出报警信号。ECU将启用降低发动机转速和功率的保护功能，来调节发动机的转速和功率。

The oil pressure sensor detects the pressure of the main oil passage of the engine oil and transmits the signal to the ECU to help control the normal operation of the engine.

When the oil pressure is lower than the expected value, the engine fault lamp and oil lamp on the instrument are always on, giving an alarm signal. The ECU will enable the protection function of reducing the engine speed and power to regulate the engine speed and power.

操作 Operation

◆ 基本原理 Basic principle:

机油压力传感器根据感应主油管内介质（机油）压力的变化，导致陶瓷应变膜的变形，使电容值发生改变，通过调理电路，成比例的输出信号。

According to the change of the medium pressure in the induction pipe, the oil pressure sensor will lead to the deformation of the ceramic strain film and change the capacitance value, which will be amplified by the conditioning circuit and converted into a voltage signal.

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◆ 连接选项 Connection options:

根据客户选择定制连接系统。

Customized to customer choice of connection system.

◆ 包装选项 Packaging Options:

可提供定制包装以满足任何需要，请联系KESENS技术部了解详情。

Custom packaging can be provided to meet any need, please contact KESENS Engineering for details.

技术参数 Functional Characteristics

参数 PARAMETER	符号 NOTE	最小值 MIN.	额定值 NOM.	最大值 MAX.	单位 UNITS
工作温度 TEMPERATURE RANGE	T	-40		150	°C
压力测量范围 PRESSURE RANGE	P	0		8	MPa
电源电压 SUPPLY VOLTAGE	Vcc	4.75	5	5.25	V
供电电流 SUPPLY CURRENT	Icc			10	mA
额定输出电压 NOMINAL OUTPUT	Vout	5		95	%Vcc
过压压力 Proof Pressure				2*P	MPa
爆破压力 Burst Pressure				3*P	MPa
过电压 Over Voltage				20	V
反向电压 Reverse voltage		-20			V
整体精度误差 OVERALL ACCURACY ERROR	Err		±3		%Fs
压力响应时间 PRESSURE RESPONSE TIME	从 10%到 90%的最输出电压 T _{10/90} 10% TO 90% OF THE FINAL OUTPUT VALUE			10	mS

可根据需要定制电气和环境规范，详情请联系KESENS技术部。

Custom electrical and environmental specifications can be designed to meet any need, please contact KESENS Engineering for details.