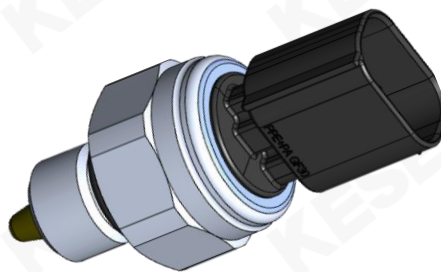


# 机油温度压力传感器

## Oil Temperature & Pressure Sensor



### 产品介绍 Product Description

机油温度压力传感器是对车辆发动机的机油压力和温度进行检测的重要零部件，确保发动机润滑油系统处于正常状态。

The oil temperature and pressure sensor (OTPS) is an important component for detecting the oil pressure and temperature of the vehicle engine, ensuring that the engine lubricating system is in a normal status.

### 产品特征及优势 Feature and Benefits

- 陶瓷电容传感技术  
Ceramic capacitance technology
- 高精度, 优异的长期稳定性  
High accuracy, excellent long-term stability
- 优良的EMC/ESD性能  
Excellent EMC/ESD performance
- 过压和反向极性保护以及短路保护  
Overvoltage, reverse polarity and short circuit protection
- 压力范围、输出曲线以及外形尺寸定制化设计  
Customized pressure range, output curve, and housing
- 卓越的耐振性设计  
Excellent vibration resistance design
- 高度模块化产品配置  
Modular product configuration
- 出色的密封设计和防护设计  
Excellent sealing and protective design

### 产品应用 Product Application

机油温度压力传感器采用陶瓷电容元件和NTC元件，检测发动机机油主油道的压力和温度，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 temperature and pressure sensor uses ceramic capacitance element and NTC to detect the pressure and temperature of the engine main oil passage and send the signal to the ECU. The ECU will 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，通过调理电路处理，成比例的输出电信号。温度传感器采用负温度系数的热敏电阻。

OTS sensor uses a ceramic strain film to detect the change of the medium pressure in the main oil 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. Temperature sensor is a NTC thermistor.

连接选项 Connection Options

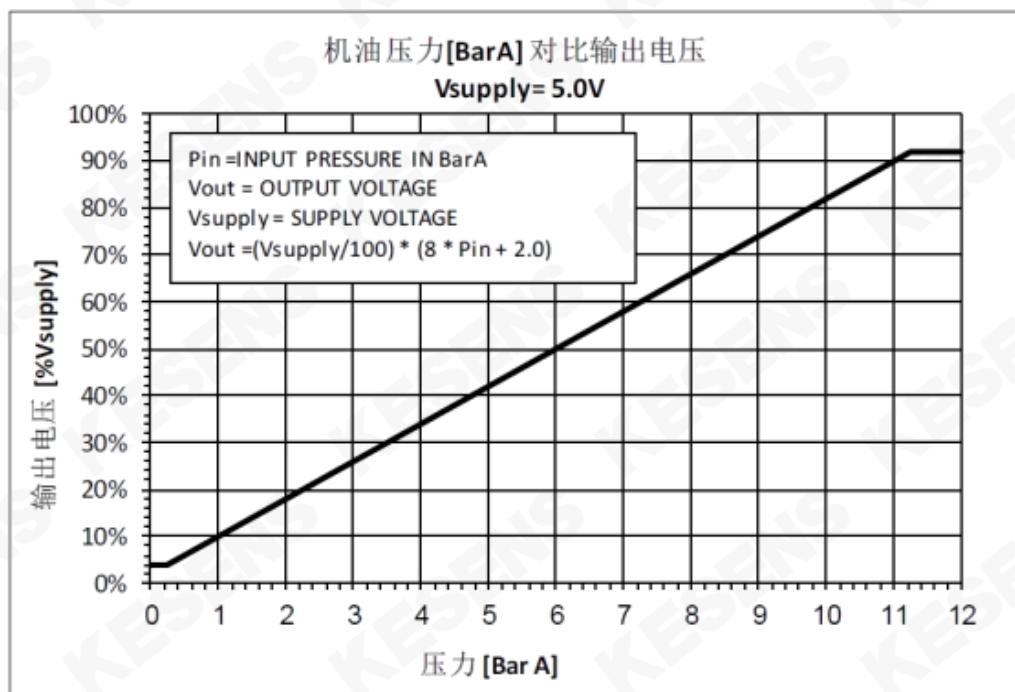
根据客户选择定制连接系统。  
Customized to customer choice of connection system.

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 Technical Characteristics

参数PARAMETER	符号SYMBOL	最小值MIN.	额定值NOM.	最大值MAX.	单位UNITS
工作温度 TEMPERATURE RANGE	T	-40		150	℃
压力测量范围 (可定制) PRESSURE RANGE (Customizable)	P	0.5		11	Bar
电源电压 SUPPLY VOLTAGE	Vcc	4.75	5	5.25	V
供电电流 SUPPLY CURRENT	Icc			15	mA
额定输出电压 NOMINAL OUTPUT	Vout	6		90	%Vcc
过压压力 PROOF PRESSURE				1.5*P	Bar
爆破压力 BURST PRESSURE				2*P	Bar
过电压 OVER VOLTAGE				20	V
整体精度误差 OVERALL ACCURACY ERROR	Err		±2		%Fs
温度传感器电阻值 (25℃) TEMPERATURE SENSOR RESISTANCE@25℃	R	11000	12550	13500	Ω



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