KESENS

汽车氧传感器（开关型）
Automotive Oxygen Sensor (Switch Type)

产品介绍 Product Description

汽车氧传感器是一种检测发动机排放废气中氧的含量的传感器，它将自身产生的电压信号反馈给汽车发动机电子控制单元（ECU）用于空燃比闭环控制。氧传感器是现代电喷发动机的一个关键零部件。

Automotive Oxygen sensor is a part that detects the amount of oxygen in the exhaust gas of vehicle engine. It feeds back its own voltage signal to the engine electronic control unit (ECU) for air-fuel ratio closed-loop control. Oxygen sensor is an essential component of modern engine management system (EMS).

产品特征及优势 Feature and Benefits

- 可靠性好
  Strong reliability.
- 起燃时间短
  Short light-off time.
- 抗中毒能力强
  Strong anti-poisoning ability.
- 响应速度快
  Quick response.
- 外观和客户接口可以与主流OEM产品兼容
  Performance and customer interface compatible with OEM products.
- 信号稳定
  Stable signal.
- 密封性能好
  Good sealing performance.

产品应用 Product Application

- 降低汽车综合油耗
  Reduce car fuel consumption.
- 满足汽车排放要求
  Meet automotive emission requirements.
- 提高催化器效率
  Improve the efficiency of the catalytic converter.
- 参与闭环控制
  Participate in closed-loop control.

操作 Operation

基本原理 Basic Principle

氧传感器采用平板结构多层陶瓷元件作为基础元件，工作原理相当于一个简单的固体原电池。氧传感器敏感元件两侧电极间将由于氧离子浓度的差异而存在电势差。外侧电极由于暴露于废气中，氧离子浓度将根据实际工况的不同而变化，而内侧电极为参考空气，氧离子浓度是不变的。当发动机空燃比为稀时，废气中氧离子浓度相对较高，内外电极间氧离子浓度差就小，氧传感器的输出电压信号较低，接近 0V；反之，当空燃比为浓时，废气中氧离子浓度也相对较低，内外电极间氧离子浓度差就大，传感器的输出电压较高，接近 1V。

The oxygen sensor uses a flat structure multilayer ceramic chip as the basic sensing element, and its working principle is equivalent to a simple solid galvanic cell. There will be an electrical voltage difference between the electrodes on two sides of the element due to the difference of oxygen ion concentration. As the outer electrode is exposed to the exhaust gas, the oxygen ion concentration will change according to the actual working conditions, while the inner electrode is the reference air, and the oxygen ion concentration is unchanged. When the air fuel ratio of the engine is lean, the oxygen ion concentration in the exhaust gas is relatively high, and the oxygen ion concentration difference between the inner and outer electrodes is small, and the sensor output voltage is low close to 0V; On the contrary, when the air-fuel ratio is rich, the oxygen ion concentration in the exhaust gas is relatively low, and the oxygen ion concentration difference between the inner and outer electrodes is large, and the sensor output voltage is high, close to 1V.

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

项目Item	条件Condition		标准Standard
输出电压 Output voltage	排气温度≥350℃ 加热器工作电压13V±0.5V Exhaust gas temperature ≥350 °C Heater operating voltage 13V ± 0.5V	Lambda=0.97	≥750mv
		Lambda =1.03	≤120mv
响应性能 Response performance	排气温度≥350℃ 加热器工作电压13V±0.5V Exhaust gas temperature ≥350 °C Heater operating voltage 13V ± 0.5V	600mv—300mv	≤200ms
		300mv—600mv	≤100ms
加热电阻 Heater resistance	20℃±1℃		8.5Ω±1.5Ω
起燃时间 Light-off time	≤12s		
静态λ值 Static lambda	新鲜氧传感器 New oxygen sensor		1.004±0.005
加热功率 Heating power	≤7W		

可根据客户需求定制产品，如有需求请联系我们。
Customized products available upon request. Contact us for details.

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