KESENS

曲轴位置传感器（可变磁阻型）
Crankshaft Position Sensor （VR Type）



产品介绍 Product Description

该产品是基于可变磁阻的电磁感应原理而设计的，安装于发动机上用于判定曲轴在齿轮旋转时发动机的转速和活塞的相对位置，确定发动机的点火时刻的曲轴位置传感器。

This product is designed based on the principle of variable reluctance electromagnetic induction. It is installed in the engine to sense and determine the engine speed and relative position of the piston during gear rotation so that the ECU can determine the engine ignition timing.

产品特征及优势 Feature and Benefits

- 工作温度范围广，为-40-125℃。
  The working temperature range is - 40-150 ℃.
- 电磁感应式的非接触式传感，使用寿命长，可靠性高。
  Electromagnetic type non-contact sensing gives excellent life and reliability.
- 坚固的结构使该传感器非常适合恶劣环境。
  Robust construction makes this sensor well suited to harsh environments.
- 安装灵活，无严格方向性要求，气隙范围宽。
  Flexible High Accuracy.

产品应用 Application

检测曲轴在齿旋转时发动机的转速和活塞的相对位置；确定发动机的点火时刻。
Detect the rotation speed of the engine and the relative position of the piston when the crankshaft rotates; Determine the ignition time of the engine.

操作 Operation

基本原理 Basic Principle

曲轴位置传感器内部主要由永磁体，集磁体和绕线线圈组成，传感器安装在发动机外壁凸台上，感应头正对信号轮上齿和槽。信号轮旋转时传感器变化磁场中线圈内产生模拟电压信号，ECU处理后识别判定发动机曲柄的转速和活塞的相对位置；发动机控制单元使用曲轴位置传感器提供的信息生成点火信号和喷射脉冲，分别发控制点火线圈和喷油器。

The crankshaft position sensor is mainly composed of a permanent magnet, pole piece and winding coil. The sensor is installed on the convex hole on the wall of the engine, and the sensing probe is facing the teeth and slots of signal wheel. When the signal wheel rotates, the variable reluctance generates an analog voltage signal in the coil of the sensor. After processing, the ECU recognizes and determines the speed of the engine crankshaft and the relative position of the piston; The engine control unit uses the information provided by the crankshaft position sensor to generate ignition signals and injection pulses.

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	最小值MIN.	额定值NOM.	最大值MAX.	单位UNITS	备注COMMENT
工作温度 OPERATION TEMPERATURE RANGE	-40		125	℃	
工作气隙 OPERATION AIR GAP:	0.3	1.0	1.8	mm	
安装扭矩 MOUNTING TORQUE REQUIREMENS	6		19	Nm	
信号端子间电阻 RESISTANCE BETWEEN TERMINAL A & B	650		950	Ω	测试温度Test@25±5℃.
信号端子之间电感 INDUCTANCE BETWEEN TERMINAL A & B	290		520	mH	测试模式和温度条件 test at 1K Hz @ 25±5℃
最小输出电压 MINIMUM OUTPUT VOLTAGE	200			mV	测试条件：20±2 rpm, air gap = 1.5±0.05 mm
最大输出电压 MAXIMUM OUTPUT VOLTAGE			200	V	测试条件：7000±30 rpm, air gap = 0.3±0.03 mm

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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