KESENS

空挡位置传感器
Neutral Position Sensor

产品介绍 Product Description

变速箱空挡位置传感器检测变速箱换挡器是否处于空挡位置，便于发动机机熄火和起动机控制。

The transmission neutral position sensor detects if the shifter is in neutral position or not and send signal to controller, which facilitates engine shutdown and starter control.

产品特征及优势 Feature and Benefits

- 非接触式霍尔感应，无磨损精确的角度和位置精度
  Noncontact Hall sensing technology, high angular and position accuracy without wearing
- 磁铁内含式，简易安装
  Magnet embedded design, easy to install
- 密封设计，防水等级高
  Sealed design, high grade IP protection
- 可靠性高，使用寿命长
  High reliability and long service life
- 坚固的结构设计适合严苛恶劣的应用环境
  Robust structural design suitable for harsh application environments
- 根据应用要求，输出特性检测量程可定制
  The output characteristic and travel range can be customized
- 体积小，结构紧凑，安装简易
  Small size, compact structure, easy installation

产品应用 Product Application

空挡位置传感器适用于手动变速箱系统或具有起停系统的车辆。传感器检测变速箱换挡器是否处于空挡位置，便于发动机机熄火和起动机控制。

The neutral position sensor is suitable for manual transmission systems or vehicles with start stop systems. The sensor detects whether the gearbox shifter is in neutral position, which facilitates engine shutdown and starter control.

操作 Operation

基本原理 Basic Principle

空挡位置传感器是基于霍尔效应原理的磁敏传感器，传感器内部具有霍尔芯片和磁铁，在外部的目标齿转动或移动时，芯片周围的磁场强度相应变化，芯片输出不同的电压对应目标齿的角度和移动位置。传感器信号输出的电压信号输送给控制器进行逻辑判断和控制。

The Neutral Position Sensor is a magnetic sensor based on the Hall effect principle. Inside the sensor there is a Hall chip and a magnet. As the external target gear tooth rotates or moves, the magnetic field strength around the chip changes accordingly. The chip outputs different voltage levels corresponding to the angle and movement position of the target gear tooth. The sensor output voltage is sent to the controller for processing and control operations.

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NOTE	最小值MIN.	额定值NOM.	最大值MAX.	单位UNITS
工作温度 TEMPERATURE RANGE	T	-40		125	℃
电源电压 SUPPLY VOLTAGE	Vcc	2.2	12	22	V
输出高电平 High output voltage	Vout-ON	60%* Vdd		80%*Vdd	V
输出低电平 Low output voltage	Vout-OFF	22%*Vdd		50%*Vdd	V
供电电流 Supply current	I-supply			33	mA
上升时间 (低-高） Response time （OFF-ON）	Trise	5		30	uS
下降时间 (高-低） Response time（ON-OFF）	Tfall	10		25	uS
空气间隙 Airgap	A.G	0.85	1.25	1.65	mm
安装扭矩 Mounting torque	T			6	Nm

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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