KESENS

高温进气温度压力传感器
Hight Temperature TMAP

产品介绍 Product Description

高温进气歧管压力温度传感器安装在发动机中间冷却器之前的进气歧管上，检测气体温度和压力。ECU利用传感器信息来优化发动机运行。传感器通常安装在EGR系统废气流中，凯晟开发了多种解决方案，以适应严苛复杂气体成分和耐腐蚀的应用要求。

The H-TMAP sensor is installed on the intake manifold before inter cooler to detect gas temperature and pressure. ECU utilizes sensor information to optimize engine operation performance. H-TMAP sensors are used in the exhaust flow of EGR systems, and KESENS provides solutions to meet the requirements of complex gas composition and anti-corrosion.

产品特征及优势 Feature and Benefits

- MEMS传感技术
  MEMS sensing technology
- 高精度, 优异的长期稳定性
  High accuracy, excellent long-term stability
- 智能化零位补偿和温度补偿
  Intelligent zero compensation and temperature compensation
- 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 design of pressure range, output curve, and external dimensions
- 单芯片解决方案，电路单元利用SMT 技术贴装
  Single chip solution，SMT for EMA fabrication process.
- 产品适合发动机废气再循环系统的严苛工作环境，具有长期耐久
  Design for EGR system harsh operation environment.
- 根据客户要求，多种量程可选（10-115,10-250,10-300,15-300,20-300,50-400kpa abs）
  Different pressure ranges are available on customer request.

产品应用 Product Application

根据TMAP输出信号和气缸/歧管容积，ECU可以得到进气质量，与燃油压力信号配合，ECU可以得到空气燃油比，从而通过调节喷油时间来获得最佳空气燃油比。

With information of TMAP sensor and the manifold and cylinder volume, ECU can calculate the intake air mass flow and ratio of air & fuel, increase or reduce fuel injecting time to get the optimal ratio of air & fuel.

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操作 Operation

基本原理 Basic Principle

进气温度压力传感器压力部分根据感应进气歧管内的真空变化，再从感知器内部电阻的改变，转换成电压信号，供ECU电脑修正喷油量和点火正时角度。温度部分由一个负温度系数热敏电阻，当温度高，电阻减小当温度低，电阻增大，随着温度电阻的变化，电压变化，0V到5V信号变化。

According to the change of vacuum in intake manifold, the pressure part of intake temperature and pressure sensor converts into voltage signal from the change of internal resistance of sensor, which is used for ECU computer to correct fuel injection quantity and ignition timing angle. The temperature part consists of a negative temperature coefficient thermistor. When the temperature is high, the resistance decreases; when the temperature is low, the resistance increases. With the change of temperature resistance, the voltage changes, and the signal changes from 0V to 5V.

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.

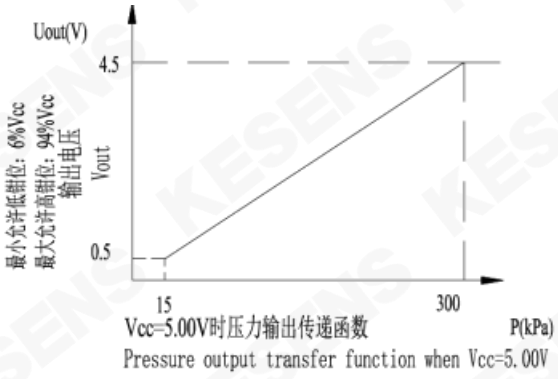
包装选项 Packaging Options

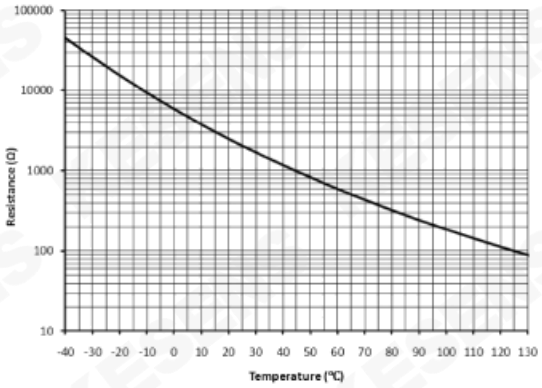
可提供定制包装以满足任何需要，请联系KESENS技术部了解详情。

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	15		300	kPa
电源电压 SUPPLY VOLTAGE	Vcc	4.50	5	5.50	V
电源电流 SUPPLY CURRENT	Icc		8	10	mA
输出负载电流 OUTPUT LOAD CURRENT	IL	-1		1	mA
负载电阻 LOAD RESISTANCE	Rpull-up	5	59	100	kΩ
	Rpull-down	5	59	100	kΩ
额定输出电压 (可定制) NOMINAL OUTPUT (Customizable)	Vout	8		93	%Vcc
输出电压上限值 UPPER CLAMPING LEVEL	VCL-HI	4.45	4.5	4.55	V
输出电压下限值 LOWER CLAMPING LEVEL	VCL-LO	0.45	0.50	0.55	V
整体精度误差 (0-85 ℃) OVERALL ACCURACY ERROR	Err	-1.0%		+1.0%	%
过电压 OVERVOLTAGE	Vover			16.5	VDC
反向电压 REVERSE VOLTAGE	Vrev	-14			VDC
过压压力 OVER PRESSURE	Pmax			2*P	KPa
爆破压力 BURST PRESSURE	Pb			3*P	KPa





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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