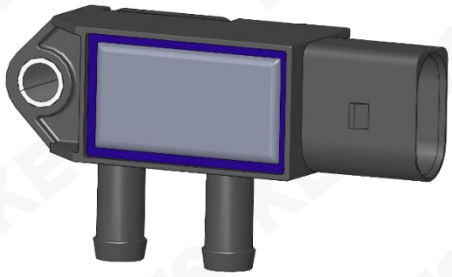
KESENS

压差传感器
GPF/DPF Differential Pressure Sensor



产品介绍 Product Description

DPF/GPF压差传感器是基于MEMS技术而设计的一种测量两端口压力差的传感器。

DPF/GPF differential pressure sensor is a kind of sensor designed based on MEMS technology to measure the pressure difference between two ports.

产品特征及优势 Feature and Benefits

- 工作温度范围广，为-40-140℃，并具有全温区补偿
  The working temperature range is wide, from - 40 ℃ to 140 ℃, with full temperature compensation。
- 含氟凝胶灌封保护，适应尾气恶劣的工作环境
  Fluorinated gel encapsulation protection to adapt to poor exhaust environment.
- 优异的过反压保护能力，反压-24V，过压28V
  Excellent over and back pressure protection, back pressure - 24 V, over voltage 28 v.
- 外观和客户接口可以与主流一级供应商产品兼容
  Appearance and customer interface can be compatible with major tier 1 suppliers' products.
- 电路单元利用SMT 技术贴装
  SMT for EMA fabrication process.
- 根据客户要求，多种量程可定制
  According to customer requirements, a variety of ranges can be customized.

产品应用 Product Application

压差传感器检测尾气系统中颗粒捕集器两端的压力差信号，将压差信号发给ECU，ECU进行处理分析后选择合适的颗粒捕集器重生时刻，进行尾气排放管理，最多能减少90%的废气颗粒物。

The differential pressure sensor detects the differential pressure between two ports of the particulate filter in the exhaust system and sends signal to ECU so that ECU control the appropriate regeneration time of the particulate filter for exhaust emission management, which can reduce the particulate matter by up to 90%.

操作 Operation

基本原理 Basic Principle

压差传感器压力敏感单元受到颗粒捕集器两端压力的变化，导致惠斯通电桥的压电电阻阻值变化，转换成电压信号，并由信号调理电路进行信号放大，补偿，将压力差信号送至ECU， ECU根据压力差判断捕集器中颗粒的积聚程度，决定再生触发时刻。

The pressure sensitive unit of the DPF sensor is affected by the pressure change at both ends of the particulate trap, resulting in the change of the resistance value of the Wheatstone bridge, which is converted into a voltage signal. The signal is amplified and compensated by the signal conditioning circuit, and the pressure difference signal is sent to the ECU. The ECU judges the accumulation degree of particles in the trap according to the pressure difference, and determines the regeneration trigger time.

连接选项 Connection Options

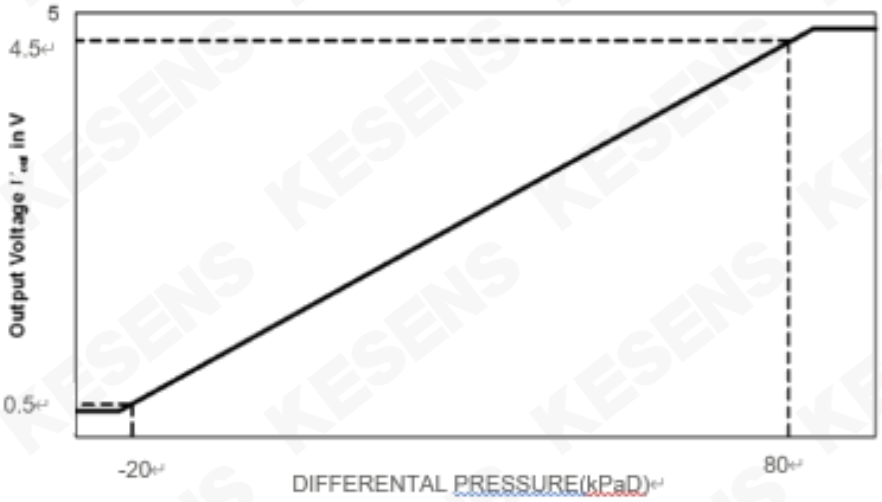
根据客户选择定制连接系统。
Customized to customer choice of connection system.

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	备注COMMENT
工作温度 TEMPERATURE RANGE	T	-40		140	℃	
压力测量范围 PRESSURE RANGE	P	-20		80	kPa	可定制 Customizable
电源电压 SUPPLY VOLTAGE	Vcc	4.5	5	5.5	V	
电源电流 SUPPLY CURRENT	Icc		2.4	10	Ma	
负载电阻 LOAD RESISTANCE	RL	1			kΩ	
额定输出电压 NOMINAL OUTPUT	Vout	0.5		4.5	V	可定制 Customizable
上限钳位电压 UPPER CLAMPING LEVEL	VCL-HI		4.7		V	可定制 Customizable
下限钳位电压 LOWER CLAMPING LEVEL	VCL-LO		0.3		V	可定制 Customizable
输出压力精度 OUTOUT PRESSURE ACCURACY	Err	-1.5		1.5	kPa	@0℃~80℃
		-2.5		2.5	kPa	@-40~140℃
压力响应时间 PRESSURE RESPONSE TIME	T		2		ms	



PRESSURE OUTPUT TRANSFER FUNCTION AT *Vcc* =5.00V
Vcc = 5.00V时压力输出传递函数

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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