

# 真空度压力传感器

## Vacuum Pressure Sensor



### 产品介绍 Product Description

真空度压力传感器是用于监测真空助力器内的相对压力的传感器。

The vacuum pressure sensor is used to monitor the relative pressure in the vacuum booster.

### 产品特征及优势 Feature and Benefits

- 压力感应元件并经芯片处理后的真空制动助力器内部相对压力信号。  
Internal relative pressure signal of vacuum brake booster after pressure sensing element and chip processing.
- 外观和客户接口可以与主流供应商产品兼容。  
Performance and customer interface compatible with major tier suppliers' products.
- 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.
- 利用防水透气膜防止粉尘与水汽进入。  
Use waterproof and breathable membrane to prevent dust and moisture from entering.
- 根据客户要求，多种量程可选（-100-10 kpa，-105-10 relative）。  
Different pressure ranges are available on customer request.
- 压力范围、输出曲线特性以及外形尺寸定制化设计。  
Customized pressure range, output curve, and housing design.

### 产品应用 Product Application

真空度压力传感器通过检测汽车真空助力器内压力值，并输出给车辆控制系统。

The vacuum pressure sensor detects the pressure value of the vehicle vacuum booster and send the output signal to the vehicle system controller.

### 操作 Operation

#### 基本原理 Basic Principle

真空度压力传感器通过内部的微机电系统元件（MEMS）检测真空助力器内压力值，即大气压与真空助力器压强差，将压力大小转化为电信号，并输出给车辆控制系统，进而确保真空助力制动系统正常并节约能耗。

The vacuum pressure sensor detects the pressure value of the vehicle vacuum booster through the MEMS element inside the sensor, that is the pressure difference between atmospheric pressure and vacuum booster. It converts the pressure into an electrical signal and send it to the vehicle control system to assure vacuum booster braking normal operation as well as to achieve energy saving.

## 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.

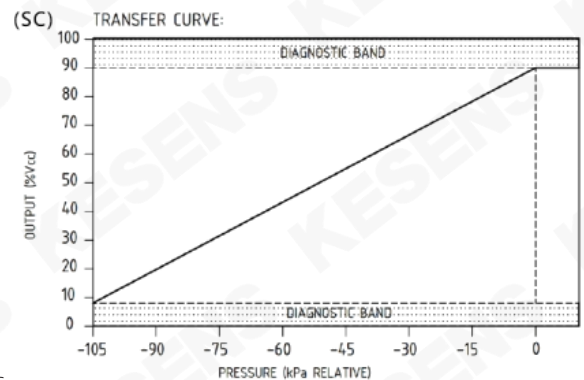
## 包装选项 Packaging Options

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 KESSENS Engineering for details.

## 技术参数 Technical Characteristics

| 参数PARAMETER                                            | 符号STMBOL | 最小值MIN. | 额定值NOM. | 最大值MAX. | 单位UNITS |
|--------------------------------------------------------|----------|---------|---------|---------|---------|
| 工作温度<br>TEMPERATURE RANGE                              | T        | -30     |         | 130     | °C      |
| 压力测量范围 (可定制)<br>RELATIVE PRESSURE RANGE (Customizable) | P        | -105    |         | 10      | kPa     |
| 电源电压<br>SUPPLY VOLTAGE                                 | Vcc      | 4.75    | 5       | 5.25    | V       |
| 电源电流<br>SUPPLY CURRENT                                 | Icc      |         | 8       | 10      | mA      |
| 输出负载电流<br>OUTPUT LOAD CURRENT                          | IL       | -1      |         | 1       | mA      |
| 额定输出电压<br>NOMINAL OUTPUT                               | Vout     | 10      |         | 90      | %Vcc    |
| 输出电压上限值<br>UPPER CLAMPING LEVEL                        | VCL-HI   | 4.45    | 4.5     | 4.55    | V       |
| 输出电压下限值<br>LOWER CLAMPING LEVEL                        | VCL-LO   | 0.25    | 0.3     | 0.35    | V       |
| 整体精度误差<br>OVERALL ACCURACY ERROR                       | Err      |         |         | 2.2     | kPa     |
| 过压压力<br>OVER PRESSURE                                  | Pmax     |         |         | 2*P     | KPa     |
| 爆破压力<br>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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