



汽车传感器

AUTOMOTIVE SENSOR

压力传感器
Pressure Sensor

加速度传感器
Acceleration Sensor

速度传感器
Speed Sensor

转角传感器
Angular Sensor

光学传感器
Optical Sensor

电流传感器
Current Sensor

位置传感器
Position Sensor

刹车磨损传感器
Brake Wear Indicator



让更多人受益于汽车科技的发展

LET MORE PEOPLE BENEFIT FROM THE DEVELOPMENT OF AUTOMOTIVE TECHNOLOGY

CNEN22072208

关于保隆科技 / About Baolong Automotive

保隆科技于1997年5月在松江创立，于2017年成功登陆上证主板（股票代码：603197）。公司总部位于上海市松江区，在上海松江、浦东、安徽宁国、安徽合肥、湖北武汉和美国、德国、波兰、匈牙利、奥地利等地有生产基地以及研发和销售分支机构，全球员工超过4700人。

保隆科技立足汽车制造业，向汽车智能化与轻量化方向发展。公司产品包括气门嘴、平衡块、智能空气悬架等橡胶金属部件；排气系统管件、汽车结构件和EGR管件等汽车金属管件；汽车胎压监测系统、汽车传感器、基于摄像头和毫米波雷达等技术的汽车驾驶辅助系统等汽车电子产品。

保隆科技是大众、丰田、通用、现代起亚、福特、斯特兰蒂斯、捷豹路虎、上汽、东风、一汽、长安、北汽、广汽、长城、吉利等国内外知名汽车厂的合格供应商。公司秉承“以人为本，依法管理，互予机会，共同发展”的管理理念，以“掌握领先技术，提升汽车部件”为己任，在汽车零部件领域作纵深发展。

Shanghai Baolong Automotive Corporation (hereinafter referred to as "Baolong") was founded in 1997, and is listed on Shanghai Stock Exchange (603197.SH). Headquartered in Songjiang District, Shanghai, Baolong has manufacturing sites, R&D and sales centers in China (Songjiang District, Shanghai; Ningguo and Hefei, Anhui Province; Wuhan, Hubei Province), the United States (North Carolina), Germany (Baden-Württemberg), Hungary (Érd) and Austria (Berndorf).

With the vision of "let more people benefit from the development of automotive technology", Baolong has implemented the Intelligent & Lightweight strategy to illustrate its passion for continuous innovation in automotive products and solutions. Its products include rubber & metal parts such as tire valves, wheel weights, air springs, air suspensions and air dampers; metal tubing such as exhaust pipes, EGR pipes, and body & chassis structural parts; and automotive electronics featured by TPMS, pressure sensors, rain & light sensors, speed & position sensors, current sensors, cameras, and millimeter-wave radars.

With these competitive products and more than 4700 employees globally, Baolong is an automotive supplier of choice for world-known OEMs and Tier 1 enterprises, including Volkswagen, GM, Ford, FCA, Toyota, Hyundai, Kia, JLR, SAIC, Dongfeng, FAW, Faurecia, Continental, etc., and has won wide recognition from clients, such as "Ford Q1 certificate", "GM -Supplier Quality Excellence" and "Volkswagen- Grade A Supplier".



主要客户 / Customer Base

保隆科技与许多世界知名的整车厂和一级供应商合作，他们相信保隆科技致力于汽车产品和解决方案的创新和改变，使得驾乘人员能够获得更安全、更有效率和更舒适的体验。

Baolong cooperates with many world-renowned OEMs and Tier 1 suppliers that trust us to implement the most innovative and game-changing products and solutions to improve safety, efficiency and comfort.

自主品牌 (Chinese Brands)	造车新势力 (NEV Start-ups)	外资品牌 (Foreign Brands)

一级供应商 (Tier 1 Suppliers)	售后客户 (Aftermarket)

注：以客户英文名称首字母的先后顺序排列 (In alphabetical order of English name)

全球布局 / Global Footprint

当客户选择保隆科技作为汽车产品和解决方案的供应商时，他们能够从保隆科技遍布全球的网点中获得广泛的服务。

在全球范围内，我们保隆科技敬业的员工始终在客户的身边。保隆科技的这些人才，通晓汽车行业，并了解客户的具体需求，能够随时为客户提供各种支持。

When customers choose Baolong as a supplier of automotive products and solutions, they can be assured of abroad spectrum of services from Baolong's global network.

Globally present, the access to Baolong's dedicated employees is never far away. Baolong's talents who all know the automotive industry and understand customers' specific demands and needs are always ready to support customers.



- 公司总部
Headquarter
- 研发中心
R&D Centers
- 生产园区
Production Bases
- 销售分支机构
Sales Branches

发展历程 / Milestones

1995



1997
公司成立
Baolong founded



1998
研制轮胎气门嘴
Developed tire valves



1999
总部园区成立
Songjiang (China) factory opened

2000



2000
研制车轮平衡块
Developed wheel weights



2001
研制排气系统管件
Developed exhaust pipes



2002
研制TPMS
Developed TPMS

2005



2005
收购美国DILL公司
Acquired Dill Air Controls Products, LLC



2006
宁国园区成立
Ningguo (China) factory opened



2009
研制汽车压力传感器
Developed pressure sensors

2010



2012
研制汽车结构件、光学传感器、空气弹簧
Developed structural parts, optical sensors, and air springs



2013
研制视觉系统、毫米波雷达
Developed cameras and millimeter-wave radars



2014
武汉园区成立
Set up R&D center in Wuhan, China

2015



2016
研制电控减振器
Developed air spring dampers



2017
上海证券交易所上市
IPO on Shanghai Stock Exchange

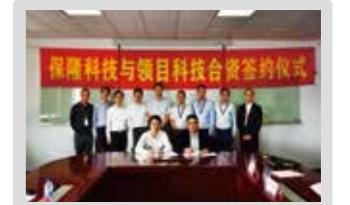


2018
合肥园区成立，收购德国PEX和TESONA、研制ECAS
Hefei (China) factory founded; Acquired PEX, TESONA; Developed ECAS



2019
保富电子正式运营、保隆沙士基达成立、收购奥地利MMS
BH SENS established; BSHF founded; Acquired MMS, Austria

2020



2020
与领目科技合资，武汉园区新办公楼启用，量产双目视觉系统
JV with Leadmove; Wuhan R&D building opened; Batch production of stereo cameras



2021
SAP上线、空气悬架新品量产、合肥园区启用
Introduced ERP system from SAP; Batch production of air suspension; Hefei (China) factory opened

让更多人受益于汽车科技的发展。
Let more people benefit from the development of automotive technology.

资质证书/Certifications

保隆科技为取得的众多认可我们的天赋，技术和辛勤工作的认证和荣誉深感自豪。
Baolong takes pride in the many certifications and honors that recognize our talent, technology and hard work.

企业荣誉/Enterprise Honors

客户认可
Customer Awards



保隆科技
ISO 26262功能安全管理体系认证证书
ISO 26262 Baolong Automotive



保隆汽车电子实验室
CNAS认证
CNAS L12065 Baolong Automotive



保隆科技宁国分公司
IATF 16949 质量体系认证
IATF 16949 Ningguo Branch



福特Q1质量体系认证证书
Ford Q1 Preferred Quality Status



伍尔特A级供应商
Wurth Grade "A" Supplier



理想精神奖
Li Auto Spirit Award



保隆安徽汽车配件有限公司
ISO 14001环境管理体系认证
ISO 14001 Ningguo Branch



保隆科技
ISO 14001环境管理体系认证
ISO 14001 Baolong Automotive



保隆安徽拓扑思汽车零部件有限公司
ISO 14001环境管理体系认证
ISO 14001 Anhui Plant



通用汽车供应商质量卓越奖
GM Supplier Quality Excellence Award



大众A级供应商
Volkswagen Grade "A" Supplier



佛吉亚全球供应商
Faurecia Global Supplier

政府荣誉/Government Awards



保隆科技
IATF 16949质量体系认证
IATF 16949 Baolong Automotive



保隆科技安徽宁国分公司
OHSAS 职业健康安全管理体系认证证书
OHSAS Anhui Plant



保隆科技
汽车能源管理证书
Energy Management System Certificate



国家认定企业技术中心
National-recognized Enterprise
Technology Center



院士专家工作站
Academician Expert Workstation



国家级知识产权优势企业
National Intellectual Property
Advantage Enterprise

实验能力 / Test Capability

电气类试验主要能力 Electrical Test Capability

电压复位试验	Voltage Reset Test
瞬时过电压试验	Transient Overpressure Test
电压瞬断实验	Voltage Dips and Interruptions
电压下降与上升	Voltage Drop and Increase Test
负载跌落	Load Drop Test
脉冲电压测试	Impulse Voltage Test
反向电压试验	Reversed Voltage Test
叠加交流电试验	AC Superimposed Test
绝缘电阻试验	Insulation Resistance Test
短路测试	Short Circuit Test
开路测试	Open Circuit Test

光雨量测试主要能力 RLS Special Test Capability

光谱范围为730-1100nm, 430-610nm	Spectrum: 730-1100nm, 430-610nm
雨量：可模拟小雨、中雨、大雨	Rain Simulation: Thin Rain, Moderate Rain, Heavy Rain.

环境性能试验主要能力 Environment Test Capability

高温耐久性试验	High Temperature Durability Test
高低温湿热试验	Climate and Humidity Test
温度冲击试验	Thermal Shock
高低温湿复合旋转装置试验台	Climate, Humidity and Rotation Combined Test
低温存储试验	Low Temperature Storage Test
温度循环试验	Temperature Cycle
阶梯温度试验	Stepped Temperature Test
稳态湿热试验	Constant Climate and Humidity Test

防护及腐蚀性能试验主要能力 Chemical and Corrosion Test Capability

防水试验	Water Proof Test
外壳尘防护试验	Dust Proof Test
循环盐雾试验	Salt Fog Cycle
介质兼容试验	Medium Compatibility Test
化学腐蚀试验	Chemical Corrosion Resistance
冰水冲击试验	Ice Water Shock Test
碎石冲击试验	Stone Chip

压力传感器专项测试能力 Pressure Sensor Special Test Capability

气压（加高低温） 脉冲试验	Pulse Pressure Test (combined with climate change)
液压（加高低温） 脉冲试验	Hydraulic Impulse Test (combined with climate change)
压力循环测试	Press Cycle Endurance
爆压测试	Burst Pressure

机械环境性能试验主要能力 Mechanical Test Capability

高低温-湿度-振动综合 试验	Climate, Humidity and Vibration Combined Test
机械冲击试验	Mechanical Shock
拉压力机械破坏性试验	Tensile Destructive Test
共振扫频试验	Resonant Sweep Test
自由跌落试验	Free Drop Test
线束耐久试验	Wire Harness Durability Test

EMC类试验主要能力 EMC Capability

BCI
RE
CE
ESD



光雨量测试台架
RLS Test Bench



高低温复合旋转台
Climate Combined Rotation Test Bench



传感器液压疲劳测控系统
Sensor Liquid Pressure Fatigue Test System



旋转式高低温湿箱
Rotatory Climate and Humidity Chamber



高低温湿箱
Climate and Humidity Chamber



干燥箱
Drying Oven



EMS 测试室
EMS Lab



BCI测试系统
BCI Test System



拉压力计
Tension Pressure Gauge



防水试验台
Water Proof Test Rig



灰尘试验箱
Dust Chamber



高低温复合振动台
Climate Combined Vibration Test Bench

传感器生产工厂 / Automotive Sensor Factories



上海松江 Songjiang, Shanghai, China

- > 压力温度传感器 / Pressure and Temperature Sensor
- > 光学传感器 / Optical Sensor
- > 电流传感器 / Current Sensor
- > 加速度传感器 / Acceleration Sensor



上海浦东 Pudong, Shanghai, China

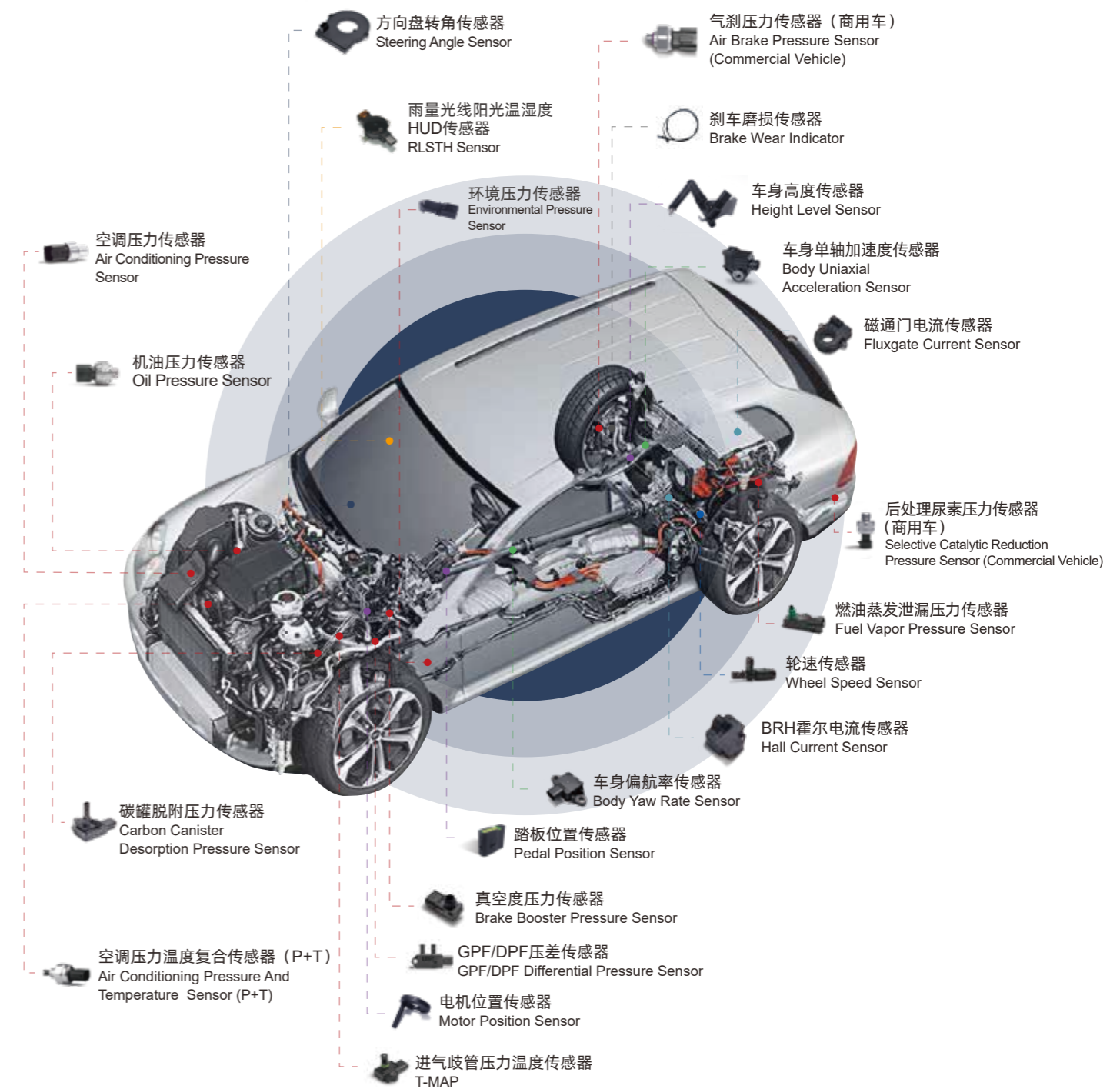
- > 位置传感器 / Position Sensor
- > 速度传感器 / Speed Sensor
- > 角度传感器 / Angular Sensor



匈牙利埃尔德 Erd, Hungary

- > 刹车磨损传感器 / Brake Wear Indicator

我们的产品 / Our Products



AUTOMOTIVE SENSOR

01

压力传感器 Pressure Sensor

进气歧管压力温度传感器 T-MAP	01
机油压力传感器 Oil Pressure Sensor	03
空调压力传感器 Air Conditioning Pressure Sensor	05
碳罐脱附压力传感器 (国六排放要求) Carbon Canister Desorption Pressure Sensor (National VI Emission Requirements)	07
燃油蒸发泄漏压力传感器 (国六排放要求) Fuel Vapor Pressure Sensor (National VI Emission Requirements)	09
GPF/DPF压差传感器 (国六排放要求) GPF/DPF Differential Pressure Sensor (National VI Emission Requirements)	11
空调压力温度复合传感器 (P+T) Air Conditioning Pressure And Temperature Sensor (P+T)	13
真空度压力传感器 Brake Booster Pressure Sensor	15
气刹压力传感器 (商用车) Air Brake Pressure Sensor (Commercial Vehicle)	17
后处理尿素压力传感器 (商用车) Selective Catalytic Reduction (SCR) Pressure Sensor (Commercial Vehicle)	19
环境压力传感器 Environmental Pressure Sensor	21

02

光学传感器 Optical Sensor

雨量光线阳光温湿度HUD传感器 RLSTH Sensor	23
---------------------------------	----

03

加速度传感器 Acceleration Sensor

车身单轴加速度传感器 Body Uniaxial Acceleration Sensor	25
车身偏航率传感器 Body Yaw Rate Sensor	27

04

电流传感器 Current Sensor

BRH霍尔电流传感器 Hall Current Sensor	29
磁通门电流传感器 Fluxgate Current Sensor	31

05

速度传感器 Speed Sensor

轮速传感器 Wheel Speed Sensor	33
-----------------------------	----

06

位置传感器 Position Sensor

车身高度传感器 Height Level Sensor	35
电机位置传感器 Motor Position Sensor	37
踏板位置传感器 Pedal Position Sensor	39

07

转角传感器 Angular Sensor

方向盘转角传感器 Steering Angle Sensor	41
-----------------------------------	----

08

刹车磨损传感器 Brake Wear Indicator

刹车磨损传感器 Brake Wear Indicator	43
---------------------------------	----

► 进气歧管压力温度传感器

| 应用

进气歧管压力温度传感器用于发动机电控系统。此传感器根据发动机的负荷状态时时测量进气歧管内的绝对压力和温度，并转换成电信号输送到电控单元（ECU），作为确定喷油器喷油量的依据。



特性

- MEMS传感技术
- 高性能，优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度，行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围，输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小，安装简单，小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围（可定制）	10~115kPaA/20~300kPaA/50~400kPaA等		
输出电压（可定制）	0.4~4.65V 0.5~4.5V等		
精度（可调整）	±1.0%FS: 10°C~85°C ±1.5%FS: -40°C~130°C		
工作温度	-40°C~130°C		
存储温度	-40°C~150°C		
供电电压	4.75~5.25VDC	爆压（压力）	3*P max
输出负载（容性）	100nF ~ 470nF	过电压	18VDC
输出负载（阻性）	Min 4.7KΩ	反向电压	-14VDC
短路保护	有	循环实验	200万次
供电电流	≤10mA	外壳材料	PBT+30%GF
过压（压力）	2*P max	防护等级	IP69

▶ T-MAP

| APPLICATION

The intake manifold Pressure Sensor is used in the engine electronic control system. It measures the change of the absolute pressure (vacuum degree) in the intake manifold and the temperature change according to the load state of the engine, and converts it into a voltage signal and a resistance signal, and transmit it to the electronic control unit together with the speed signal (ECU), as the basis for determining the basic fuel injection amount of the injector.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-Cost OEM application design

| PARAMETER

Pressure Range (Customizable)	10~115kPaA/20~300kPaA/50~400kPaA	
Output Voltage (Customizable)	0.4~4.65V 0.5~4.5V	
Accuracy (Adjustable)	±1.0%FS: 10°C~85°C	±1.5%FS: -40°C~130°C
Operating Temperature	-40°C~130°C	
Storage Temperature	-40°C~150°C	
Supply Voltage	4.75~5.25VDC	Burst Pressure 3*P max
Output Load (Capacitive)	100nF~470nF	Overvoltage 18VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage -14VDC
Short-circuit Protection	Yes	Cyclic Test 2,000,000 times
Supply Current	≤10mA	Housing Material PBT+30%GF
Proof (Pressure)	2*P max	Protection Level IP69

► 机油压力传感器

| 应用

产品安装在发动机上，检测发动机机油的压力，压力传感器把检测到的压力转化为电信号输入到车辆的控制系统。



特性

- MEMS传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围 (可定制)	0~1000kPaA等		
输出电压 (可定制)	0.4~4.65V or 0.5~4.5V等		
精度 (可调整)	±2.0%FS: 10°C~100°C	±3%FS: -40°C~150°C	
工作温度	-40°C~150°C		
存储温度	-40°C~150°C		
供电电压	4.75~5.25VDC	爆压 (压力)	3*P max
输出负载 (容性)	100nF ~ 470nF	过电压	18VDC
输出负载 (阻性)	Min 4.7KΩ	反向电压	-14VDC
短路保护	有	循环实验	200万次
供电电流	≤10mA	外壳材料	铝合金/钢等
过压 (压力)	2*P max	防护等级	IP69

► OIL PRESSURE SENSOR

| APPLICATION

The product is mounted on the engine to detect the pressure of the engine oil, and the pressure sensor converts the detected pressure into electrical signal then input to the vehicle's control system.

Engine oil has cooling, lubrication, cleaning and sealing functions, which play a vital role in ensuring the normal operation of the engine. As engine operating time increases, engine oil is contaminated by high temperature oxidation, mechanical parts wear, fuel vapor corrosion and other factors.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	0~1000kPaA	
Output Voltage (Customizable)	0.4~4.65V or 0.5~4.5V	
Accuracy (Adjustable)	±2.0%FS: 10°C~100°C	±3%FS: -40°C~150°C
Operating Temperature	-40°C~150°C	
Storage Temperature	-40°C~150°C	
Supply Voltage	4.75~5.25VDC	Burst Pressure 3*P max
Output Load (Capacitive)	100nF~470nF	Overvoltage 18VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage -14VDC
Short-circuit Protection	Yes	Cyclic Test 2,000,000 times
Supply Current	≤10mA	Housing Material aluminum/steel
Proof (Pressure)	2*P max	Protection Level IP69

► 空调压力传感器

| 应用

产品安装在空调系统的管路上或冷凝器上，检测空调系统制冷剂的压力，压力传感器把检测到的压力转化为电信号输入到车辆的控制系统。

特性

- MEMS传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计



压力传感器

| 参数

压力范围 (可定制)	0~3400KPaG/0~3200kPaG等		
输出电压 (可定制)	0.4~4.65V or 0.5~4.5V等		
精度 (可调整)	±2.0%FS: 10°C~85°C	±3%FS: -40°C~125°C	
工作温度	-40°C~125°C		
存储温度	-40°C~130°C		
供电电压	4.75~5.25VDC	爆压 (压力)	3*P max
输出负载 (容性)	100nF ~ 470nF	过电压	18VDC
输出负载 (阻性)	Min 4.7KΩ	反向电压	-14VDC
短路保护	有	循环实验	200万次
供电电流	≤10mA	外壳材料	铝合金/铜/钢等
过压 (压力)	2*P max	防护等级	IP67

► AIR CONDITIONING PRESSURE SENSOR

| APPLICATION

The product is installed on the pipeline of the air conditioning system or on the condenser to detect the pressure of the refrigerant in the air conditioning system, and the pressure sensor converts the detected pressure into an electrical signal and output it to the control system of the vehicle.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	0~3400kPaG/0~3200kPaG	
Output Voltage (Customizable)	0.4~4.65V or 0.5~4.5V	
Accuracy (Adjustable)	±2.0%FS: 10°C~85°C	±3%FS: -40°C~125°C
Operating Temperature	-40°C~125°C	
Storage Temperature	-40°C~130°C	
Supply Voltage	4.75~5.25VDC	Burst Pressure 3*P max
Output Load (Capacitive)	100nF~470nF	Overvoltage 18VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage -14VDC
Short-circuit Protection	Yes	Cyclic Test 2,000,000 times
Supply Current	≤10mA	Housing Material aluminum/copper/steel
Proof (Pressure)	2*P max	Protection Level IP67

► 碳罐脱附压力传感器（国六排放要求）

| 应用

碳罐脱附压力传感器安装在燃油蒸汽吸附脱附装置（俗称“碳罐”）上，检测碳罐系统上的绝对压力。碳罐脱附压力传感器把检测到的压力转化为电信号输入到车辆的控制系统，作为燃油蒸发控制系统中对泄漏量进行检测和车载诊断OBD要求的依据。



特性

- MEMS传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单。小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围（可定制）	10~115kPaA等		
输出电压（可定制）	0.4~4.65V or 0.5~4.5V等		
精度（可调整）	±1.0%FS: 10°C~85°C; ±1.5%FS: -40°C~125°C		
工作温度	-40°C~130°C		
存储温度	-40°C~130°C		
供电电压	4.75~5.25VDC	爆压（压力）	3*P max
输出负载（容性）	Max 470nF	过电压	18VDC
输出负载（阻性）	Min 4.7KΩ	反向电压	-14VDC
短路保护	有	循环实验	200万次
供电电流	≤10mA	外壳材料	PBT+30%GF
过压（压力）	2*P max	防护等级	IP69

▶ CARBON CANISTER DESORPTION PRESSURE SENSOR (NATIONAL VI EMISSION REQUIREMENTS)

| APPLICATION

The canister desorption pressure sensor is mounted on a fuel vapor adsorption and desorption device (commonly known as a “canister”) to detect the absolute pressure on the canister system. The canister desorption pressure sensor converts the detected pressure into an electrical signal and output it to the vehicle’s control system as a basis for the detection of the leakage amount and the on-board diagnostic OBD requirement in the fuel evaporation control system.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	10~115kPaA	
Output Voltage (Customizable)	0.4~4.65V or 0.5~4.5V	
Accuracy (Adjustable)	±1.0%FS: 10°C~85°C	±1.5%FS: -40°C~125°C
Operating Temperature	-40°C~130°C	
Storage Temperature	-40°C~130°C	
Supply Voltage	4.75~5.25VDC	Burst Pressure 3*P max
Output Load (Capacitive)	Max 470nF	Overvoltage 18VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage -14VDC
Short-circuit Protection	Yes	Cyclic Test 2,000,000 times
Supply Current	≤10mA	Housing Material PBT+30%GF
Proof (Pressure)	2*P max	Protection Level IP69

► 燃油蒸发泄漏压力传感器（国六排放要求）

| 应用

产品安装在油箱的油泵上或油路的管路上，检测燃油管路系统上的相对压力。燃油蒸发泄漏压力传感器把检测到的压力转化为电信号输入到车辆的控制系统，作为燃油蒸发控制系统中对泄漏量进行检测和车载诊断的依据。



特性

- MEMS传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围 (可定制)	-3.75~+1.25kPaD/-3.75~+3.5kPaD/-20~+40kPaD等		
输出电压 (可定制)	0.4~4.65V or 0.5~4.5V等		
精度 (可调整)	±2.0%FS: 10°C~85°C	±3%FS: -40°C~115°C	
工作温度	-40°C~115°C		
存储温度	-40°C~115°C		
供电电压	4.75~5.25VDC	爆压 (压力)	3*P max
输出负载 (容性)	100nF ~ 470nF	过电压	18VDC
输出负载 (阻性)	Min 4.7KΩ	反向电压	-14VDC
短路保护	有	循环实验	200万次
供电电流	≤10mA	外壳材料	PA6/6T-GF35
过压 (压力)	2*P max	防护等级	IP69

► FUEL VAPOR PRESSURE SENSOR (NATIONAL VI EMISSION REQUIREMENTS)

| APPLICATION

The product is installed on the oil pump of the fuel tank or on the pipeline of the oil circuit to detect the relative pressure on the fuel pipeline system, The fuel evaporative leakage pressure sensor converts the detected pressure into an electric signal and input it to the vehicle's control system, and this electrical signal is served as a basis for detecting the leakage amount and on-board diagnosis in the fuel evaporation control.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	-3.75~+1.25kPaD/-3.75~+3.5kPaD/-20~+40kPaD	
Output Voltage (Customizable)	0.4~4.65V or 0.5~4.5V	
Accuracy (Adjustable)	±2.0%FS: 10°C~85°C	±3%FS: -40°C~115°C
Operating Temperature	-40°C~115°C	
Storage Temperature	-40°C~115°C	
Supply Voltage	4.75~5.25VDC	Burst Pressure 3*P max
Output Load (Capacitive)	100nF~470nF	Overvoltage 18VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage -14VDC
Short-circuit Protection	Yes	Cyclic Test 2,000,000 times
Supply Current	≤10mA	Housing Material PA6/6T-GF35
Proof (Pressure)	2*P max	Protection Level IP69

► GPF/DPF压差传感器（国六排放要求）

| 应用

GPF差压传感器安装在颗粒过滤器的两端。车辆电控系统通过传感器采集GPF上游和下游的相关压力值（差压，相对压力，绝对压力或几种组合信号）来判断GPF是否堵塞或者出现管路脱落等异常，以此来进行GPF再生的操作和故障诊断。



特性

- MEMS传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的耐尾气腐蚀性性能
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围（可定制）	-20~80kPaD/50~220kPaA/-14.5-+50kPaD等		
输出电压（可定制）	0.4~4.65V or 0.5~4.5V或SNET输出等		
精度（其中一种）	±0.8kPa (-14.3~50kPaD/±1.2kPa (-14.3~25kPaG) 温度系数: 1.5 (-40~-10°C & 100~140°C)		
工作温度	-40°C~140°C		
存储温度	-40°C~150°C		
供电电压	4.75~5.25VDC	爆压 (压力)	3*P max
输出负载 (容性)	100nF ~ 470nF	过电压	18VDC
输出负载 (阻性)	Min 4.7KΩ	反向电压	-14VDC
短路保护	有	循环实验	200万次
供电电流	≤15mA/≤30mA(根据不同类型而定)	外壳材料	PPS+30%GF
过压 (压力)	2*P max	防护等级	IP69

► GPF/DPF DIFFERENTIAL PRESSURE SENSOR (NATIONAL VI EMISSION REQUIREMENTS)

| APPLICATION

The GPF differential pressure sensor is installed at both ends of the particulate filter to detect the differential pressure at both ends of the particulate filter or to detect the absolute pressure at both ends of the particulate filter. The GPF differential pressure sensor converts the detected pressure into an electrical signal and input it to the vehicle's control system as a basis for the system to detect leakage and on-board diagnostics.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	-20~80kPaD/50~220kPaA/-14.5~+50kPaD		
Output Voltage (Customizable)	0.4~4.65V/0.5~4.5V/SNET Output		
Accuracy (Adjustable)	±0.8KPa (-14.3~50KPaD) / ±1.2KPa (-14.3~25KPaG) / TC: 1.5 (-40~-10 °C & 100~140 °C)		
Operating Temperature	-40°C~140°C		
Storage Temperature	-40°C~C150°C		
Supply Voltage	4.75~5.25VDC	Burst Pressure	3*P max
Output Load (Capacitive)	100nF~470nF	Overvoltage	18VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage	-14VDC
Short-circuit Protection	Yes	Cyclic Test	2,000,000 times
Supply Current	≤15mA/≤30mA	Housing Material	PPS+30%GF
Proof (Pressure)	2*P max	Protection Level	IP69

► 空调压力温度复合传感器 (P+T)

| 应用

产品安装在空调管路上，用于测量管路中的介质压力和温度情况，传感器把检测到的压力和温度数据转化为电信号输入到车辆的控制系统。



特性

- 陶瓷电容传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐机械性能设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计
- 高精度的温度输出功能

| 参数

压力范围 (可定制)	0~11BarG/0~36BarG等		
输出电压 (可定制)	0.4~4.65V or 0.5~4.5V等		
精度 (可调整)	±1.8%Vcc: -5°C~115°C	±2.8%Vcc: -40°C or 135°C	
工作温度	-40°C~135°C		
存储温度	-40°C~135°C		
供电电压	4.75~5.25VDC	爆压 (压力)	3*P max
输出负载 (容性)	Max 470nF	过电压	28VDC
输出负载 (阻性)	Min 4.7KΩ	反向电压	-24VDC
短路保护	有	循环实验	200万次
供电电流	≤5mA	外壳材料	铝合金/不锈钢
过压 (压力)	2*P max	防护等级	IP69

► AIR CONDITIONING PRESSURE AND TEMPERATURE SENSOR (P+T)

| APPLICATION

The product is installed in the air conditioning pipeline, used to measure the medium pressure and temperature in the pipeline, the sensor detects the pressure and temperature data into an electrical signal input to the vehicle control system.



FEATURE

- Ceramic capacitive sensing technology
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design
- High precision temperature output function

| PARAMETER

Pressure Range (Customizable)	0~11BarG/0~36BarG	
Output Voltage (Customizable)	0.4~4.65V or 0.5~4.5V	
Accuracy (Adjustable)	±1.8%Vcc: -5°C~115°C	±2.8%Vcc: -40°C or 135°C
Operating Temperature	-40°C~135°C	
Storage Temperature	-40°C~135°C	
Supply Voltage	4.75~5.25VDC	Burst Pressure 3*P max
Output Load (Capacitive)	Max 470nF	Overvoltage 28VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage -24VDC
Short-circuit Protection	Yes	Cyclic Test 2,000,000 times
Supply Current	≤5mA	Housing Material aluminum/stainless steel
Proof (Pressure)	2*P max	Protection Level IP69

► 真空度压力传感器

| 应用

真空度压力传感器安装在制动真空管路系统上，用于监测当前制动真空管路上的真空度，反馈当前制动助力大小。压力传感器把检测到的压力转化为电信号输入到车辆的控制系统。



特性

- MEMS传感技术
- 高性能, 优异的长期稳定性和性能
- 零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围 (可定制)	-100~0kPa等		
输出电压 (可定制)	0.4~4.65V/0.5~4.5V等		
精度	±1.6%FS: 0°C~100°C; ±2.4%FS: -40°C~130°C		
工作温度	-40°C~130°C		
存储温度	-40°C~130°C		
供电电压	4.75~5.25VDC	爆压 (压力)	3*P max
输出负载 (容性)	2.2nF ~ 470nF	过电压	18VDC
输出负载 (阻性)	≥4.7kΩ	反向电压	-14VDC
短路保护	有	循环寿命	200万次
供电电流	≤10mA	外壳材料	PBT+30%GF
过压 (压力)	2*P max	防护等级	IP69

► BRAKE BOOSTER PRESSURE SENSOR

| APPLICATION

The Brake booster pressure sensor is installed on the brake vacuum line to monitor the air pressure on the current brake vacuum line, reflect the degree of vacuum, and indirectly feedback the current brake boost.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	-100~0kPa		
Output Voltage (Customizable)	0.4~4.65V/0.5~4.5V		
Accuracy (Adjustable)	±1.6%FS: 0°C~100°C; ±2.4%FS: -40°C~130°C		
Operating Temperature	-40°C~130°C		
Storage Temperature	-40°C~130°C		
Supply Voltage	4.75~5.25VDC	Burst Pressure	3*P max
Output Load (Capacitive)	2.2nF~470nF	Overvoltage	18VDC
Output Load (Resistive)	≥4.7KΩ	Reverse Voltage	-14VDC
Short-circuit Protection	Yes	Cyclic Test	2,000,000 times
Supply Current	≤10mA	Housing Material	PBT+30%GF
Proof (Pressure)	2*P max	Protection Level	IP69

► 气刹压力传感器（商用车）

| 应用

产品安装在商用车刹车系统的储气罐上，检测储气罐的压力，压力传感器把检测到的压力转化为电信号输入到车辆的控制系统。

特性

- MEMS传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐振性设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计

压力传感器



| 参数

压力范围（可定制）	0~1.143MPa/0~1.4MPa等		
输出电压（可定制）	0.4~4.65V/0.5~4.5V等		
精度（可调整）	±2.5%FS: -40°C~85°C		
工作温度	-40°C~85°C		
存储温度	-40°C~125°C		
供电电压	4.75~5.25VDC	爆压（压力）	3*P max
输出负载（容性）	Max 470nF	过电压	32VDC
输出负载（阻性）	Min 4.7KΩ	反向电压	-28VDC
短路保护	有	循环寿命	50万次
供电电流	≤10mA	外壳材料	不锈钢, 钢
过压（压力）	2*P max	防护等级	IP69

► AIR BRAKE PRESSURE SENSOR (COMMERCIAL VEHICLE)

| APPLICATION

The product is installed on the air tank of brake system for commercial vehicle. The pressure sensor converts the detected pressure into electrical signal then input to the vehicle's control system.



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	0~1.143MPa/0~1.4MPa		
Output Voltage (Customizable)	0.4~4.65V/0.5~4.5V		
Accuracy (Adjustable)	±2.5%FS: -40°C~85°C		
Operating Temperature	-40°C~85°C		
Storage Temperature	-40°C~125°C		
Supply Voltage	4.75~5.25VDC	Burst Pressure	3*P max
Output Load (Capacitive)	Max 470nF	Overvoltage	32VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage	-28VDC
Short-circuit Protection	Yes	Cyclic Test	500,000 times
Supply Current	≤10mA	Housing Material	stainless steel/steel
Proof (Pressure)	2*P max	Protection Level	IP69

► 后处理尿素压力传感器（商用车）

| 应用

产品安装在SCR后处理系统上，检测后处理系统尿素罐的压力，压力传感器把检测到的压力转化为电信号输入到车辆的控制系统。



特性

- 陶瓷电容传感技术
- 高性能, 优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度, 行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐机械性能设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小, 安装简单, 小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围（可定制）	0.101~1.301MPaA等		
输出电压（可定制）	0.4~4.65V/0.5~4.5V等		
精度	±3%Vcc: -11°C~85°C		
工作温度	-40°C~85°C		
存储温度	-40°C~125°C		
供电电压	4.75~5.25VDC	爆压 (压力)	3*P max
输出负载（容性）	Max 470nF	过电压	28VDC
输出负载（阻性）	Min 4.7KΩ	反向电压	-24VDC
短路保护	有	循环实验	200万次
供电电流	≤5mA	外壳材料	不锈钢
过压 (压力)	2*P max	防护等级	IP69

▶ SELECTIVE CATALYTIC REDUCTION (SCR) PRESSURE SENSOR (COMMERCIAL VEHICLE)

| APPLICATION

The product is installed on SCR after-treatment system to detect the pressure of urea tank. The pressure sensor converts the detected pressure into electrical signal then input to the vehicle's control system.



FEATURE

- Ceramic capacitive sensing technology
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Pressure Range (Customizable)	0.101~1.301MPaA		
Output Voltage (Customizable)	0.4~4.65V or 0.5~4.5V		
Accuracy (Adjustable)	±3%Vcc: -11°C~85°C		
Operating Temperature	-40°C~85°C		
Storage Temperature	-40°C~125°C		
Supply Voltage	4.75~5.25VDC	Burst Pressure	3*P max
Output Load (Capacitive)	Max 470nF	Overvoltage	28VDC
Output Load (Resistive)	Min 4.7KΩ	Reverse Voltage	-24VDC
Short-circuit Protection	Yes	Cyclic Test	2,000,000 times
Supply Current	≤5mA	Housing Material	stainless steel
Proof (Pressure)	2*P max	Protection Level	IP69

► 环境压力传感器

| 应用

产品通常安装于汽车底盘上，实时检测环境中的压力变化情况，压力传感器把检测到的压力转化为电信号输入到车辆的控制系统。



特性

- MEMS传感技术
- 高性能，优异的长期稳定性和性能
- 智能化零位补偿和温度补偿
- 优良的EMC/ESD性能
- 过压和反向极性保护以及短路保护
- 在广泛的操作范围内提高准确度，行业领先的温度范围精度
- 广泛的工作温度范围
- 压力范围、输出曲线以及外形尺寸定制化设计
- 卓越的耐机械性能设计
- 高度模块化产品配置
- 出色的密封设计和防护设计
- 体积小，安装简单，小型紧凑型
- 低成本的OEM应用设计

| 参数

压力范围（可定制）	44.8-110.3kPaA/10-115kPaA		
输出电压（可定制）	0.5~4.5V/0.4-4.65V		
精度	10-85°C: $\pm 1.5\%FS$; -40°C or 130°C: 2.4%FS		
工作温度	-40°C~130°C		
存储温度	-40°C~130°C		
供电电压	4.75-5.25VDC	爆压 (压力)	3*P max
输出负载 (容性)	Max 470nF	过电压	20VDC
输出负载 (阻性)	Min 4.7K Ω	反向电压	-20VDC
短路保护	有	循环实验	200万次
供电电流	5mA	外壳材料	PBT-GF30%
过压 (压力)	2*P max	防护等级	IP69

► ENVIRONMENTAL PRESSURE SENSOR

| APPLICATION

The product is usually installed on the chassis of the car, and the pressure changes in the environment are detected in real time. The pressure sensor converts the detected pressure into electrical signals and inputs them to the control system of the vehicle .



FEATURE

- MEMS sensing technique
- Excellent long-term stability
- Intelligent zero compensation and temperature compensation
- Excellent EMC/ESD performance
- Proof pressure and reverse polarity protection and short-circuit protection
- Improve accuracy in a wide range of operations, industry leading temperature range accuracy
- Wide range of operating temperature
- Pressure range, output curve, and dimension customization design
- Distinguished Vibration proof
- Highly modular product configurations
- Well sealing design and protective design
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

PARAMETER

Pressure Range (Customizable)	44.8-110.3kPaA/10-115kPaA
Output Voltage (Customizable)	0.5~4.5V/0.4-4.65V
Accuracy (Adjustable)	10-85°C: ±1.5%FS; -40°C or 130°C: 2.4%FS
Operating Temperature	-40°C~130°C
Storage Temperature	-40°C~130°C
Supply Voltage	4.75~5.25VDC
Output Load (Capacitive)	Max 470nF
Output Load (Resistive)	Min 4.7KΩ
Short-circuit Protection	Yes
Supply Current	5mA
Proof (Pressure)	2*P max
Burst Pressure	3*P max
Overvoltage	20VDC
Reverse Voltage	-20VDC
Cyclic Test	2,000,000 times
Housing Material	PBT-GF30%
Protection Level	IP69

► 雨量光线阳光温湿度HUD传感器

| 应用

用于自动灯光、自动雨刮、自动空调、自动除雾、HUD亮度调节、自动雨天关窗、隧道识别等。



特性

- 功能丰富，最多支持五合一
- 雨量功能可自学习
- 符合汽车级
- 功能安全
- LIN通讯
- 12V电源供电
- 尺寸小巧，弹簧圈安装方式可选
- 平台化，同结构可支持不同功能

| 参数

通讯	LIN2.0/2.1		
工作电压	9~16V		
工作温度	-40~100°C		
工作电流	< 20mA		
温湿度功能	温度量程-40~100°C 典型精度±0.15°C；湿度量程0~100%RH 典型精度±2%RH		
适应玻璃范围	厚度4~8mm；曲率≥1400mm；红外透光率20%~60%；可见光透光率>70%		
休眠电流	≤50uA		
防护等级	IP5K0	阳光功能	量程0~1200w/m2 典型精度±10%
光线功能	量程0~10000lux 典型精度±10%	HUD功能	量程0~130000lux 典型精度±10%

▶ RLSTH SENSOR

| APPLICATION

Used for automatic lighting, automatic wiper, automatic air conditioning, automatic fog removal, HUD brightness adjustment, automatic rainy day window closing, tunnel recognition, etc.



FEATURE

- Feature-rich, supporting up to 5-in-1
- Rainfall function is self-learning
- Conforming to automobile class
- Functional safety
- LIN communication
- 12V power supply
- Compact size, Spring coil mounting options are available
- Platformized, the same structure can support different functions

| PARAMETER

Communication	LIN2.0/2.1		
Working Voltage	9~16V		
Operating Temperature	-40~100°C		
Working Current	<20mA		
Temperature And Humidity Function	temperature range -40~100°C; typical Accuracy $\pm 0.15^{\circ}\text{C}$ humidity range 0~100%; RH typical accuracy $\pm 2\%\text{RH}$		
Adapt To Glass Range	thickness 4~8mm, curvature $\geq 1400\text{mm}$; infrared transmittance 20%~60% visible light transmittance $> 70\%$		
Light Function	range 0~10000lux, typical accuracy $\pm 10\%$		
Solar Function	range 0~1200w/m ² , typical accuracy $\pm 10\%$	Sleep Current	$\leq 50\mu\text{A}$
Hud Function	range 0~130000lux, typical accuracy $\pm 10\%$	Protection Level	IP5K0

► 车身单轴加速度传感器

| 应用

车身单轴加速度传感器安装在四轮悬架系统上或车身底盘上，用于监测悬架系统状态或车辆运行状态。车身单轴加速度传感器将检测到的加速度转换为电信号通过PSI5通讯协议传输给车辆的控制系统，以判断当前车辆的运行状态。



特性

- MEMS传感技术
- 宽测量范围
- 双线制通讯接口
- PSI5标准协议
- 高数据传输速度
- 优良的EMC性能
- 片上数字低通滤波器
- OTP编程
- 过压保护
- 汽车级应用

| 参数

测量量程（可定制）	±16g等
精度	±3.5%FS
供电电压	4.5~11V
工作温度	-40~125°C
存储温度	-55~150°C
分辨率	16Bit
工作电流	22~30mA
静态电流	4~6mA
灵敏度	480LSB/g
通讯速率	125kbps/189kbps
工作寿命	10年
防护等级	IP6K9

► BODY UNIAXIAL ACCELERATION SENSOR

| APPLICATION

The acceleration sensor is installed on the four-wheel suspension system or the chassis of the body to monitor the state of the suspension system or the running state of the vehicle. The acceleration sensor converts the detected acceleration into electrical signals and transmits them to the control system of the vehicle through the PSI5 communication protocol to judge the current running state of the vehicle.



FEATURE

- MEMS sensing technology
- Wide measuring range
- Dual wire communication interface
- PSI5 standard protocol
- High data transmission speed
- Excellent EMC performance
- On chip digital low pass filter
- OTP programming
- Power protection function
- Automotive Applications

| PARAMETER

Measuring Range (Customizable)	±16g
Accuracy	±3.5%FS
Supply Voltage	4.5~11V
Operating Temperature	-40~125°C
StorageTemperature	-55~150°C
Resolution	16Bit
Working Current	22~30mA
Static Current	4~6mA
Sensitivity	480LSB/g
CommunicationSpeed	125kbps/189kbps
Working Life	10years
Protection Level	IP6K9

► 车身偏航率传感器

| 应用

车身偏航率传感器是用于对车辆动态变化的感知。用于测量车辆的纵向加速度 A_x ，横向加速度 A_y ，绕Z轴转速度 W_z ，安装于尽量靠近车辆质心位置。偏航率传感器信号对于集成式制动控制系统而言是很重要的输入变量，通过 A_x 可以判断坡度和制动平顺性，通过 W_z, A_y 可以判断车辆姿态。



特性

- MEMS传感技术
- 宽测量范围
- 长生命周期
- 高灵敏度
- 低输出噪音
- 优良的EMC性能
- 宽数字低通滤波器
- 支持在线OBD升级
- 过压保护
- 高速CAN2.0B接口

| 参数

测量量程（可定制）	加速度 $\pm 1.8g$ ，角速度 $\pm 100^\circ/s$ (Ωz)
精度	$\pm 3\%$
加速度过量程范围	$\pm 10g$
角速度过量程范围	$\pm 1000^\circ/s$
供电电压	9~16V
工作温度	-40~125°C
存储温度	-55~150°C
工作电流	< 80mA@13.5V
检测时间	$\leq 5ms$
灵敏度	加速度3924LSB/g，角速度80LSB/ $^\circ/s$
过电压	24V
防护等级	IP6K7

► BODY YAW RATE SENSOR

| APPLICATION

The body yaw rate sensor is used to sense the dynamic changes of the vehicle. It is used to measure the vehicle's longitudinal acceleration A_x , lateral acceleration A_y , and rotation speed W_z around the Z-axis. It is installed as close to the vehicle's center of mass as possible. The yaw rate sensor signal is a very important input variable for the integrated braking control system. A_x can be used to judge the slope and braking comfort, and W_z and A_y can be used to judge the vehicle attitude.



FEATURE

- MEMS sensing technology
- Wide measuring range
- Long life cycle
- High sensitivity
- Low output noise
- Excellent EMC performance
- Wide digital low pass filter
- Support online OBD upgrade
- Power protection function
- High speed CAN2.0B interface

| PARAMETER

Measuring Range (Customizable)	acceleration: $\pm 1.8g$ angular velocity: $\pm 100^\circ/s$ (Ωz)
Accuracy	$\pm 3\%$
Acceleration Range Of Quanta	$\pm 10g$
Angular Velocity Range Of Quanta	$\pm 1000^\circ/s$
Supply Voltage	9~16V
Operating Temperature	-40~125°C
Storage Temperature	-55~150°C
Working Current	<80mA@13.5V
Detection Time	$\leq 5ms$
Sensitivity	acceleration: 3924LSB/g angular velocity: 80LSB/ $^\circ/s$
Overvoltage	24V
Protection Level	IP6K7

► BRH霍尔电流传感器

| 应用

BRH霍尔电流传感器可以测量DC、AC电流，带宽为DC~250KHz，主要用于新能源汽车，充电桩、电驱动、电池管理系统等。



特性

- 可编程国际大厂的Hall芯片
- 编程调节以适配不同量程
- 符合汽车级
- 功能安全
- 全温度范围误差控制在3%以内，线性度好
- 5V电源供电，电压输出
- 尺寸小巧，安装方式可选
- 产品结构简单，全隔离，性能稳定可靠
- 多种量程供客户选择，产品种类丰富

| 参数

电流量程（可定制）	±300A,±500A,±800A,±1200A,±1500A
工作电压	5±0.25V
工作温度	-40~125°C
工作电流	typ20; max25
零位输出	2.500V
输出曲线	$V_{out}=(U_c/5) \times (V_0+G \times I_p)^\circ C$
总误差	零位：±13mV@常温，±18mV其他温度°C 带负载：±45mV@常温，±65mV其他温度
灵敏度	1.33mV/A
防护等级	IPx2

► HALL CURRENT SENSOR

| APPLICATION

The sensor can measure DC and AC current with a bandwidth of DC~250KHz. It is mainly used for new energy vehicles, charging piles, electric drives, battery management systems, etc.



FEATURE

- Programmable Hall chip of international IC factory
- Programmatic adjustment to fit different ranges
- Conforming to automobile class
- Functional safety
- The whole temperature range error is controlled within 3%, good linearity
- 5V power supply, voltage output
- Compact size, optional installation
- Product structure is simple, fully isolated, stable and reliable performance
- A variety of ranges for customers to choose, product variety is rich

| PARAMETER

Current Range (Customizable)	±300A, ±500A, ±800A, ±1200A, ±1500A
Working Voltage	5±0.25V
Operating Temperature	-40~125°C
Working Current	typ20; max25
Zero Output	2.500V
Output Curve	$V_{out}=(U_c/5)\times(V_0+G\times I_p)$
Total Error	zero: ±13mV@ normal temperature, ±18mV other temperatures with load: ±45mV@ normal temperature, ±65mV other temperatures
Sensitivity	1.33mV/A
Protection Level	IPx2

► 磁通门电流传感器

| 应用

磁通门电流传感器为一高精度直流电流测量装置，主要安装于电池组母排，用于监测充放电电流。采用磁通门技术，具有高精度，低磁滞等优点。



特性

- 磁通门原理
- 隔离电流测量，范围 $\pm 500\text{A}$ ， $\pm 1500\text{A}$
- 最大工作温度： 85°C
- 线性误差 $<0.1\%$
- 全温区误差 $<0.5\%$
- $+8\text{V}\sim+16\text{V}$ 供电
- 电源保护功能
- 高速CAN2.0B接口

| 参数

电流量程（可定制）	$\pm 500\text{A}/\pm 1500\text{A}$
供电电压	$12\pm 4\text{V}$ ，标准值 13.5V
工作温度	$-40\sim 105^\circ\text{C}$
工作电流	typ35; max45 @IP=0A typ130 @Ipm typ85 @IP=0A typ500 @Ipm
线性度误差	$\pm 0.1\%$ @ $\pm 3\sigma$ 全温区
零偏	$I_0=\pm 10\text{mA}$ @ $\pm 3\sigma$ 全温区 $I_0=\pm 30\text{mA}$ @ $\pm 3\sigma$ 全温区
精度	$X_g=\pm 1500\text{mA}$ @ $\pm 3\sigma$ $+25^\circ\text{C}$; $X_g=\pm 2500\text{mA}$ @ $\pm 3\sigma$ 全温区 $X_g=\pm 4500\text{mA}$ @ $\pm 3\sigma$ $+25^\circ\text{C}$; $X_g=\pm 7500\text{mA}$ @ $\pm 3\sigma$ 全温区
防护等级	IP41

► FLUXGATE CURRENT SENSOR

| APPLICATION

Fluxgate current sensor is a high-precision DC current measurement device, mainly installed in the battery bus, used to monitor charge and discharge current.

Fluxgate current sensor uses fluxgate technology, with high precision, low hysteresis and other advantages.



FEATURE

- Fluxgate principle
- Isolation current measurement, range $\pm 500\text{A}$
- Max operating temperature: 85°C
- The linear error is less than 0.1%
- The error of whole temperature zone is less than 0.5%
- +8 v~+16 v power supply
- Power protection function
- High speed CAN2.0B interface

| PARAMETER

Current Range (Customizable)	$\pm 500\text{A}/\pm 1500\text{A}$
Working Voltage	$12\pm 4\text{V}$; typical 13.5V
Operating Temperature	$-40\sim 85^{\circ}\text{C}$
Working Current	typ35; max45 @IP=0A; typ130 @Ipm typ85 @IP=0A typ500 @Ipm
Linear Error	$\pm 0.1\%$ @ $\pm 3\sigma$ whole temperature
Zero Offset	$I_o=\pm 10\text{mA}$ @ $\pm 3\sigma$ whole temperature $I_o=\pm 30\text{mA}$ @ $\pm 3\sigma$ whole temperature
Accuracy	$X_g=\pm 1500\text{mA}$ @ $\pm 3\sigma$ +25 $^{\circ}\text{C}$; $X_g=\pm 2500\text{mA}$ @ $\pm 3\sigma$ whole temperature $X_g=\pm 4500\text{mA}$ @ $\pm 3\sigma$ +25 $^{\circ}\text{C}$; $X_g=\pm 7500\text{mA}$ @ $\pm 3\sigma$ whole temperature
Protection Level	IP41

► 轮速传感器

| 应用

产品安装在车轮附近，检测车轮转动速度，车轮速度信息对于电子稳定程序（ESP）或防抱死制动系统（ABS）至关重要。因此，轮速传感器是现代汽车中最重要的传感器之一。



特性

- Hall/AMR/GMR传感技术
- 标准两线电流接口
- 集成电容，抗电磁干扰能力强
- 磁铁可集成，统一出厂标定，气隙稳定性高
- 更高的工作气隙
- 灵活性设计，标准/PWM/AK 信号输出
- 可识别方向
- 广泛的工作温度范围
- 多种芯片选择，匹配不同控制器需求
- 符合间接式胎压监测低跳动(Jetter)要求
- 有双芯片ASIL-D产品方案
- 采用PA612材料，防水性能优

| 参数

工作频率	2500/3000Hz
输出电流	标准与PWM 7mA/14mA AK 7mA/14mA/28mA
工作温度	-40°C~150°C
供电电压	标准与PWM 4.4~20VDC AK 6~20VDC
负载电阻	标准与PWM 15~75Ω AK 15~50Ω
磁性环节距	3~8mm
启动时间	≤1ms
延迟时间	≤120us
上升沿	8~24mA/us
下降沿	8~24mA/us
防护等级	IP69

► WHEEL SPEED SENSOR

| APPLICATION

Wheel Speed Sensor (WSS) is installed near the wheel to detect the wheel rotation speed. The wheel speed information is very important for Electronic Stability Program (ESP) or Anti lock Braking System (ABS). Therefore, WSS is one of the most important sensors in modern vehicles.



FEATURE

- Hall/AMR/GMR sensing technology
- Standard two wire current interface
- Integrated capacitor, strong EMC performance
- Magnet integrated, and the air gap stability is high
- Higher working air gap
- Flexible design, Standard/PWM/AK signal output
- Recognizable direction
- Wide operating temperature range
- Multiple IC to match controller requirements
- Meet the requirements of indirect tire pressure monitoring about Jetter
- Dual IC meet ASIL-D
- PA612 material with excellent waterproof performance

| PARAMETER

Operating Frequency	2500/3000Hz
Output Current	standard and PWM 7mA/14mA AK 7mA/14mA/28mA
Operating Temperature	- 40 °C~150 °C
Supply Voltage	standard and PWM 4.4~20Vdc AK 6~20VDC
Load Resistance	standard and PWM 15~75Ω AK 15~50Ω
Encoder Pitch	3~8mm
Starting Time	≤1ms
Delay Time	≤120us
Rising Edge	8~24Ma/us
Falling Edge	8~24Ma/us
Protection Grade	IP69

► 车身高度传感器

| 应用

车身高度传感器用于悬架、主动底盘控制或前照灯调平应用程序，目的是将车轮相对于底盘的位置转换成一个电气输出信号，供控制器使用。



特性

- Hall传感技术
- 模拟/PWM/PSI5通信
- 绝对角度测量
- 角度精度高
- 模块化设计，支架与连杆系列化
- 自润滑万向球窝，满足底盘防尘要求
- EOL在线标定
- 信号支持故障诊断
- 结构设计可靠，寿命高
- 适用于主动悬架系统

| 参数

角度范围	360°
分辨率	0.03°
总精度	±1.3%
工作电流	<49mA
工作温度	-40°C~125°C
供电电压	5±0.5VDC
信号输出	模拟/PWM/PSI5
防护等级	IP69

► HEIGHT LEVEL SENSOR

| APPLICATION

The sensor is used in suspension, active chassis control or headlamp leveling applications to convert the angle of the wheels relative to the chassis into an electrical output signal for use by the controller.



FEATURE

- Hall sensing technology
- PWM/PSI5 communication
- Absolute angle measurement
- High angle accuracy
- Modular design, support and connecting rod serialization
- Self lubricating universal ball socket meets the dust-proof requirements of chassis
- EOL online calibration
- Signal support fault diagnosis
- Reliable structural design and high service life
- For active suspension system

| PARAMETER

Angle Range	360 °
Resolution	0.03 °
Total Accuracy	±1.3%
Working Current	<49mA
Operating Temperature	- 40 °C~125 °C
Power Supply Voltage	5±0.5vdc
Signal Output	analog/PWM/PSI5
Protection Grade	IP69

► 电机位置传感器

| 应用

电机位置传感器用于检测电机转子转动角度等物理量，转换为电信号传递给系统控制器。



特性

- 电感式感应电机角度，可端部或贯穿式安装
- PCB板实现线圈设计，成本低，EMC性能优越
- 精度高达0.2°
- 电感工作原理抗电磁干扰能力强
- 多对极设计，精度高
- 冗余设计，双路输出，安全级别ASIL-D
- EOL在线标定
- 信号支持故障诊断
- 适用于线控制动系统

| 参数

工作温度	-40°C~+150°C
角度精度	±0.2°
信号输出	差分SIN COS 或 SPI
消耗电流	<80mA
转速支持	10000rpm
工作次数	>50000

► MOTOR POSITION SENSOR

| APPLICATION

Motor position sensors, which are used to detect physical quantities such as motor rotor rotation angle, which are converted into electrical signals and transmitted to the system controller.



FEATURE

- Inductive induction, installed end through
- PCB board coil design, low cost, Higher EMC
- Accuracy up to 0.2 °
- The working principle of inductance has strong anti electromagnetic interference ability
- Multi pole design, high precision
- Redundant design, dual output, safety level ASIL-D
- EOL online calibration
- Signal support fault diagnosis
- Applicable to brake by wire system

| PARAMETER

Operating Temperature	- 40 °C~ +150 °C
Angle Accuracy	±0.2 °
Signal Output	differential SIN, COS or SPI
Consumption Current	<80mA
Speed Support	10000rpm
Number Of Work	>50000

► 踏板位置传感器

| 应用

踏板位置传感器用于检测踏板位移等物理量，转换为电信号传递给系统控制器。



特性

- Hall传感技术
- 冗余设计，双路输出，安全级别ASIL-D
- EOL在线标定
- 信号支持故障诊断
- 差分模拟量、PWM与SENT输出可选
- 适用于线控制动系统

| 参数

工作温度	-40°C~+150°C
测量行程	0-42mm
信号输出	PWM 或 SENT
信号精度	±0.2mm
功能安全级别	ASIL-D
数字分辨率	12bit (0.015mm/bit)
刷新率	<1ms

► PEDAL POSITION SENSOR

| APPLICATION

Pedal position sensors, which are used to detect physical quantities such as pedal displacement, which are converted into electrical signals and transmitted to the system controller.



FEATURE

- Hall sensing technology
- Redundant design, dual output, safety level ASIL-D
- EOL online calibration
- Signal support fault diagnosis
- Differential analog, PWM and sent outputs are optional
- Applicable to brake by wire system

| PARAMETER

Operating Temperature	- 40 °C~+150 °C
Measuring Stroke	0-42mm
Signal Output	PWM or SENT
Signal Accuracy	±0.2mm
Functional Security Level	ASIL-D
Digital Resolution	12bit (0.015mm/bit)
Refresh Rate	<1ms

► 方向盘转角传感器

| 应用

产品安装在组合开关或转向管柱末端，检测方向盘转动角度，通过CAN通信提供方向盘转动角度与速度等信号，此信号应用于电子稳定程序、倒车影像、自动泊车、自动驾驶等系统。



特性

- Hall传感技术
- CAN通信
- 绝对角度测量
- 断电后无需连接电池，上电立即有角度输出
- 抗翘曲设计降低扭矩噪音
- 无需螺丝固定，安装便捷
- 多种角度范围可选，适用于乘用车与商用车
- 支持在线标定
- 支持BootLoader
- 支持故障诊断
- 角度精度高

| 参数

角度范围	±780°、±1560°		
角度精度	±2.5°		
非线性	±0.2°		
迟滞	<2°		
速度范围	0-1060°/s		
分辨率	角度 0.1°，速度 4°/s	扭矩范围	8Ncm
工作电流	<100mA	CAN速率	500k
工作温度	-40°C~85°C	刷新时间	10ms
供电电压	6~20VDC	标定时间	≤500ms

► STEERING ANGLE SENSOR

| APPLICATION

The steering angle sensor (SAS) is installed with combination switch or at the end of the steering column, it detects the steering wheel rotation angle and provide signals such as steering wheel rotation angle and speed through CAN. This signal is applied to Electronic Stability Program,, automatic parking, automatic driving and other systems.



FEATURE

- Hall sensing technology
- CAN communication
- Absolute angle measurement
- No need to connect the battery after power off, True power on
- Anti warping design reduces torque noise
- No screw fixing, easy installation
- A variety of angle ranges available, suitable for passenger cars and commercial vehicles
- Support online calibration
- Support bootloader
- Support fault diagnosis
- High angle accuracy

| PARAMETER

Angle Range	$\pm 780^\circ$, $\pm 1560^\circ$		
Angle Accuracy	$\pm 2.5^\circ$		
Nonlinearity	$\pm 2^\circ$		
Vhysteresis	$< 2^\circ$		
Speed Range	0-1060 $^\circ / S$		
Resolution	angle 0.1 $^\circ$, speed 4 $^\circ / s$	Torque Range	8Ncm
Working Current	$< 100mA$	Can Speed	500K
Operating Temperature	-40 $^\circ C$ ~85 $^\circ C$	Refresh Time	10ms
Supply Voltage	6~20VDC	Calibration Time	$\leq 500ms$

► 刹车磨损传感器

| 应用

产品测量刹车盘磨损程度。传感头安装于刹车盘固定厚度处，当盘磨损到阈值时，传感头内部被接通，向后续控制单元输出信号。



特性

- 电阻+机械结构方案
- 高性能，优异的长期稳定性和性能
- 优良的EMC/ESD性能
- 产品提供多种信号模式可选
- 广泛的工作温度范围
- 卓越的耐机械性能设计
- 体积小，安装简单，小型紧凑型
- 低成本的OEM应用设计

| 参数

触发点（可定制）	2~7.5mm
输入电压	乘用车16V，商用车24V
工作温度	-40°C ~130°C
存储温度	-40°C ~130°C
产品寿命	1.2万公里
线束材料	基于SAE/USCAR-12
防护等级	IP69

► BRAKE WEAR INDICATOR

| APPLICATION

The brake wear Indicator measures the wear of the brake pads. These pads include a wire, which comes in contact with the brake disc after wear. This will transmit a signal to the control unit after reach the threshold.



FEATURE

- Resistor + mechanical structure solution
- Excellent long-term stability and robustness
- Excellent EMC/ESD performance
- Customizable single- or multiple sensing signals solution
- Wide range of operating temperature
- Excellent mechanical resistance design (Vibration proof, etc.)
- Small volume, easy for installation, small and compact
- Low-cost OEM application design

| PARAMETER

Threshold Point (Customizable)	2~7.5mm
Supply Voltage	passager car with 16V, commercial cars with 24V
Operating Temperature	-40°C ~130°C
Storage Temperature	-40°C ~130°C
Lifetime	12k km
Harness Material	based on SAE/USCAR-12
Protection Level	IP69



上海保隆汽车科技股份有限公司
Shanghai Baolong Automotive Corporation

上海市松江区沈砖公路5500号 201619
5500, Shenzhuan Road, Songjiang, Shanghai 201619, China

☎ +86-21-31273333
☎ +86-21-31190319
✉ sbic@baolong.biz
🌐 www.baolong.biz

