

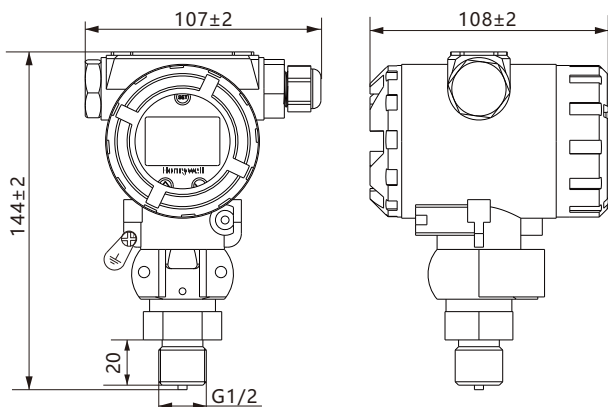
Honeywell

防爆型压力传感器

Explosion proof pressure sensor

安装说明 / Installation instructions

HSP-EW系列外观图



隔爆型

符合标准: GB/T 3836.1-2021, GB/T 3836.2-2021

防爆标志: Ex db IIC T6 Gb

环境温度: -20~70°C

防护等级: IP65

电气参数: 电压型 (12~36VDC)

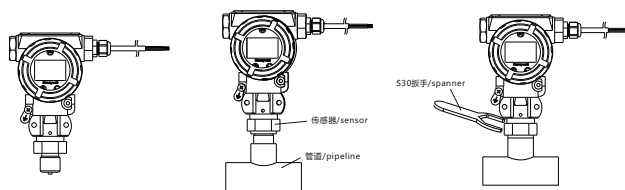
电流型 (10~30VDC)

RS485型 (10~36VDC)

1

安装步骤/Installation steps

1. 将传感器装入管道预留安装位置
Install the sensor into the pipeline to reserve installation space
2. 使用S30扳手将传感器进行锁紧密封, 安装扭力不大于7.5N.M
Use an S30 wrench to lock and seal the sensor, with an installation torque not exceeding 7.5N.M



检查安装位置是否满足下列条件

Check if the installation position meets the following conditions

- 无障碍物/Accessibility
- 靠近测量点/Approaching the measurement point
- 无冲击、无振动/No impact, no vibration
- 无荷载工艺接头/No load process joint
- 在允许的环境范围内/Within the allowable environmental range

注意事项/Precautions

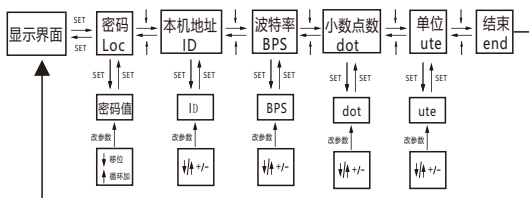
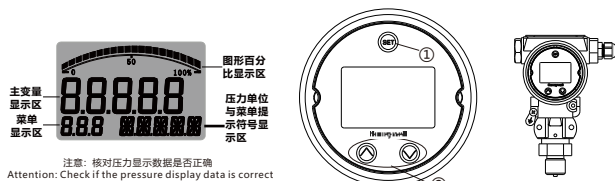
1. 如果导气孔被堵塞, 禁止用尖锐的物体疏通导气孔, 将传感器卸下将导压孔部分浸入能溶解堵塞物的液体中, 将堵塞物溶解。
If the air duct is blocked, it is prohibited to use sharp objects to clear the air duct. Remove the sensor and immerse the pressure duct partially into a liquid that can dissolve the blockage to dissolve it.
2. 如果介质为粘稠的液体, 应拆卸壳体底座下的阻尼器。
If the medium is a viscous liquid, the damper under the housing base should be removed.
3. 产品在高温环境下, 注意防冻烫伤。
When the product is in high and low temperature environments, pay attention
4. 安装扭力应不大于7.5N.M。
The installation torque should not exceed 7.5N.M.
5. 防止压力传感器受到直接热辐射, 突然的温度波动
Prevent pressure sensors from being exposed to direct thermal radiation and sudden temperature fluctuations
6. 严禁安装在重污染、阳光直射、造成机械损伤的环境
It is strictly prohibited to install in environments with heavy pollution, direct sunlight, or mechanical damage

2

用户设置/User settings

产品在运输以及装配过程中, 可能受到高温、跌落以及震动等因素影响, 造成短时间读数偏移, 使用清零设置, 打开前盖, 点击“SET”键进入设置模式, 菜单显示“LOC”, 同时按下“^”、“v”直到屏幕重新显示压力数据。

During transportation and assembly, the product may be affected by factors such as high temperature, drop, and vibration, resulting in short-term reading deviation. To reset the reading, open the front cover, click the “SET” button to enter the setting mode, and the menu will display “LOC”. At the same time, press “^” and “v” until the pressure data is displayed again on the screen.



参数设置说明/Parameter Setting Description

Loc: 00001 (密码仅供专业人员使用, 不可以更改/The password is for professional use only and cannot be changed)

ID: 1~255

BPS: 4800/9600/19200/38400

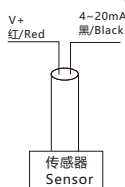
dot: 显示小数点, 可设范围0~3/Display decimal points, with a range of 0 to 3

ute: 显示单位/Display Unit

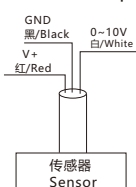
3

接线方式/Wiring Mode

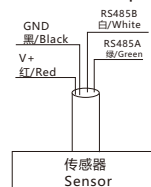
4~20mA输出
4~20mA Output



0~10V输出
0~10V Output



RS 485输出
RS 485 Output



警告/WARNING

安装和维护必须由经过培训的专业技术人员执行。
Installation and maintenance must be carried out by trained professional technicians.
为避免人身伤害 (电击) 和设备损坏, 接线前务必断开电源。
To avoid personal injury (electric shock) and damage to the device, always disconnect the power supply before wiring.

本节列出了用户使用本产品时, 必须遵循的一些安全指导和提示。

This section lists few security guidelines and tips that you must follow the 确保设备的物理安全。只有授权人员才能访问设备和总线。
Do not open the device or damage the appearance, resulting in internal exposure.

确保设备安装、运行、维护管理的安全性。
Ensure the security of equipment installation, operation and maintenance management. 确保设备处于隔离的内部网络中。
Ensure that the device is on an isolated internal network.

请勿打开设备或损坏设备外观, 导致设备内部暴露。
Ensure the physical security of the device. Only authorized personnel can access 确保设备远离挥发性化学物质, 强酸、强碱、清洁剂等否则会造成永久性损坏电路板。
Make sure the device is free from volatile chemicals, strong acids, bases, detergents, etc. which can permanently damage the circuit board.

注意: 上述是霍尼韦尔推荐的操作及安全管理, 但并不局限于此。
Note: The above recommendations for operation and safety management are suggested by Honeywell, but are not limited to these.

如果您发现任何安全漏洞, 请报告 security@honeywell.com。
If you discover any security vulnerabilities, please report them to security@honeywell.com.

Modbus通讯协议说明/Modbus Protocol

寄存器地址信息表 / Register Address Information

寄存器地址 ID	参数描述 Description	寄存器数 Quantity	数据类型 Data Type	读写 Writable(R,W)	详细说明 Detailed Information
0x0000	整数型压力值 Integer pressure value	1	Short	R	当前压力输出值 (16进制) /Current pressure output value(headecimal) 如单位 (kPa) 输出为0x320(801)压力值为801/100=8.01kPa If the unit (kPa) output is 0x320 (801), the pressure value is 801/100=8.01kPa
0x0001	NA	1	Short	R	
0x0002	NA	1	Short	R	
0x0003	NA	1	Short	R	
0x0004	波特率设置 Baud ratesetting	1	Short	R/W	波特率设置 / Baud rate setting default(2) 1:4800 2:9600 3:19200 4:38400
0x0005	地址 Address	1	Short	R/W	地址范围 (1-255) , 出厂默认 (1) /Address range (1-255), factory default (1)
0x0006	压力单位 Pressure unit	1	Short	R/W	压力单位设置 / Pressure unit setting 0:Mpa 1:Bar 2:Psi 3:Kpa 4:mH2O 5:cmH2O 6: Pa
0x000A~0008	浮点数值压力值 Floating point pressure value	1	Float	R	32位压力浮点数, 默认高字节在前低字节在后 / 32-bit pressure floating-point number, default high byte before low byte after 如单位 (kPa) ,输出0x4100CCCD,即压力值=8.05kPa In units of kPa, output 0x4100CCCD, i.e. pressure value=8.05kPa
0x000E	高低字节切换 High and low byteswitching	1	Short	R/W	0: 高低字节不切换(8.05kPa=0x4100CCCD) 0: No switching between high and low bytes (8.05kPa=0x4100CCCD) 1:高低字节切换 (8.05kPa=0xCDC0041) 1: High and low byte switching (8.05kPa=0xCDC0041)
0x000F	清零 Zeroing	1	Short	W	清零, 压力在零点±5%F.S内, 发0x1234 Clear to zero, pressure within zero ± 5% F.S, send 0x1234

功能代码信息表 / Function Information

功能码 Code	功能名称 Function	报错代码 Error Code	异常代码 Exception Code
0x03	读取保持寄存器 Read holding register	0x83	02 or 03
0x06	写入单个寄存器 Write single register	0x86	02 or 03

部件名称 Parts	有害物质 / Harmful substances					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属外壳 Metal shell	○	○	○	○	○	○
螺钉 Screw	○	○	○	○	○	○
电路组件 PWBA	X	○	○	○	○	○
格兰头 Gland	○	○	○	○	○	○
金属堵头 Metal plug	○	○	○	○	○	○
阻尼器 Damper	○	○	○	○	○	○
底座 Base	○	○	○	○	○	○
本表格依据SJ/T11364的规定编制。 This table is prepared in accordance with the provisions of SJ/T11364. O:表示该有害物质在该部件所有均质材料中的含量在GB/T26572规定的限量要求以下。 O: Indicates that the content of the hazardous substance in all homogeneous materials of the component is below the limit requirements specified in GB/T26572. X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572规定的限量要求。 X: Indicates that the content of the hazardous substance in at least one homogeneous material of the component exceeds the limit requirements specified in GB/T26572. 未列入表内的其他部件, 皆不含任何超出限量要求的限制使用物质。 Other components not listed in the table do not contain any restricted substances that exceed the limit requirements.						

免责条款/Disclaimer clause

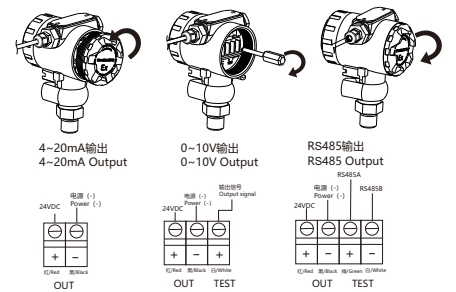
1.如果用户未按照制造商提供的操作指南和安装说明操作, 导致的任何损害或故障不在保修范围内
If the user does not follow the manufacturer's operating instructions and installation instructions, any damage or malfunction caused is not covered by the warranty

2.因超负荷使用导致的敏感元件损坏不属于保修条款覆盖的范围
Damage to sensitive components caused by overloading is not covered by the warranty clause

3.用户需遵守所有适用的安全规则和操作规程, 因用户违规操作导致的触电事故, 服务提供商或房东可能免责。
Users are required to comply with all applicable safety rules and operating procedures. Service providers or landlords may be exempt from liability for electric shock accidents caused by user violations.

4.如果租户或用户未经允许擅自改动电路或电器设备, 造成的触电事故, 责任自负。
If tenants or users modify circuits or electrical equipment without permission, resulting in electric shock accidents, they shall bear the responsibility themselves.

内部接线端子说明/Internal terminal wiring instructions



说明/Instructions
1.防水格兰头允许线径3-6mm
The allowable wire diameter for waterproof glands is 3-6mm
2.接线端子最大线径1-2.5mm
The maximum wire diameter of the terminal block is 1-2.5mm
3.接线端子的最大扭矩3N.M
The maximum torque of the terminal block is 3N.M
4.后盖锁紧力不小于5N.M
The locking force of the rear cover shall not be less than 5N.M

注意: 设备有接地线可接入壳体接地端
Attention: The equipment has a grounding wire that can be connected to the grounding terminal of the casing

警告 / Warning

- 安拆本产品时请勿带压操作。
Do not operate under pressure when disassembling this product.
- 安拆本产品时, 使用专业工具进行。
When disassembling this product, use professional tools.

其他说明 / Other Instructions

技术参数 / Technical Data

- 电源 / power supply: SELV (Safety Extra-Low Voltage).
- 工作电压 / Operating Voltage: 4~20mA DC:10~30V ≤21mA
0~10V DC:12~36V ≤15mA
RS485 DC:10~36V ≤15mA

注意: 电源请用隔离电源单独供电/Please use an isolated power supply for separate power supply

防爆安全注意事项/Explosion proof safety precautions

- 1.安装合规性: 安装时必须遵循国家或地区相关安全标准
Installation compliance: Relevant national or regional safety standards must be followed during installation
- 2.壳盖必须在危险场所使用时拧紧, 且通电时不得打开壳盖
The shell cover must be tightened when used in hazardous areas and must not be opened when powered on
- 3.接地要求: 变送器外壳必须良好接地, 以确保安全。
Grounding requirements: The transmitter casing must be well grounded to ensure safety.

防触电安全注意事项/Safety precautions for preventing electric shock

- 1.定期检查电线电缆的绝缘层是否破损。
Regularly inspect the insulation layer of wires and cables for damage.
- 2.加强个人的安全用电知识和技能训练, 了解正确的电器操作方法。
Strengthen personal safety knowledge and skill training on electricity usage, and understand correct electrical operation methods.
- 3.私自拆修电器, 使用合格的电器产品, 不超负荷使用电源插座。
Unauthorized disassembly and repair of electrical appliances, use qualified electrical products, and do not overload power sockets.

声明 / declaration

- 所有图例仅供参考, 请以实物为准
All illustrations are for reference only.Please refer to the real products.
- 保修期限请参考实际合同
Please refer to sales contracts for warranty period information
- 说明书如有变动, 恕不另行通知。
Subject to change without notice

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