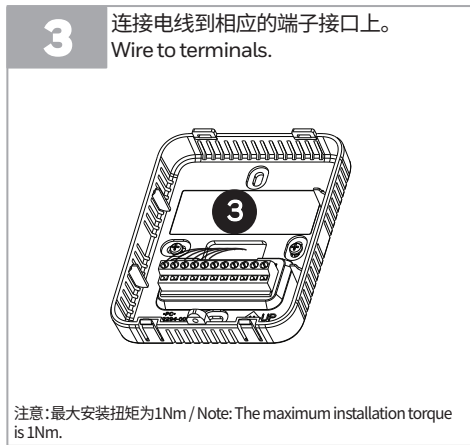
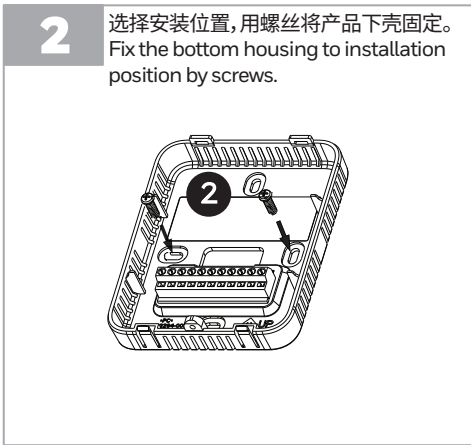
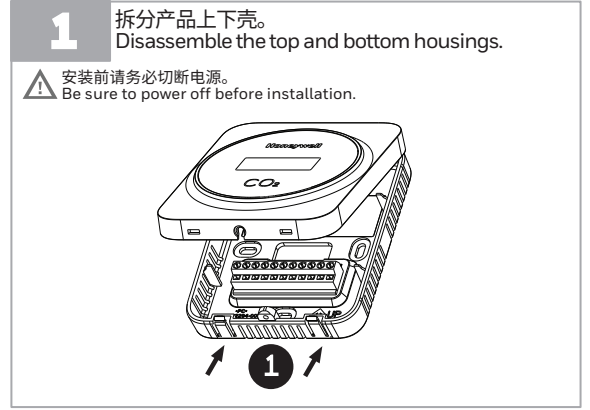
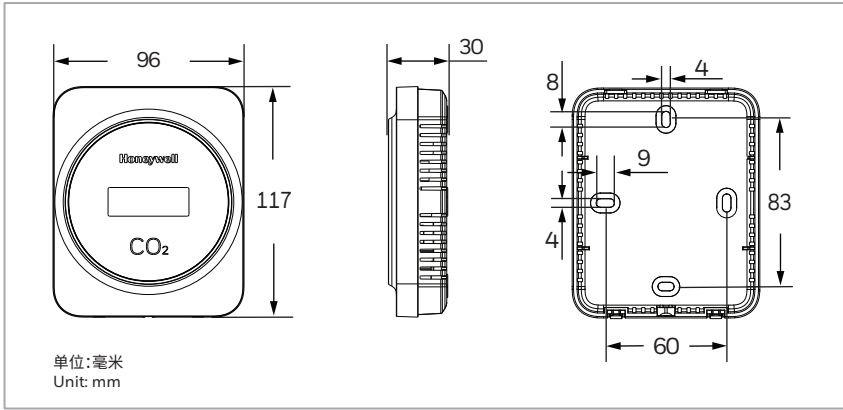


## 室内型二氧化碳传感器

### Room CO<sub>2</sub> Sensor

### 安装说明 / Installation Instructions



### 自动校准功能说明 / ASC (Automatic Self-Calibration)

- 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, 建议用户保持自动校准功能打开状态。自动校准出厂默认为打开状态。During the transportation and assembly process, the product may be affected by factors such as high temperature, drops, and vibrations, causing short-term reading deviations. It is recommended that users keep the automatic self-calibration function on. Cal is on is turned on by factory default.
- 开启自动校准功能, 需保证产品工作环境一天内的二氧化碳最低浓度达到400ppm (或者新鲜空气) 一小时。产品需要在这种环境中至少连续工作7天以上, 才能完成第一轮自动校准。至少三轮自动校准后, 产品读数更准确。To enable the Cal function, it is necessary to ensure that the minimum concentration of CO<sub>2</sub> in the product's working environment reaches 400ppm (or fresh air) for one hour within a day. The product needs to work continuously in this environment for at least 7 days before it can complete the first round of automatic self-calibration. After at least three rounds of automatic self-calibration, product readings are more accurate.
- 在以下两种情况下不建议使用自动校准:  
Cal function is not recommended to be used in below conditions:
  - 二氧化碳浓度长期低于400 ppm的环境, 如大棚;  
CO<sub>2</sub> concentration is below 400 ppm for long term, eg. greenhouse;
  - 二氧化碳浓度长期高于400 ppm的环境, 如密闭空间。  
CO<sub>2</sub> concentration is above 400 ppm for long term, eg. confined space.

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 the few security guidelines and tips that you must follow for the Honeywell sensors.

确保设备的物理安全。只有授权人员才能访问设备和总线。Ensure the physical security of the device. Only authorized personnel can access the device and bus.

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。Do not open the device or damage the appearance, resulting in internal exposure.

确保设备远离挥发性化学物质, 强酸、强碱、清洁剂等永久性损坏电路板。Keep the device away from volatile chemicals. Strong acids, strong alkalis, detergents and so on will 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。如果您发现任何安全漏洞, 请报告security@honeywell.com。  
Note: The above is the operation and safety management recommended by Honeywell, Honeywell, but it is not limited to this. If you find any security vulnerabilities, please report to security@honeywell.com.

### 基本款拨码开关说明 / CO<sub>2</sub> DIP Switch Instructions

- 型号 / SKU: HSCD-R1U, HSCD-R1UL, HSCD-R2U, HSCD-R2UL.
- 拨码位数量 / Number of Switches: 4
- 拨码开关状态 / DIP Switch Setting

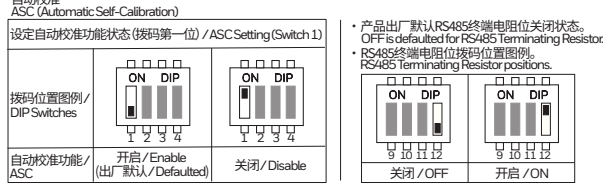
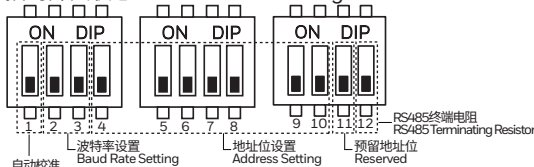
- 基本款输出信号设定 / CO<sub>2</sub> Output Signal Setting

设定自动校准功能状态 (拨码第一位) / ASC Setting (Switch 1)	
拨码位置图例 / DIP Switches	
自动校准功能 / ASC	开启 / Enable (出厂默认 / Defaulted)
	关闭 / Disable

设定输出信号 (拨码第二、三位) / Set Output Signal (Switch 2 and 3)		
拨码位置图例 / DIP Switches		
输出信号 / Output Signal	4 ~ 20 mA (出厂默认 / Defaulted)	0 ~ 10 V
		2 ~ 10 V

# 通讯款拨码开关说明 / CO<sub>2</sub> RS485 DIP Switch Instructions

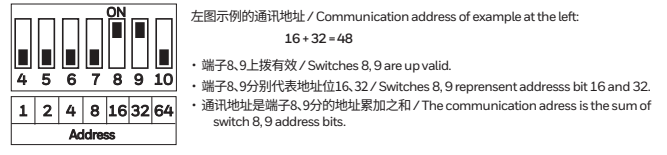
- 型号 / SKU: HSCD-R2M, HSCD-R2ML.
- 拨码位数量 / Number of Switches: 12
- 拨码开关状态 / DIP Switch Setting



## Modbus通讯波特率设置 / Modbus Baud Rate Setting

设定波特率 (拨码第二、三位) / Set Baud Rate (Switch 2 and 3)	
拨码位置图例 / DIP Switches	
波特率 / Baud Rate (出厂默认 / Defaulted)	9600, 4800, 19200, 38400

## Modbus地址位设置 / Modbus Address Setting



## Modbus通讯协议说明 / Modbus Protocol

### 寄存器地址信息表 / Register Address Information

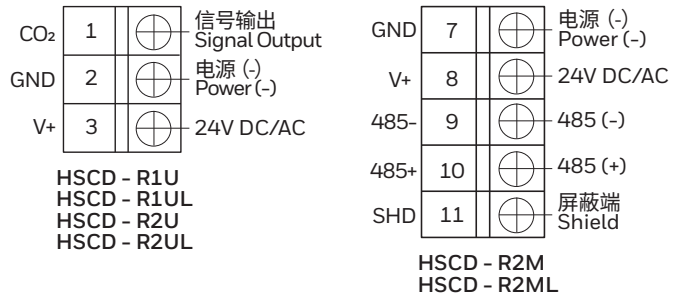
寄存器地址 ID	参数描述 Description	寄存器数量 Quantity	数据类型 Data Type	读写 Writable (R/W)	详细说明 Detailed Information
0x01	气体浓度 Gas Concentration	1	Short	R	当前气体浓度, 单位: PPM Current gas concentration, Unit: PPM
0x02	预留 / Reserved	1	Short	R	
0x03	预留 / Reserved	1	Short	R	
0x04	ASC位 ASC State	1	Short	R	ASC状态, 0-停用; 1-激活 ASC Status, 0-Deactiver; 1-Activate
0x05	FRC目标值 FRC Target Value	1	Short	R/W	写入该寄存器可以修改FRC数值, 范围是400-1000 ppm Modify FRC value after writing to this register, range is 400-1000 ppm
0x06	预留 / Reserved	1	Short	R	
0x07	预留 / Reserved	1	Short	R	
0x08	预留 / Reserved	1	Short	R	
0x09	报错代码 Error Code	1	Short	R	0-正常; 1-传感器报错; 2-系统报错 0-Normal; 1-Sensor Error; 2-System Error

### 功能代码信息表 / Function Code 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	01 or 02 or 03
0x06	写入单个寄存器 Write Single Register	0x86	01 or 02 or 03
0x10	写入多个寄存器 Write Multiple Registers	0x90	01 or 02 or 03

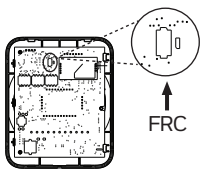
## 底壳接线说明 / Bottom Housing Wiring

- 允许接线线径 / Acceptable Wire Diameter: 15 ~ 22 AWG
- 端子螺丝允许最大扭矩 / Acceptable Maximal Torque of Screw: 1 Nm
- 端子接线说明 / Terminal Wiring Instructions



## 强制校准功能说明 / FRC (Forced Re-Calibration)

- 给产品通电, 将产品置于大气环境或400ppm标气环境中。Power up the product and place it in the atmosphere or in a 400ppm standard gas environment.
- 长按如下按钮4秒钟, 进入校准状态。Press and hold the button for 4 seconds to enter the calibration state.
- 不带LCD版本的产品, LED会慢闪。2秒亮2秒灭, 代表校准中。For products without LCD, LED will flash slowly. On for 2 sec and Off for 2 sec, means calibration is in progress.
- 带LCD版本的产品, 会如下图显示。Products with LCD will be displayed as below.
- 校准过程中, 必须释放手上静电, 并保持环境遮光避风, 二氧化碳浓度稳定。During the calibration process, it is necessary to release the static electricity on the hands, and keep the environment shielded from light and wind, and the concentration of CO<sub>2</sub> is stable.
- 11分钟后校准自动结束, 产品恢复正常显示。The calibration will end automatically after 11 minutes. The product will return to normal display.



## 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.

## 其它说明 / Other Instructions

- 技术数据 / Technical Data
  - 电源 / Power Supply: SELV (Safety Extra-Low Voltage).
  - 工作电压 / Operating Voltage: AC 24V ±20%, or DC 19.2...35V, or AC / DC 24V Class 2 (US).
  - 频率 / Frequency: 50/60 Hz at AC 24V.
- LED状态说明 / LED Status Description

适配型号 SKUs Applied	LED显示状态 LED Display Status	传感器状态 Sensor Status
HSCD-R1U HSCD-R2U HSCD-R2M	常亮 Always ON	启动中 Starting
	不亮 Always OFF	正常工作 Working Normally
	慢闪 - 2秒亮, 2秒灭 Slow Flash - 2 sec ON, 2 sec OFF	校准中 Calibrating
	快闪 1 - 1秒亮, 1秒灭 Flash 1 - 1 sec ON, 1 sec OFF	传感器错误 Sensor Error
	快闪 2 - 0.5秒亮, 0.5秒灭 Flash 2 - 0.5 sec ON, 0.5 sec OFF	系统错误 System Error

部件名称 Parts	有害物质 / Hazardous Substances					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
塑料外壳 Plastics Housing	0	0	0	0	0	0
螺丝 Screw	0	0	0	0	0	0
电路板组件 PWBs	X	0	0	0	0	0

本表格依据 SJ/T 11364 的规定编制。  
This table is prepared in accordance with the provisions of SJ/T 11364.  
O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。  
Indicates that the hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.  
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/T 26572 规定的限量要求。  
Indicates that the hazardous substance contained in at least one of the homogeneous materials for this part is above the limit requirement of GB/T 26572.  
未列入表内的其它部件, 皆不含任何超出限量要求的限制使用物质。  
All other components, not listed in the table, do not contain restricted substances above the threshold level.

WEEE 指令 2012/19/EC 废弃电气和电子设备指令  
WEEE 2012/19/EC Waste Electrical and Electronic Equipment Directive  
在产品寿命结束时, 在相应的回收中心处理包装和产品。请勿使用通常的生活垃圾处理方式处理该产品。请勿焚烧该产品。  
This product and package should be disposed of, at the end of its useful life, at the appropriate recycling center. Do not dispose of this product with common domestic waste disposal methods. Do not burn this product.