

# S01GL 隔离模块使用说明书

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## 一、产品型号及外观

| 型 号   | 功率(24VDC) | 外形尺寸       |
|-------|-----------|------------|
| S01GL | 0.48VA    | 30*95*82mm |



## 二、指示灯说明

- 1、POW: 电源指示灯，绿色。常亮 - 电源正常；不亮 - 电源异常。
- 2、LINK: 当设备有数据传输时闪烁。

## 三、电源规格

| 项 目            | DC 直流电源              |
|----------------|----------------------|
| 输入电压           | DC24V -15%~+20%      |
| 电源频率           | —                    |
| 瞬间电涌           | MAX 20A 1.5ms @24VDC |
| 允许瞬间断电时间       | 10ms 以内              |
| 电源保险丝          | 0.3A, 250VAC         |
| 24V 输出(输入及外设用) | 无                    |
| 隔离方式           | 变压器隔离                |
| 电源保护           | 直流输入电源极性反接、过压保护      |

## 四、产品环境规格

| 项 目   | 环 境 规 格                                                 |
|-------|---------------------------------------------------------|
| 温度/湿度 | 工作温度: 0~+55 °C 储存温度: -25~+70 °C 湿度: 5~95%RH, 无凝露        |
| 抗振动能力 | 10~57Hz 振幅 0.075mm, 57Hz~150Hz 加速度 1G, X、Y、Z 三轴方向各 10 次 |
| 抗冲击能力 | 15G, 持续 11ms, X、Y、Z 三轴方向各 6 次                           |
| 抗干扰能力 | DC EFT: ±2500V                                          |
| 耐压能力  | DC 端子对地线端子间 500VAC, 1 分钟                                |
| 绝缘阻抗  | DC 端子对地线端子间 500VDC, 5MΩ以上(所有输入/输出点对地间 500VDC)           |
| 使用环境  | 防尘、防潮、防腐蚀、免受电击及外力冲击等环境                                  |

## 五、模块功能说明

通讯隔离模块是一款用于串口通讯接口的隔离模块。一个 S01GL 模块可由一个 RS485 隔离并转为一个 RS232 口或 RS485 口，具体选择何种接口方式通讯，由用户自行决定，而无需对其设置参数，接线示意图见后面章节；支持 Modbus RTU/ASCII 协议、自由通讯协议、Haiwellbus 高速通讯协议，波特率 1200~115200bps。

## 六、通讯模块端子配线图

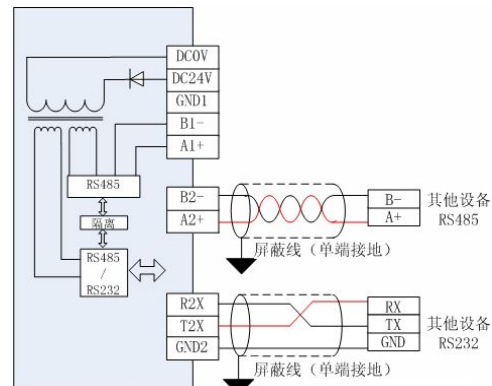
|       |     |       |     |
|-------|-----|-------|-----|
| RS232 | T2x | RS485 | A1+ |
|       | R2x |       | B1- |
|       | DG2 |       | DG1 |
| RS485 | A2+ | DC IN | 24V |
|       | B2- |       | 0V  |

S01GL 配线图

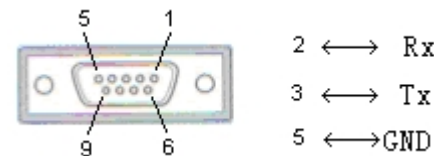
### 1、接线原则:

| 隔离方式        | 接线端子    |             |
|-------------|---------|-------------|
|             | 通讯输入    | 隔离输出        |
| RS485/RS485 | A1+、B1- | A2+、B2-     |
| RS485/RS232 | A1+、B1- | T2x、R2x、DG2 |

## 七、接线示意图



S01GL 接线图



计算机侧 (RS-232) DB9 母头

## 八、模块的安装

### 导轨安装方式

与 S01GL 相配的导轨规格: 标准 35mm 导轨。

### 螺丝安装方式

每台通讯隔离模块均有两个螺丝定位孔，其孔径为 4.5mm，定位孔的位置请参考产品外型尺寸图，两个定位孔的中心间距为 91mm。

感谢您选用 Haiwell PLC，若您对我们的产品或服务有问题或不足之处，敬请告诉我们！

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## 1. Product Model List

| Model | Power Consumption (24VDC) | Dimension  |
|-------|---------------------------|------------|
| S01GL | 0.48VA                    | 30*95*82mm |



## 2. Indicator Description

- ① POW: Power indicator, green. ON - Power good; OFF - Power error.  
 ② LINK: Communication indicator, green. Flashing - When the device is transmitting data.

## 3. Power Supply Specification

| Item                                          | DC Power Supply                                        |
|-----------------------------------------------|--------------------------------------------------------|
| Power Supply Voltage                          | DC24V -15%~+20%                                        |
| Power Supply Frequency                        | —                                                      |
| Instantaneous Surge                           | MAX 20A 1.5ms @24VDC                                   |
| Power Loss Time                               | 10ms or less                                           |
| Fuse                                          | 0.3A, 250VAC                                           |
| 24V Output Voltage (for output and extension) | None                                                   |
| Insulation Type                               | Transformer isolation                                  |
| Power Protection                              | DC input reverse protection and overvoltage protection |

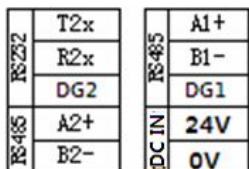
## 4. Environmental specifications for Product

| Item                    | Environment Specification                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------|
| Temperature/Humidity    | Operating temperature: 0~+55℃ Storage temperature: -25~+70℃ Humidity: 5~95%RH, No condensation       |
| Vibration Resistance    | 10~57 HZ, amplitude=0.075mm, 57HZ~150HZ acceleration=1G, 10 times each for X-axis, Y-axis and Z-axis |
| Impact Resistance       | 15G, duration=11ms, 6 times each for X-axis, Y-axis and Z-axis                                       |
| Interference Immunity   | DC EFT: ±2500V                                                                                       |
| Over Voltage Resistance | 500VAC/1min between DC terminal and PE terminal                                                      |
| Insulation Impedance    | ≥ 5MΩ between DC terminal and all input/output points to PE terminal @500VDC                         |
| Operating environment   | Avoid dust, moisture, corrosion, electric shock and external shocks                                  |

## 5. Module function specification

The S01GL module is a solution for serial communications isolation. It can convert the communication interface from RS485 into RS232 or RS485 in an isolated manner. Specific choice of what kind of interface mode depends on the user himself and need not to set the parameters, just to wire as the following wiring diagram. It supports the Modbus RTU/ASCII protocol, Freeport communication protocol and Haiwellbus high-speed communication protocol, with baud rate from 1200 to 115200 bps.

## 6. Terminal Wiring Diagram

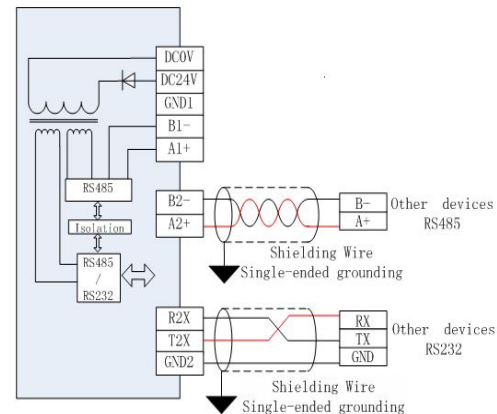


S01GL wiring diagram

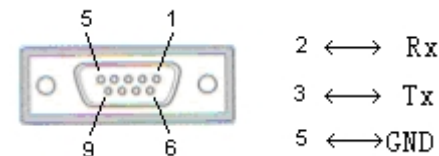
### 1. Wiring principle:

| Isolation mode | Terminal |               |
|----------------|----------|---------------|
|                | Input    | Output        |
| RS485/RS485    | A1+, B1- | A2+, B2-      |
| RS485/RS232    | A1+, B1- | T2x, R2x, DG2 |

## 7. Wiring diagram



S01GL wiring diagram



The computer side DB9 female head (RS-232)

## 8. Mounting and installation

**Rail Mounting:** Use standard 35 mm rail.

**Screw Mounting:** Each communication isolation module has two positioning screw holes, the diameter of the hole is 4.5mm. Please refer to the dimension figure for the location of the positioning holes and their spacing.

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