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CHINESE STATE OWNED COMPANY

# 晟高中&英文安装指导

## Installation Guide for SUNGO (CN & EN)

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与阳光同行，优化不停

GO WITH SUNSHINE, ALWAYS OPTIMIZED

# 1 to 2 Rapid Shutdown Devices SUNGO RSD-2 & Rapid Shutdown Transmitter SUNGO SD Quick Installation Guide

Document version: SUNGO-RSD-2<sup>IM</sup>-V1-2024 EN  
 Release Date: 2024.5

## 1 Product Overview

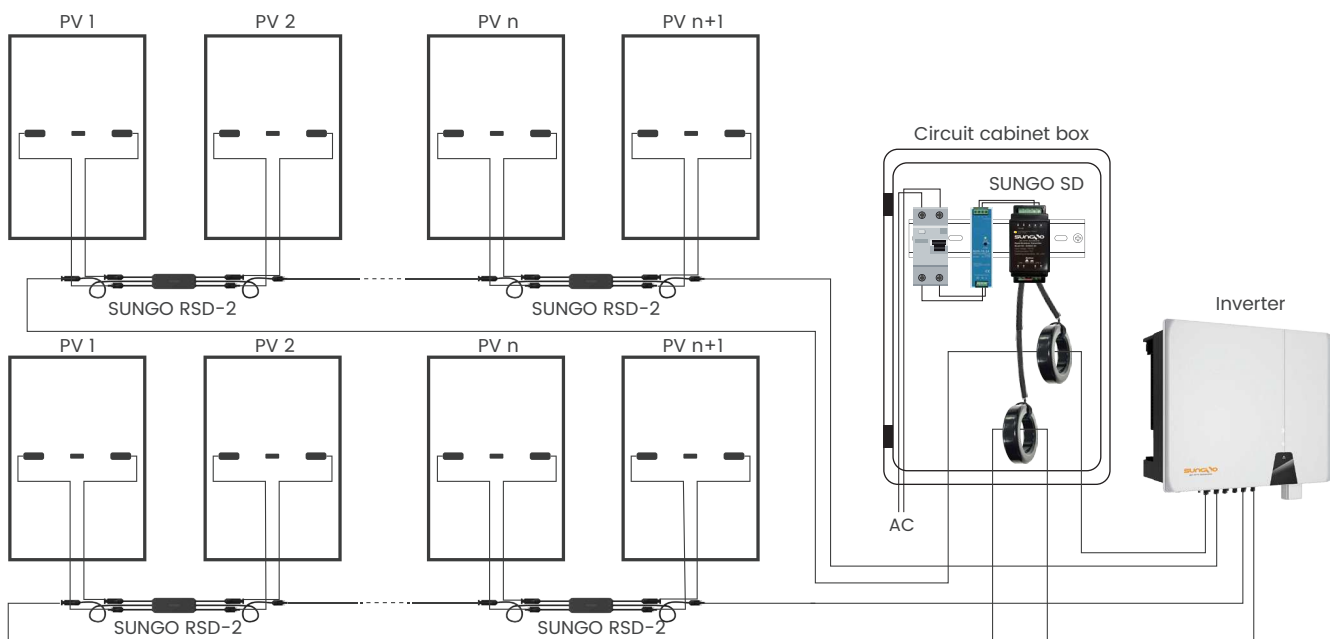


**1 to 2 Rapid Shutdown Devices  
 SUNGO RSD-2**



**Rapid Shutdown Transmitter  
 SUNGO SD**

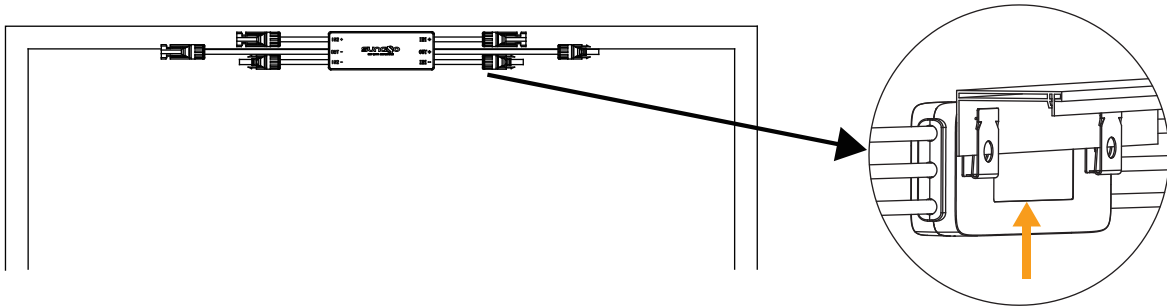
SUNGO RSD-2 is a 1 to 2 rapid shutdown devices, which maintains normal power-on operation by continuously receiving heartbeat frames sent from SUNGO SD, and when the SUNGO SD signal disappears, SUNGO RSD-2 performs a rapid shutdown operation. Users can turn off the power of SUNGO SD to realize the rapid shutdown of the system, complying with NEC 2017&2020 (690.12) specifications.



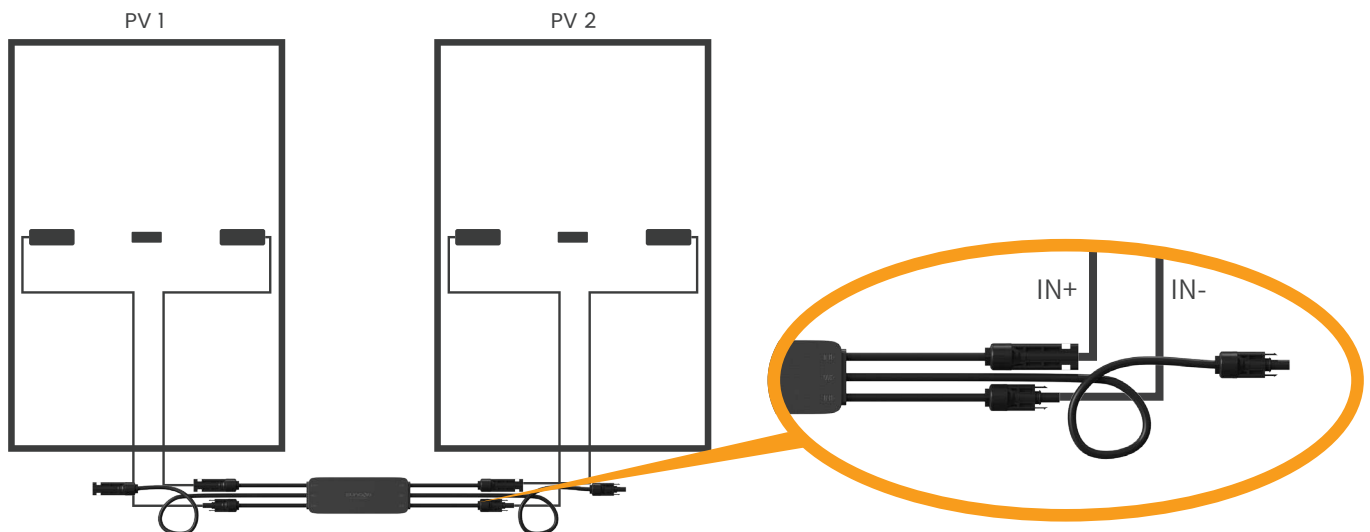
**System Wiring Diagram**

## 2 SUNGO RSD-2 Product Installation

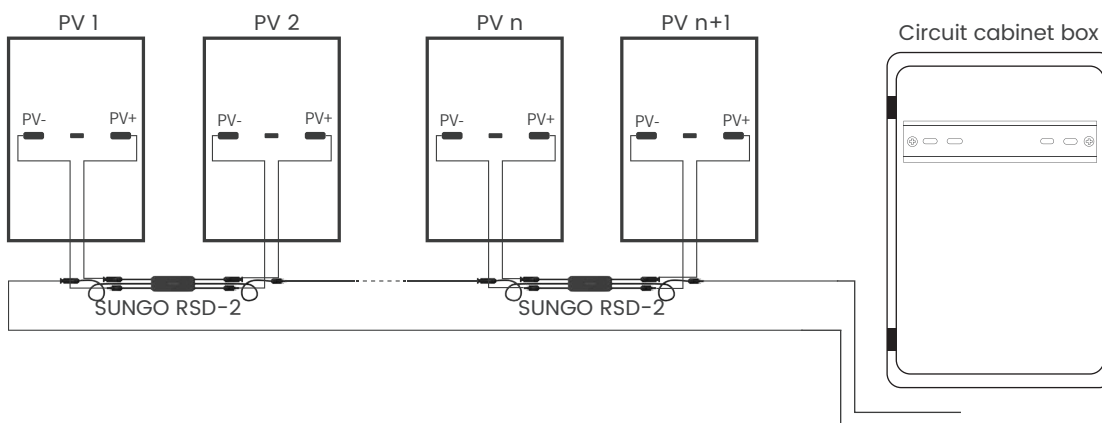
1. Install the RSD-2 by snapping the RSD-2 upward onto the PV module frame.



2. Connect IN+ and IN- of RSD-2 to the positive and negative terminals of the first and second PV module junction boxes respectively, and so on.



3. Connect two adjacent RSD-2 output ports in series and then connect them to the circuit cabinet box with a homemade DC extension cable.



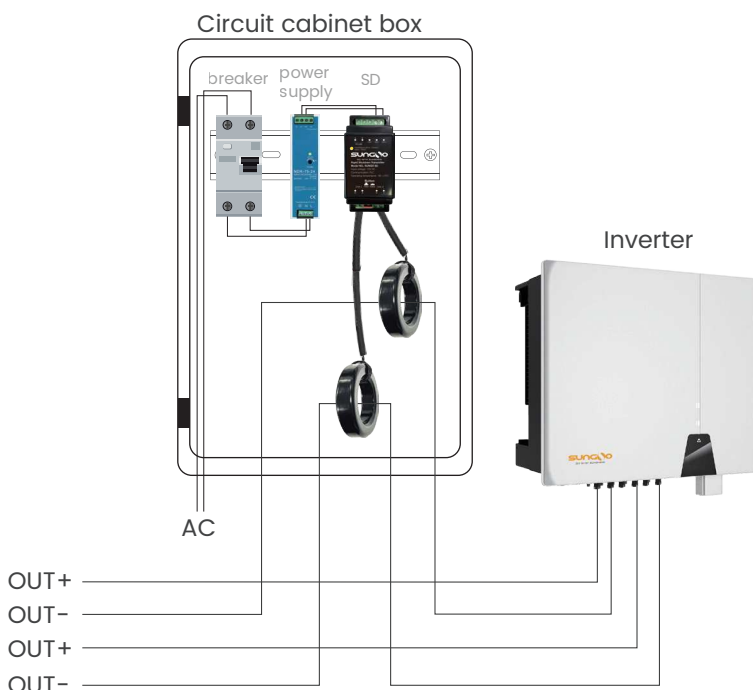
### 3 SUNGO SD Product Installation

1. Install the SD in the electrical cabinet box (must be waterproof) near the inverter. This product is divided into two ways of use: Host and Slave.

**Note:** This product is used on the user's side, a single magnetic ring can wear the PV module bus up to 5 strings, a single product hooked up to two magnetic rings, a total of 10 strings can be the maximum number of group strings. \*Need to reduce the number of strings according to the field wiring distance, Ensure PLC communication is working properly.



2. Connect the PV string OUT+ to the inverter PV+.
3. Connect the PV string OUT- to the inverter PV- through the SD magnetic ring.



Note: The SD can accommodate a string with a maximum round trip distance of 300 meters from positive to negative.

### Function debugging:

When used as a Host (number of SDs used in the power station = 1)

There is no need to connect RS-485 line, just connect DC power supply 12V+, 12V-, and Button button is placed at Host (normally open state). The Host function can be realized.

When used as a Master/Slave (power station using SD number > 1)

#### 1. Master/Slave definition:

Host definition: choose the one that defines the closest distance to the inverter to transmit the magnetic ring through which the PV module passes as the SD Host.

Slave definition: In the same power station, all except the master are slaves.

#### 2. Master/Slave Function Selection:

Host function: the host needs to put the Button button to Host (normally open state);

Slave function: the slave needs to put the Button button to Slave (normally closed state).

#### 3. Host/Slave connection mode (Twisted pair cable for RS-485 communication is required):

①. RS-485 line needs to connect RS-485 B of the master to RS-485 B of the slave, and RS-485 A of the master to RS-485 A of the slave;

②. The subsequent slaves need to access RS-485 B at the RS-485 B end of the last slave that has been connected to the host; and RS-485 A at the RS-485 A end of the slave that has been connected to the host.

③. The back of the expansion of SD slaves in turn from the last SD has been able to receive the RS-485 signal, access to the RS-485 signal.

④. The host running light shows yellow, the slave running light shows red; all the running lights flashing synchronously, indicating that the signal is normal, if there is no flashing indicates that there is a problem in receiving RS-485 signals, please check the wiring.



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# 一拖二快速关断器SUNGO RSD-2 & 快速关断信号发生器SUNGO SD快速安装指南

文档版本: SUNGO-RSD-2<sup>IM</sup>-V1-2024 CN  
发布日期: 2024.5

## 1 产品概述

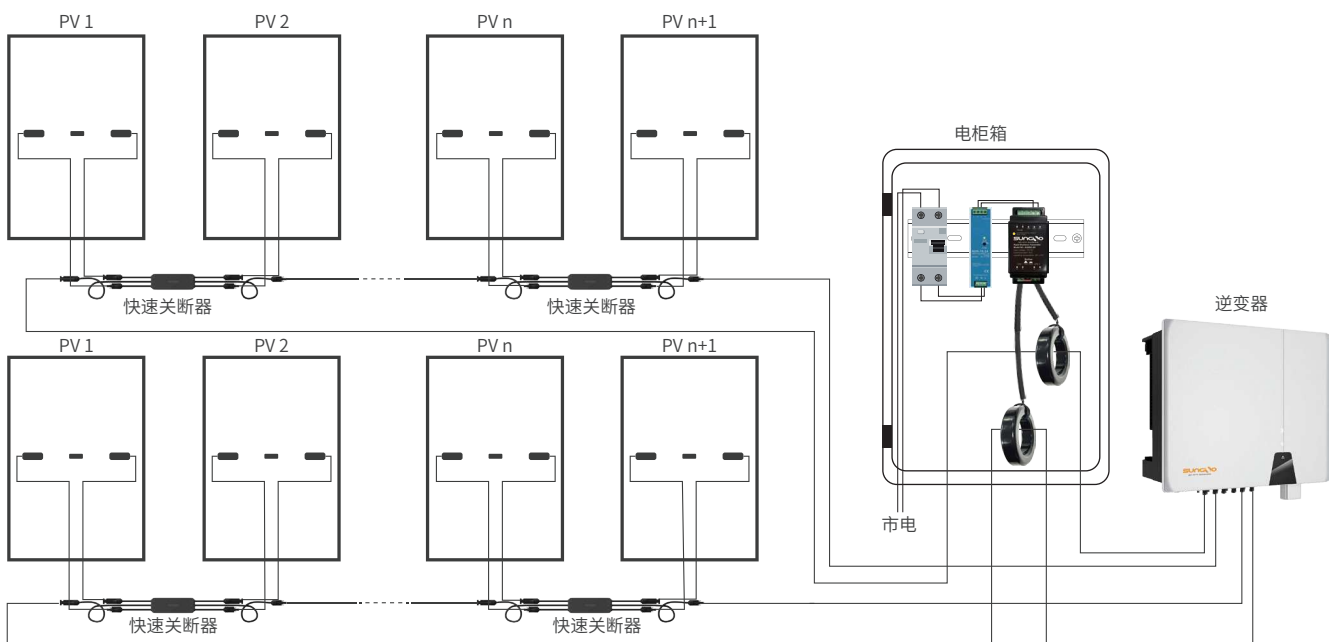


一拖二快速关断器  
SUNGO RSD-2



快速关断信号发生器  
SUNGO SD

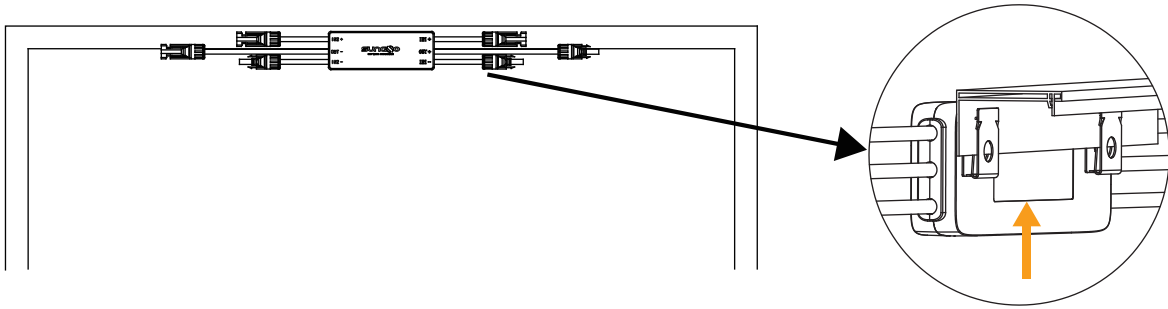
SUNGO RSD-2是一拖二光伏快速关断器,通过不断的接收 SUNGO SD 发送过来的心跳帧维持正常开机工作,当 SUNGO SD 信号消失时,SUNGO RSD-2进行快速关断操作。用户可通过关闭 SUNGO SD 的电源,实现系统快速关断,符合NEC 2017&2020(690.12)规范。



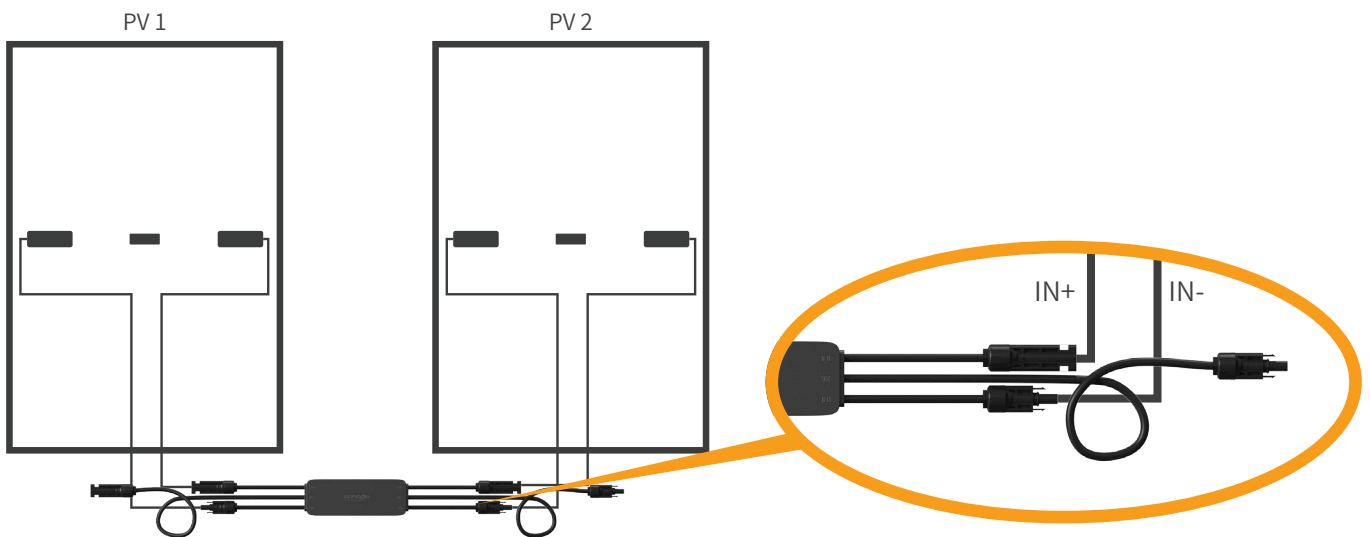
系统接线图

## 2 SUNGO RSD-2产品安装

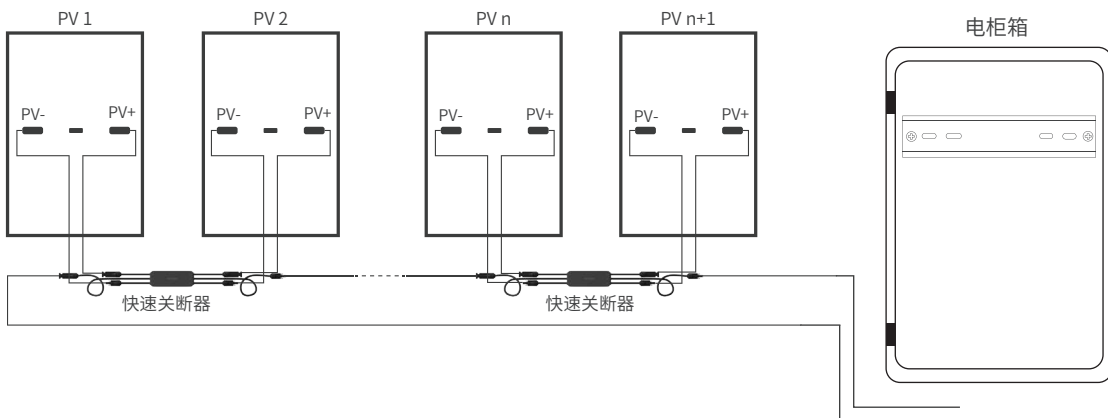
1. 安装RSD-2, 将 RSD-2 向上卡入光伏组件边框上。



2. 将 RSD-2 的 IN+、IN- 分别连接第一块和第二块光伏组件接线盒的正负极接线端，以此类推。



3. 将两个相邻 RSD-2 的输出端口串联起来, 然后用自制的直流延长线连接到电柜箱。





### 3 SUNGO SD产品安装

1. 将SD安装在逆变器附近的电柜箱 (必须防水) 内, 本产品分为主机与从机两种使用方式。

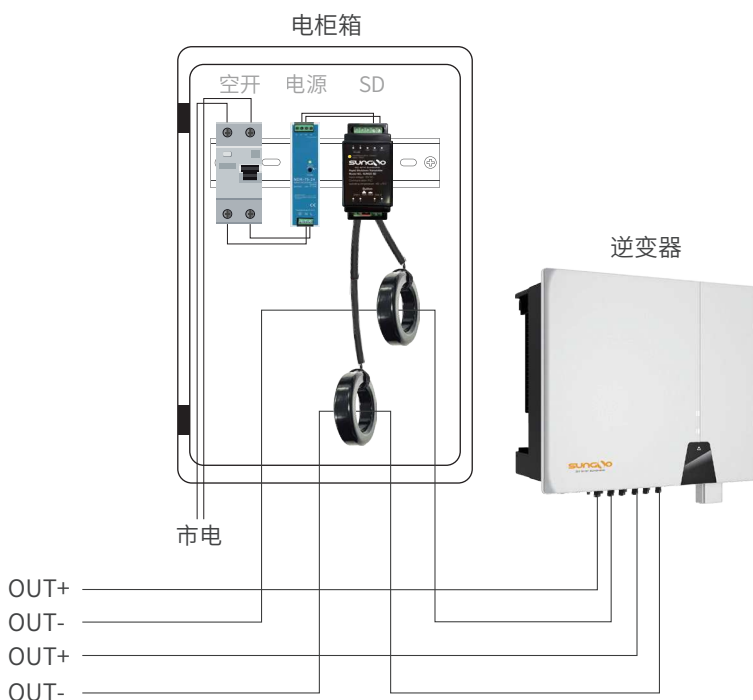
**注意:** 本产品为用户侧使用, 单个磁环可穿光伏组件总线最大5串, 单产品挂接两磁环, 总共可最大组串数为10串。

\*需要依据现场布线距离来减少串数, 确保PLC通信正常。



2. 将光伏组串OUT+连接到逆变器PV+。

3. 光伏组串OUT-穿过SD磁环后连接到逆变器PV-上。



说明: SD可容纳一个组串从正极到负极最大往返距离线长为300米。

## 功能调试:

作为主机使用时(电站使用SD数量=1个)

无需接入RS-485线,只需将直流电源12V+, 12V-接入, Button按钮置于Host处(常开状态)。即可实现主机功能。

作为主从机使用时(电站使用SD数量>1个)

### I、主/从机定义:

主机定义:选择定义距离逆变器最近传输光伏组件所通过磁环的一只作为SD主机。

从机定义:同一电站中,除主机以外都是从机。

### II、主/从机功能选择:

主机功能:主机需将Button按钮置于Host(常开状态);

从机功能:从机需将Button按钮置于Slave(常闭状态)。

### III、主/从机连接方式(需要用到RS-485通信专用的双绞线):

①、RS-485线需要将主机的RS-485 B接入从机的RS-485 B,将主机的RS-485 A接入从机的RS-485 A;

②、后续的从机,需要在上一个已与主机连接的从机RS-485 B端接入RS-485 B;已与主机连接的从机RS-485 A端接入RS-485 A。

③、后面扩展SD从机就依次从上一个已能接受到RS-485信号的SD,接入RS-485信号。

④、主机运行灯显示为黄色,从机运行灯显示为红色;所有的运行灯同步闪烁,说明信号正常,如果没有闪烁说明接收RS-485信号有问题,请检查接线。



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