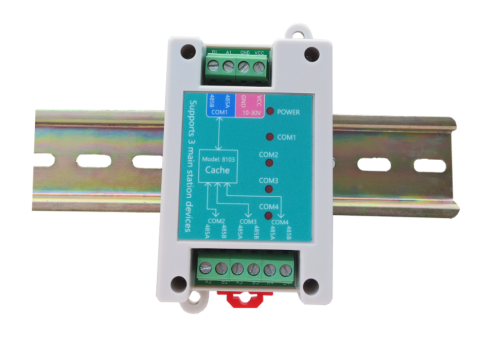
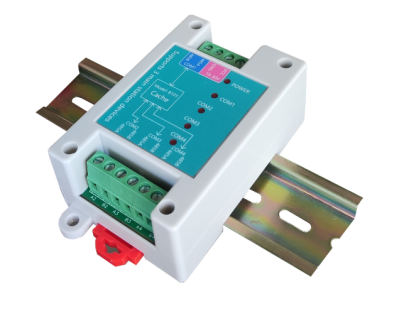
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Three masters and one slave RS485 data processor

User Guide (Simple Instructions)

User Guide



Version number V1.000

1.1 Overview

YR-8103 three-master-one-slave RS485 data processor is a high-performance communication device specially designed to solve the data conflicts caused by the communication between three hosts and one slave. In actual industrial control and monitoring scenarios, multiple hosts sending requests at the same time will cause data conflicts and affect the stability and reliability of the system. The processor achieves high-speed and stable communication by connecting three hosts and one slave to an RS485 interface. The processor supports multiple protocols and has adjustable baud rate to meet the communication needs of various scenarios. In addition, the processor also has excellent rail installation and compact features, which is convenient for installation and use in limited space. In short, this three-master-one-slave RS485 processor is a high-performance, reliable industrial equipment that can stably and efficiently solve the data conflicts caused by the communication between three hosts and one slave, improve the stability and efficiency of the entire system, and is a product that is very worthy of recommendation and use.

1.2 Features

1. This product adopts reliable power supply mode, 9-24V power input

2. Support adjustable baud rate, which can be selected between 1200 bps and 230400 bps

3. The product supports multiple protocols and can be connected to meet the needs of different application scenarios

4. Support MODBUS RTU communication protocol, convenient and fast data transmission and remote control

5. With computer parameter configuration software, users can easily configure and debug

6. The characteristics of rail installation, occupying a small space

7. Data processors process data faster than data buffers

8. 4 groups of RS485 interfaces, with ESD interface protection

1.3 Safety precautions

1. Before using this product, please read this instruction manual carefully, use it correctly, and keep it properly for reference at any time.

2. If the failure or abnormality of this product may cause an accident in the system, please set up an appropriate protection circuit to prevent the accident.

3. To reduce electrical interference, the connection lines of low-voltage DC signals and sensor inputs should be kept away from strong electrical lines.

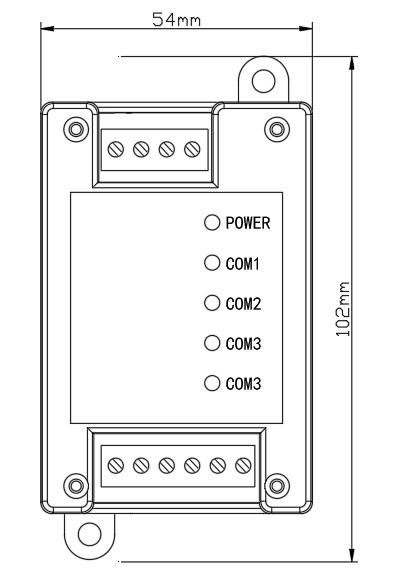
4. Shielded wires should be used and grounded at one point.

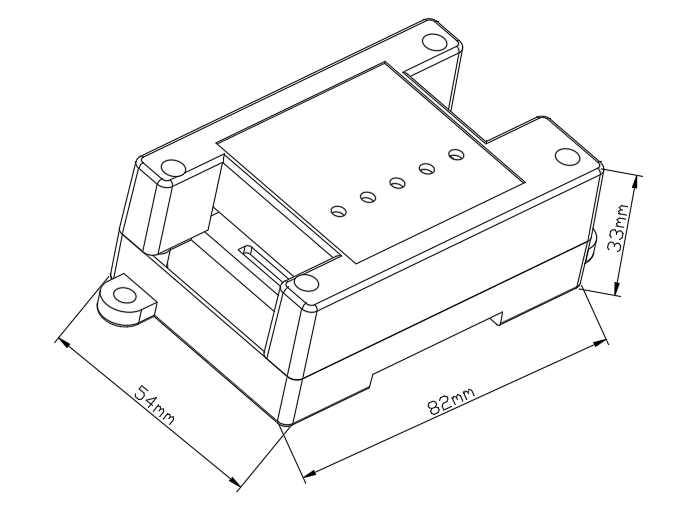
5. This product is suitable for installation in electrical cabinets and boxes, and should be kept as far away as possible from equipment that may generate strong electromagnetic induction interference.

1.4 Main technical parameters

|  |  |
| --- | --- |
| model | YR-8103 |
| Power supply | DC9-24V |
| Protocol | Transparent transmission, support any protocol |
| Baud rate | 1200-230400bps |
| Product Size | 102\*54\*33mm |
| Usage Environment | -20℃～50℃ |
| processor | Adopt 32-bit MCU processor with fast processing speed |

1.5 Product size

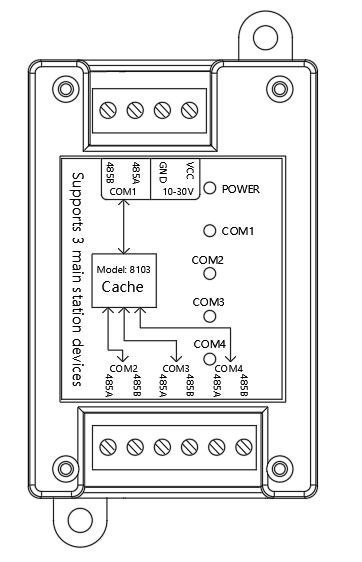




1.6 Wiring Instructions

Slave Device

1 or N



Power supply

DC9～24V

Master device 1

Master device 3

Master device 2

1.7 Computer Software Description

1. Computer Software Instructions

When the computer configures the module parameters, the computer's RS485 needs to be connected to the module's COM1 port RS485.

After the module is powered on, all five indicator lights will light up. At this time, click the connection of the computer configuration software.

Notice:

The module can be configured only during the first five seconds after it is powered on.

Five seconds before the module is powered on, all the indicators will light up.

Computer software, please contact customer service to obtain it.

1. Software Page



(3) Troubleshooting: There may be many reasons why RS485 communication connection fails. The following are some common problems that may cause connection failures and their troubleshooting methods:

1. Wiring error: Check whether the connection line is connected correctly and whether there is any wiring error. Make sure the connection line is not short-circuited.

2. Baud rate setting error: Make sure the baud rate of the connected device is consistent with the baud rate parameter on the RS485 communication device.

3. The device address is set incorrectly: Check whether the connected device has the correct address set.

4. Transmission distance is too far: RS485 communication has a limited transmission distance. If the distance is too far, the communication connection will fail. This problem can be solved by adding a signal booster.

5. Equipment failure: Sometimes the communication device itself may fail, resulting in a connection failure. In this case, you need to check whether the hardware of the device is normal, including whether the power supply is stable and whether there is any physical damage.

6. Program or protocol error: RS485 communication may also have program or protocol related problems. You can reconfigure parameters, protocols or replace software to solve the problem.

In summary, it is necessary to eliminate the problems one by one according to the actual situation to determine the specific cause of the connection failure. You can eliminate the common problems step by step according to the above, which can provide some help in solving the connection failure.