

Guarantee regulations

1. Our products are guaranteed for five years and life-long maintenance from the date they are purchased from one of our authorized distributors or dealers. If another agreement is made, it shall be followed.
2. If there are any quality issues with the product during the warranty period, the company will repair and maintain it for free.
3. We do not provide warranty service for equipment damage caused by improper operation, human error, unauthorized disassembly, accident or disaster, and unauthorized products.



8 Channel RS-485/422 Serial Gateway Manual

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【Product Overview】

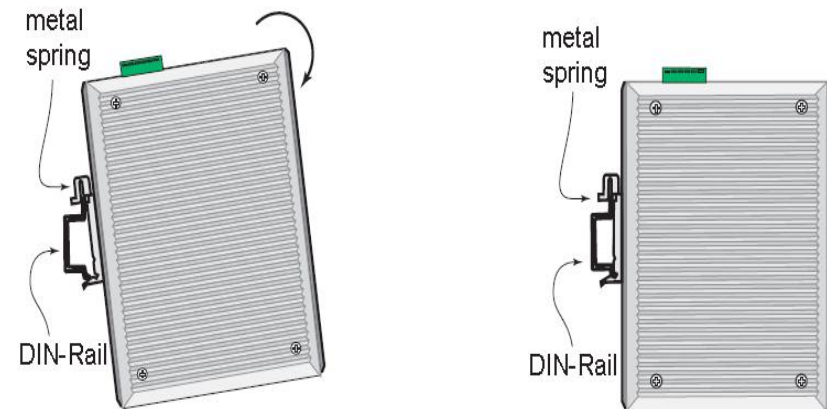
The 8-channel RS-485/422 Serial Gateway adopts high-strength IP40 protective housing, industrial grade EMC design, supports Auto-Negotiation adaptive technology, provides a comprehensive LED status indicator, supports redundant wide voltage 12~48VDC power input to increase the reliability of the communication network. It is a Serial Gateway independently developed by Shenzhen Comark Technology Co.,Ltd. Double IP design, provides 2*10/100Base-T (x) RJ45 ports and 8-channel RS-485/422 serial ports. It is easy and convenient to centralize the management of decentralized serial devices and hosts through the network., the communication rate supports 300~460800bps optional. Built-in Modbus TCP, Modbus RTU and Modbus ASCII protocol make it easy for users to connect Modbus Ethernet devices to Modbus serial devices. Base on industrial installation requirements, DIN35 rail or Wall Mounting installation mode provided. The product adopts excellent network scheme in the industry, -40~85°C working temperature range, can satisfy all kinds of industrial site requirements, provide convenient serial port communication solutions.

【Performance Feature】

- Conform to IEEE802.3/802.3u standard, store and forward Exchange Mode;
- Provide 2*10/100Base-T (x) RJ45 Ethernet ports, support Auto-Negotiation technology, automatic negotiation work rate (10M/100M) and duplex mode (half duplex/ full duplex), MDI/MDI-X self-adaption;
- Provide 8-channel RS-485/422 serial ports, provide TCP server, TCP client, UDP , ModbusTCP(RTU_MASTER),ModbusTCP(RTU_SLAVE),ModbusTCP(ASCII_MASTER),ModbusTCP(ASCII_SLAVE) seven serial transmission modes, 300~460800bps line speed non-blocking communication;
- Support 8 serial ports' isolation function, Power Isolation 3KV,Signal Isolation 2.5KV,ESD Protection 15KV;
- Conform to TCP、IP、UDP、ModbusTCP、ModbusRTU、ModbusASCII、ARP、ICMP、HTTP and TFTP Client protocols;
- Support RTU Master, ASCII Master mode, maximum support 16 TCP master connections in this mode;
- Support RTU Slave、ASCII Slave mode, maximum support 32 TCP slave connections in this mode;
- Support Slave ID mapping function, maximum support 32 mappings;
- Support Web management;
- Support serial port settings, can connect two serial devices through network for serial

the upper part).

Step 4: After the DIN rail is jammed into the DIN rail connection, check and confirm that the product is securely mounted on the DIN rail.



【Package List】

First use of the Serial Gateway, please check if the package comes with all the accessories. The 8-channel RS-485/422 Serial Gateway packing list is as follows:

- 8-channel RS-485/422 Serial Gateway 1 pcs(with industrial terminal for power supply)
- Manual 1pcs
- Warranty card 1pcs

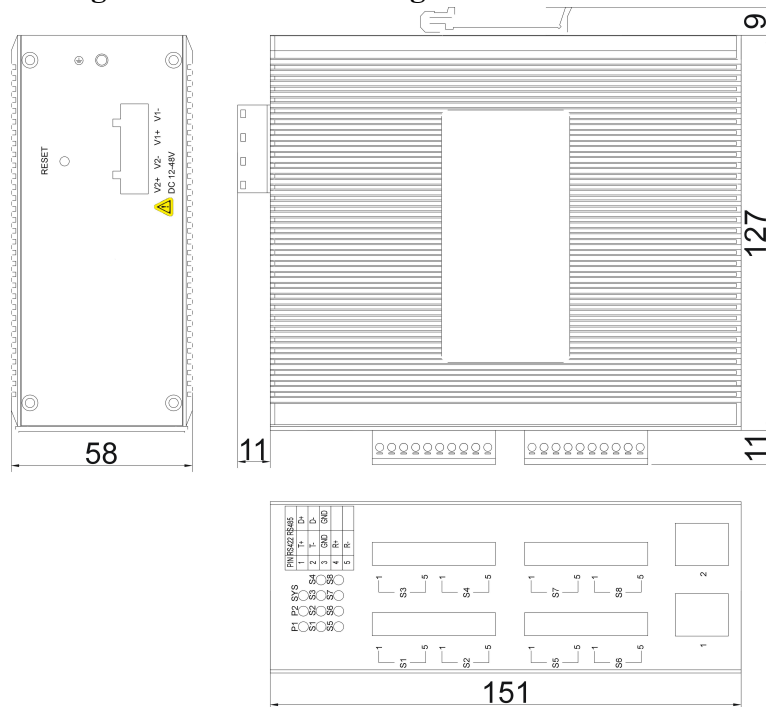
【Pay Attention】

- Please configure DC 12~48V Industrial Standard power supply, typical voltage value is 12V/24V/48V.
- This equipment belongs to the precision communication equipment, Please make sure the grounding of the device is done properly. Equipment grounding is a special grounding screw on the side plate, and a special grounding wire should be used for grounding during installation.

【Product Series List】

Product model	Specifications introducing
MG5028	8-channel RS-485/422 Serial Gateway,2*10/100Base-T(X) RJ45 ports, double IP design, 8-channel RS-485/422 serial ports,-40°C ~85°C.

【Grounding and Power Connecting】



- Equipment grounding: Serial network shut down side plates have a grounding screw, this point to connect the grounding line end, the other end of the computer room to reliably access the Earth. Grounding line requires at least 2.5 mm², grounding resistance requirements under 5Ω.
- Power supply and negative pole: The power supply voltage range is DC12~48V, please use 0.75m² above high-quality copper wire.
- RESET: Restore the factory settings button, long press more than 5 seconds to restore factory settings.

【DIN Guide Rail Installation】

The use of 35mm standard DIN rail type installation, in most industrial applications is very convenient, its installation steps are as follows:

Step 1: Check if you have the DIN-rail Rail installation tool Accessories (this product has been provided with mounting fittings).

Step 2: Check whether the DIN rail is fixed and strong, and if there is a suitable location for installing this product.

Step 3: Connect the bottom of the DIN rail of the product fittings to the DIN rail (with the spring support), and then the upper part of the connector is jammed into the DIN rail (the lower part is a little bit, a little harder to keep the device balance stuck in

data transmission;

- Support through gateway, cross-routing communication;
- Low-power consumption design;
- Metal housing with IP40 and high level EMC protection;
- support redundant wide voltage 12~48VDC power input;
- -40~85℃ Working temperature range.

【Detailed Specification】

Technology

- standard:IEEE802.3,IEEE802.3u

Port

- RJ45 port: 10/100BASE-T(X) Auto-Negotiation speed,full/half duplex mode and MDI/MDI-X self-adaption;
- Serial port: RS-422 supports R-, R+, T-, and T+ full-duplex modes,RS-485 supports A and B half-duplex working mode; RS-485/422 communication rate support 300~460800bps optional, isolated voltage 500V AC; Built-in ModbusTCP and ModbusRTU and ModbusASCII protocols, support RTU Master mode, maximum support 16 TCP master connections in this mode; support RTU Slave、ASCII Slave mode, maximum support 32 TCP slave connections in this mode; support Slave ID mapping function, maximum support 32 mappings;

Serial Port Attribute

- Standard: RS-485/422;
- RS-422 signal: T+, T-, R+, R-, GND;
- RS-485 signal: D+, D-, GND;
- Check bits: None, Even, ODD;
- Data bits: 5bit, 6bit, 7bit, 8bit;
- Stop bits: 1bit, 2bit;
- Baud rate:300~460800bps;
- Directional control: RS-485 adopts data flow auto control technology;
- Load capacity: RS-485/422 port supports 32 points polling environment (128 points customizable);
- Interface form: RS-485/422 port adopts 5-bit 3.84mm spacing terminal;
- Interface protection: 4000V surge protection.

Indicator Lamp

- Power indicator: P1/P2;
- System running indicator: SYS;
- Serial port data status indicator: S1/S2/S3/S4/S5/S6/S7/S8.

Power

- Input: Redundant wide voltage 12~48V DC power input, typical working voltage 12V/24V/48V, using 5-cores 7.62mm industrial power terminal;
- Idle running power: 0.957W@24VDC;
- Full-load power: 1.199W@24VDC.

Mechanical Features

- Dimension(W×H×D): 151mm×58mm×127mm;
- Net weight: 800g;
- Housing: Metal, IP40 protection;
- Installation: Wall mounting or DIN rail mounting.

Operating Environment

- Working temperature: -40°C~85°C;
- Storage temperature: -40°C~85°C;
- Relative humidity: 5% ~ 95% (no condensing).

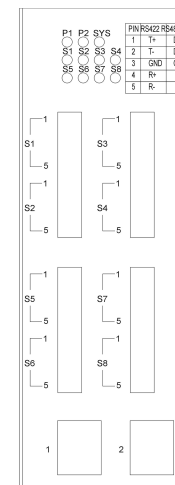
Warranty

- Warranty: 5 years.

【Up to Standard】

- IEC61000-4-2(ESD): ±8KV Contact, ±15KV Air
- IEC61000-4-3(RS): 10V/M(80-1000MHZ)
- IEC61000-4-4(EFT): Power ±4KV, Ethernet&Serial Data Cable ±4KV
- IEC61000-4-5(Surge): Power ±4KV CM/ ±2KV DM, Ethernet&Serial Data Cable ±4KV CM
- IEC61000-4-6(CS): 3V (10KHZ-150KHZ), 10V(150KHZ-80MHZ)
- IEC61000-4-16(MS): 30V COUNT 300V, 1S
- IEC60068-2-6(Vibration)
- IEC60068-2-27(Shock)
- IEC60068-2-32(Free Fall)
- IEC61000-6-2(General Industrial Standard)

【Product Appearance】



MG5028

【LED Indicator Lamp】

LED	Status	Description
P1-P2	OFF	The power supply is not connected or failure.
	ON	Power supply is normal.
SYS	OFF	The power supply is not connected or system failure.
	ON	System is running properly.
S1~8	OFF	The power supply is not connected or the serial port is not receiving data packets.
	Blinking	The serial port receives the data packet.
Each RJ45 port has two LEDs, the yellow light is not used, the green light is the port link status indicator.		
10M/100M (Green led)	OFF	RJ45 port does not establish a valid network connection.
	ON	RJ45 The port has established a valid network connection.
	Blinking	RJ45 The port has established a valid network connection and data is exchanged.