1. Overview

MSR102 is a host with multi functions of data transmission, monitoring management and operation and control, easy to install. Multiple interfaces can be connected to analog input (current, voltage acquisition), with digital input RS485 communication, switch value acquisition, relay control and analog output. The wired USB configuration is simple, configuration is done in the local area network, and operation is easy.

2. Technical Specifications

2.1 Power Supply Parameters

Supply voltage: DC12-24V
Current: 0.5A (MAX) @DC12V
External power supply: current limit <1A, voltage equal to equipment supply voltage

2.2 Signal

Wireless signal access: 2G, WIFI, 4G
Analog input: 8 channels 0-20mA input, 8 channels 0-5V voltage input
Analog output: 2 channels, 0-20mA output, 0-10V output optional
Acquisition accuracy: 0.2%
Output accuracy: 0.3%
Switch value input: 8-channel active input, among which DI0 and DI1 channels support counting, and the speed of DI0 up to 6MHz, DI1 above 100MHz
Relay output: 4-channel relay output function, AC220V/5A DC30V/5A, maximum

2.3 Hardware performance

- Environmental-friendly flame retardant plastic shell, color customizable, black by default
- USB TYPE-C interface for setting, debugging and upgrading
- Power, alarm and network indicator
- Push-type buttons
- Two communication interfaces of RS485 south and north
- 1.3 inch OLED screen display

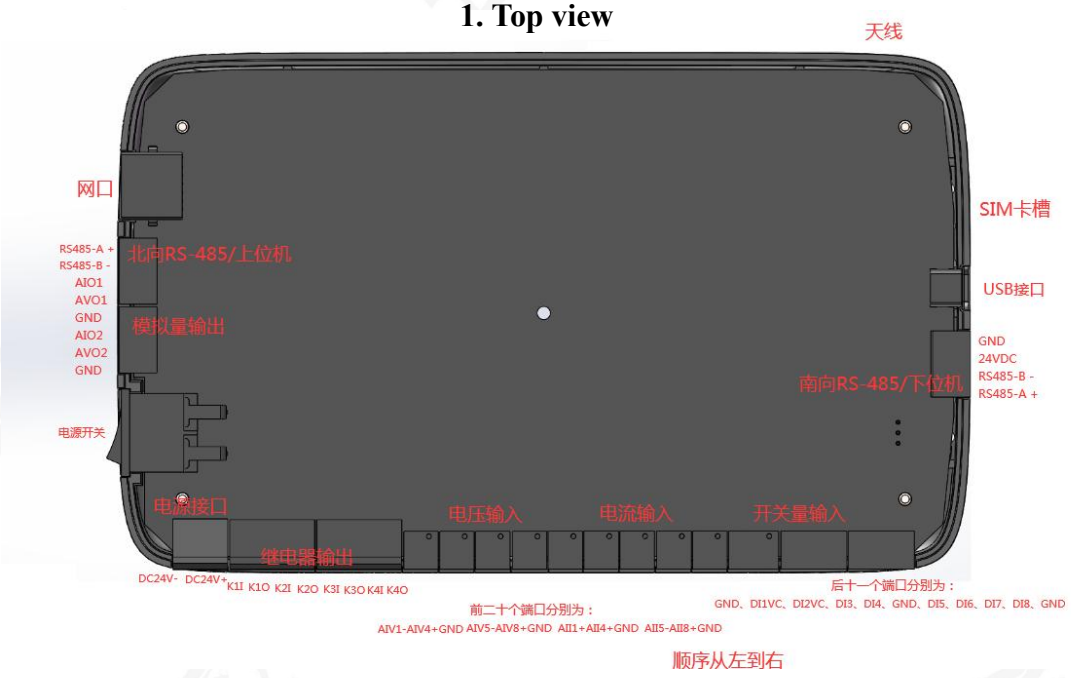
- 100M RJ45 interface
- Drawer type SIM card holder
- Weight of 600g
- SMA antenna socket
- Normal work 200mA
- Standard plug-in terminal interface
- Ship type power switch
- Size of 207×126×33mm
- Working environment of -20℃ ~60℃ 0%~95%RH
- Storage environment of -30℃~65℃ 30%~80%RH

2.4 Software performance

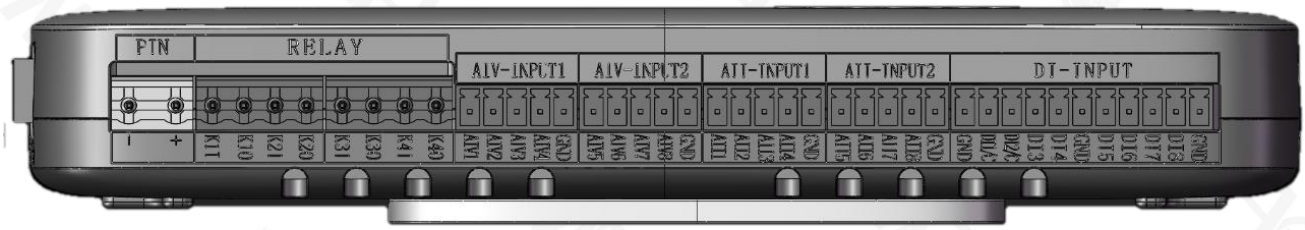
- Connecting the platform via GPRS, 4G, WIFI, LAN network
- Support RS485 DTU, wireless/wired optional for platform connection, and socket can be shared or independent
- Support the screen to set most of the parameters, and to view equipment operation information and equipment operation failure
- Large-capacity history storage, 1 year data storage (10 seconds/time) supported
- Support USB settings, data export (CSV format)
- Wireless interface supports MQTT & MODBUS RTU protocol for cloud platform connection
- The network port supports modbus tcp server function, tcp client function, mqtt function, and modbus rtu connection
- Northbound RS485 uses modbus rtu to read device data and control devices
- The southbound RS485 interface has transparent transmission function, the communication data of transparent transmission network port, wireless port, and partial operations of northbound RS485 non-local RTU
- Device search and configuration of the device in the network port LAN supported
- Real-time clock calibration supported

3. Illustration

1. Top view



2. Front view



4. Left: network port【Northbound RS485】

4. Right: Wireless port【Southbound RS485】

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