

## MSR101 RTU Product Description

### MSR101 RTU New Product Highlights



- Apply a new design concept, MINI PCIE pluggable module, more compatible and extensible
- Support 3 major operators, APN
- Automobile-level three-channel independent data acquisition and conversion AD, with higher accuracy
- Support remote offline program upgrade
- Adopt a brand new configuration tool instead of multiple configuration tools for multiple products. In the future, one configuration tool can be used to configure all of our products, and to upgrade the device program directly.
- SMD SIM card compatible, able to work in extreme environments, such as high temperature of 70 °C, low temperature of -35 °C
- Full protection of input and output ports, anti-insertion error and anti-static parts are both upgraded, and the collection port can withstand 28V long-time power shock
- Add MODBUS RTU communication protocol
- Optimize the automatic reconnection logic when disconnected and false link processing mechanism
- Add relay output alarm function

## MSR101 RTU Technical Parameters

### 1. Data Collection

- ★Channel: 3-channel analog inputs;
- ★Input type: 0-5V, 4-20mA
- ★Input impedance: voltage is more than 5 M $\Omega$ , current is less than 150 $\Omega$ ;
- ★Resolution: 24-bit industrial grade AD chip;
- ★Measurement error: 0.1 level;
- ★Protection: Full-protection of collection ports, positive and negative connection without loss of equipment performance, withstand long-time voltage for more than 28V

### 2. Communication

- ★Host computer communication: MINI USB port, fixed 115200,8,N,1;
- ★Cloud platform communication: TCP, MQTT and MODBUS RTU protocols;
- ★Working frequency: GSM,WCDMA, FDD-LTE, TD-SCDMA, TD-LTE, FDD-LTE
- ★Receiving sensitivity: <-110dBm

### 3. Power Supply

- ★Wide voltage input: single power supply range is +8V~+28V /1A, the maximum power consumption of the whole machine < 3W;
- ★Power consumption (24V): standby < 45mA, emission < 60mA;
- ★Feed output: < 500mA, optional voltages 24V/5V, off state by default;
- ★Relay alarm output: optional alarm output voltage of 24V/5V, the alarm output and the feed output share the same port, selection either function

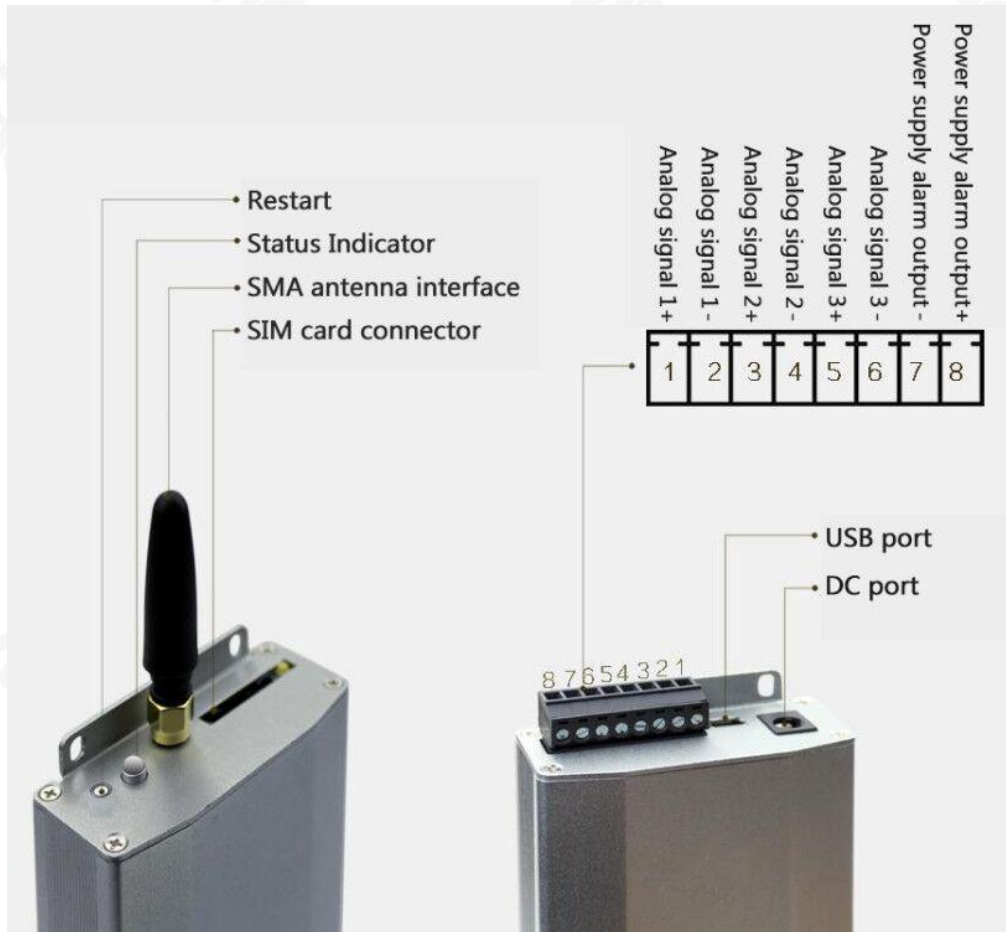
### 4. Working Environment

- ★Working temperature: -35~70°C;
- ★Hot and humid environment: able to work at 70°C, with relative humidity of 90%~95%;
- ★Vibration environment: operable in the frequency range of 10Hz ~ 55Hz, amplitude value is 0.35mm (three axis direction);
- ★Radiated interference: work well in complex electromagnetic environment below 3G

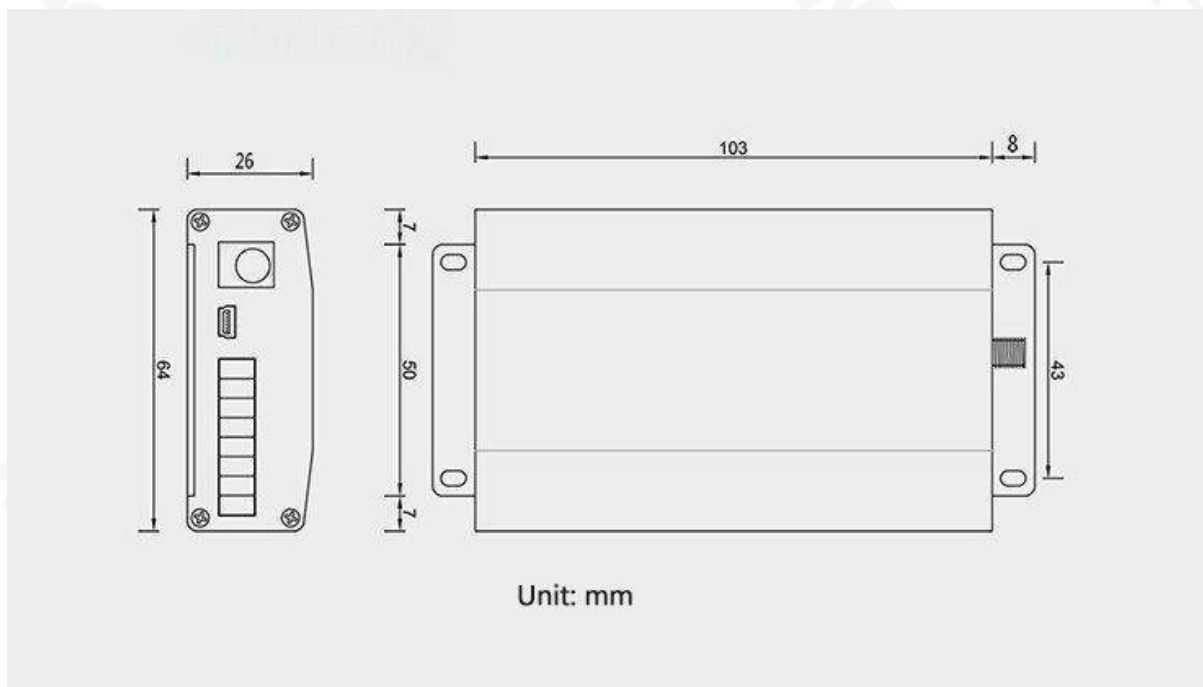
### 5. Mechanical Structure

- ★Weight: 140g;
- ★Dimension: 103\*64\*26 mm;
- ★Material: aluminum alloy shell;
- ★Color: silver gray;
- ★Label: laser engraving

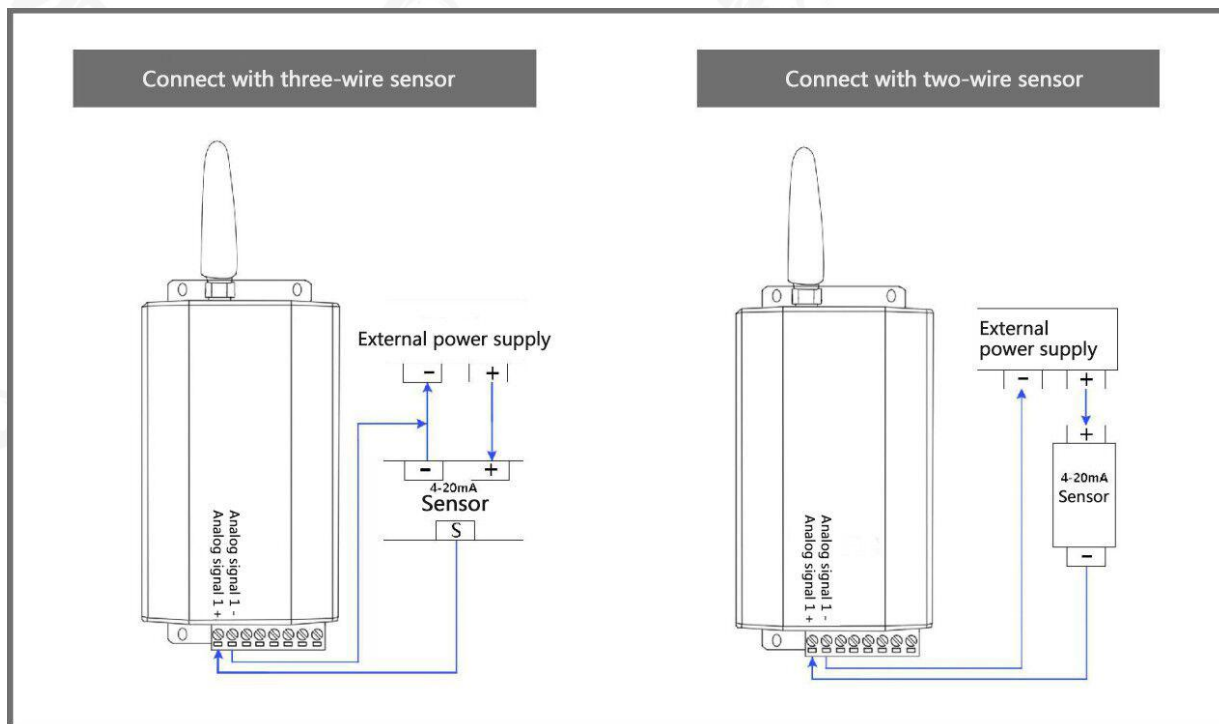
## Device Description and Port Pin Definition



## RTU Product Dimension



## Diagram of RTU Product Connecting Sensor



※Note: When using RTU external power supply output port instead of external power supply to provide power for 4-20mA, 0-5V sensors, pin 8 is the positive pole of the power supply, and pin 7 is the negative.

## Remote Monitoring Realization for GPRS(2G)/3G/4G

