

RedySmart® Series

This Quick Start Guide for the RedySmart Series Thermal Mass Flow Meters and Controllers gives easy set up and installation instructions. For complete instructions, please download and read the RedySmart Series Instruction Manual. Before installing meter, follow the steps below.

Step 1. Download Instruction Manual

To get technical information, download the RedySmart Series Instruction Manual at sierrainstruments.com/redysmart-manual

Step 2. Download FREE Software

Download the most current RedySmart product software at sierrainstruments.com/redysmart-software. Use the included cable (if ordered) to connect the meter to your computer.

IMPORTANT! If you do not have an internet connection, you must download the software to a USB stick or other storage device.



Safety and General Information

1. For safe operation, please consider the process and ambient conditions for which the device is designed and specified at the time of delivery. This information can be found on the data label on the instrument housing and in the Instruction Manual.
2. Do not remove the electronics housing to prevent damage to the unit. A damaged hologram seal will void the warranty.
3. There are no serviceable parts inside the unit. Repairs must be performed by qualified personnel only.

Installation and Electrical Connection

1. Do not use Teflon® tape or liquid sealing on the process connections.
2. Please ensure that the piping is clean and purged before you connect the flow meter.
3. The gas used must be clean and dry.
4. For particle protection, we recommend to install our 50µm filter at the inlet.
5. It is recommended that the user checks the device on a regular schedule to ensure that it is leak free as both metal and elastomeric seals, gaskets, O-rings and valve seats may change with age, exposure to process gas.

! **Note** Your Sierra sales representative can help you to source suitable O-rings, elastomeric seals, fittings and filters.

6. Please refer to the RedySmart Instruction Manual for detailed instruction on mounting orientation and location.
7. Please verify a proper electrical connection. The device must be grounded. The supply voltage is 18-30 vdc (typically ±50 mV).

! **Note** The current consumption depends on the instrument version. Please refer to the information in the Instruction Manual.

Default Factory Settings

Modbus RTU

| | |
|---------------------|-----------|
| Communication speed | 9600 Baud |
| Data bits | 8 |
| Stop bits | 2 |
| Parity | None |
| Node address | 247 |

Profibus (optional)

| | |
|--------------|-----|
| Node address | 125 |
|--------------|-----|

When using several devices simultaneously the user has to configure each device with an individual address!

Profinet/EtherCAT (optional)

| | |
|------------|---------------|
| Name | RedySmart SIP |
| IP address | 0.0.0.0 |

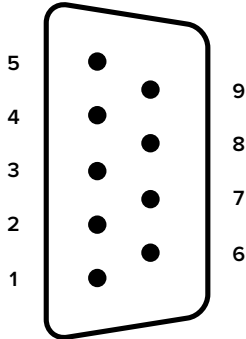
Further information on the device configuration can be found in the Instruction Manual.

Pin Assignment

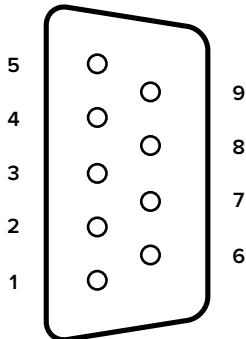
All connection diagrams can be found in the Instruction Manual. Please also refer to the additional Digital Communication Instruction Manual.

Warning! Always disconnect the power supply before working on the plugs.

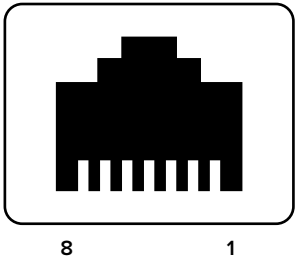
| Sub D Plug Pin Assignments Modbus RTU, Power Supply & Analog Signals (Male) | | |
|---|----------------|-------------------------------|
| PIN | Assignment | Description |
| 1 | Common (-) | GND analog signals |
| 2 | Supply 0 Vdc | 0 vdc supply voltage |
| 3 | Supply +24 Vdc | +24 vdc supply voltage |
| 4 | Output (+) | Analog output, measured value |
| 5 | Setpoint (+) | Analog input, setpoint |
| 6 | Tx+ | RS-485 Output (Y) |
| 7 | Tx- | RS-485 Output (Z) |
| 8 | Rx- | RS-485 Input (B) |
| 9 | Rx+ | RS-485 Input (A) |



| Sub D Plug Pin Assignments Profibus (Female) | | |
|--|---------------|------------------------------------|
| PIN | Assignment | Description |
| 1 | Not connected | – |
| 2 | Not connected | – |
| 3 | RxD/TxD-P | Data transmit/receive; data wire B |
| 4 | CNTR-P | Repeater control signal (RTS) |
| 5 | DGND | Ground for data signals and VP |
| 6 | VP / +5V | Power supply +5V |
| 7 | Not connected | – |
| 8 | RxD/TxD-N | Data transmit/receive; data wire A |
| 9 | Not connected | – |



| Rj45 Socket Pin Assignments Profinet/Ethercat (Female) | | |
|--|---------------|------------|
| PIN | Assignment | Wire Color |
| 1 | Data (Tx+) | Yellow |
| 2 | Data (Tx-) | Orange |
| 3 | Data (Rx+) | White |
| 4 | Not connected | – |
| 5 | Not connected | – |
| 6 | Data (Rx-) | Blue |
| 7 | Not connected | – |
| 8 | Not connected | – |



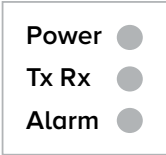
LED Operating Status

Power: The green LED lights up when the unit is supplied with the correct power supply voltage and is ready for operation.

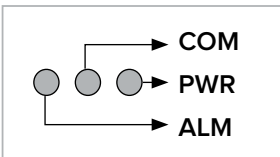


TxRx: The yellow LED flashes when the device is communicating on the digital Modbus RTU interface.

Alarm: If the red LED flashes, there is a malfunction. If the LED is lit continuously, there may be a serious problem. Disconnect the supply voltage and reconnect the device. If the LED is still lit, the unit must be returned for repair.



Note The EtherCat/Profinet devices have an extended LED operating status. Please refer to the Instruction Manual.



Toxic, Flammable Gases and ATEX

Warning! In the case of toxic and flammable gases, the respective safety guidelines in each country must be followed. The RedySmart devices are not approved for use in Ex-zones. In the case of flammable and toxic gases, fittings and pipes intended for that purpose must be used. The responsibility for safe operation lies with the designer of the facilities. The devices must not be used for explosive mixtures (ATEX, detonating gas, consisting of O₂ and H₂).

Limited Warranty Policy – Register Online

All Sierra products are warranted to be free from defects in material and workmanship and will be repaired or replaced at no charge to Buyer, provided return or rejection of product is made within a reasonable period but no longer than three (3) years for calibration and non-calibration defects, from date of delivery.

To assure warranty service, customers must register their products online on Sierra's website. Online registration at of all of your Sierra products is required for our warranty process. Read complete warranty policy at sierrainstruments.com/warranty.



Note: Please dispose of the device in an environmentally friendly way (recycle).

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We Understand Flow is Tough.
We can solve this together.



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