



EPEVER TCP RJ45 A

Operation Guide



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1 Overview

1.1 Features

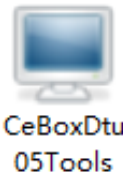
- Equipped with a standard network cable port
- High compatibility without any drivers
- Unlimited communication distance
- Flexible power supply for the communication interface
- Adjustable 10M/100M Ethernet port
- Designed with low power consumption, and high running speed

1.2 Applicable products

TCP module	Applicable products					Others
	Product type	Series Name	Connection port	Communication cable	Communication method	
EPEVER TCP RJ45 A 	Controllers	LS-B	RJ45	 CC-RS485-RS485-20 0U	RS485 to TCP/IP	PC communication cable  CC-RS485-RS 485-200U
		GM-N				
		VS-BN				
		XTRA-N				
		TRIRON				
		Tracer-AN				
		Tracer-BN				
		MSC-N				
		EIPIDB-COM				
		iTracer-ND	3.81-4P (in-line)	 CC-RJ45-3.81-150U		
		iTracer-AD				
		DuoRacer				
		LS-BP	3.81-4P (4 round holes)	 CC-RS485-RS485-15 0U-4LLT		
		Tracer-BP				
		Tracer-BPL				
	Inverters	NP	RJ45	 CC-RS485-RS485-20 0U		
		IP-Plus				
		IPT				

		IP				
		IM4230				
	Inverter/charger	UP-Hi	RJ45	 CC-RS485-RS485-20 0U		
		UP				
	Note: Other EPEVER products, which conform to the "Standard Modbus Communication Protocol" and have communication interfaces, are suitable for the TCP module.					

1.3 Prerequisite software

Component	Prerequisite software					
	Type	Name	Installer	Figure	Function	Source
TCP Serial Device Server	EPEVER TCP configuration tool	CeBoxDtu05Tools	CeBoxDtu05Tools.exe		Check or modify the EPEVER TCP module's parameters (work mode, protocol, local IP, DHCP, slave address, subnet, gateway, and server information).	EPEVER
	Virtual com software	USR-VCOM	USR-VCOM.exe		Virtualize the IP address of the TCP module to a COM port	
	PC monitor software	Solar Station Monitor	Solar Station Monitor.exe		Monitor devices working status or modify related parameters.	
Applicable PC system	WindowsXP, windows7, windows8, windows10					

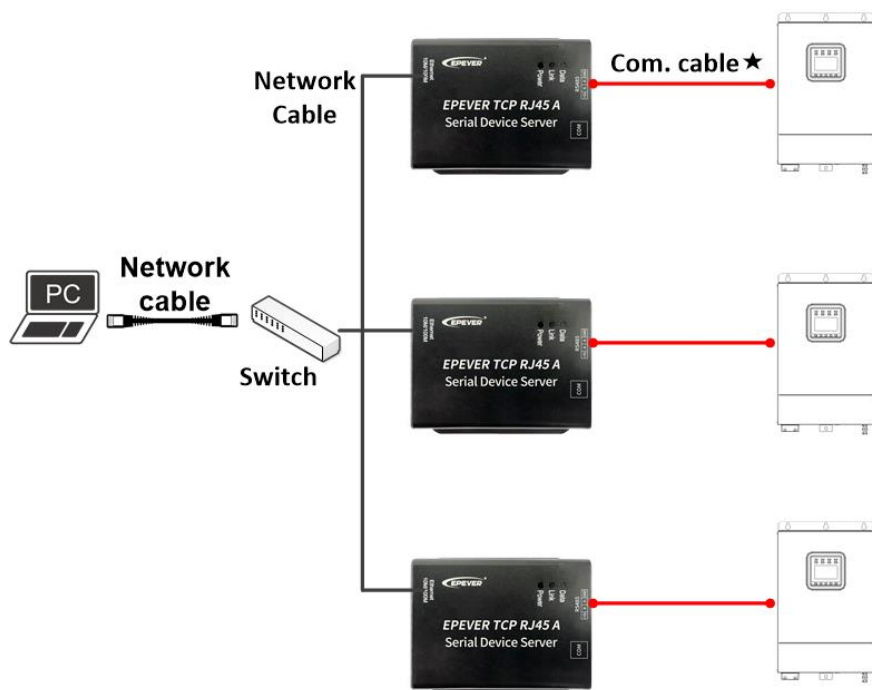
2 Connection



Notes:

- Select an appropriate communication cable per the communication interface of the controller, inverter, or inverter/charger. Detailed communication cables refer to chapter [1.2 Applicable products](#).
- After successfully connecting to the PC through the TCP module's COM port, users can modify the TCP module's parameters or monitor the connected devices by the PC software.

2.1 LAN connection



★ Select an appropriate communication cable per the communication interface of the controller, inverter, or inverter/charger.

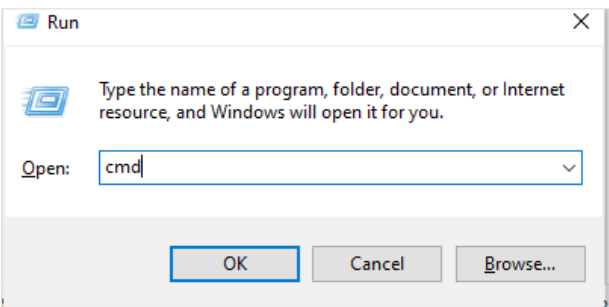
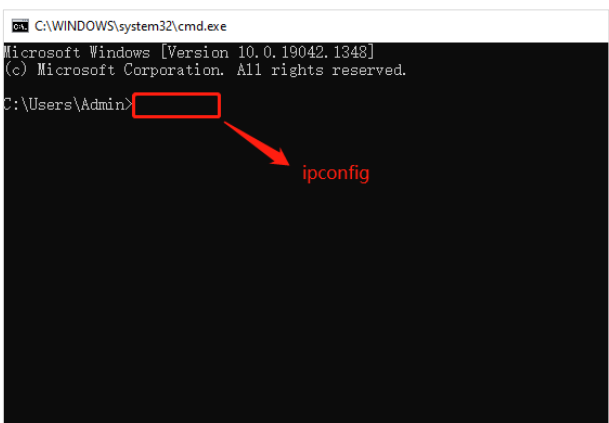
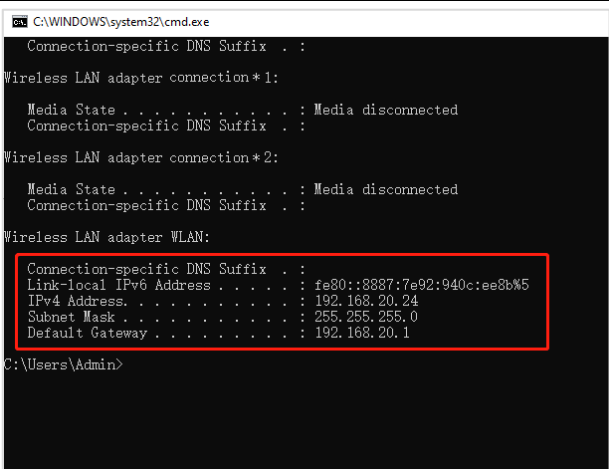
3 Configure and monitor

3.1 Configure and monitor by the LAN (Serial port)



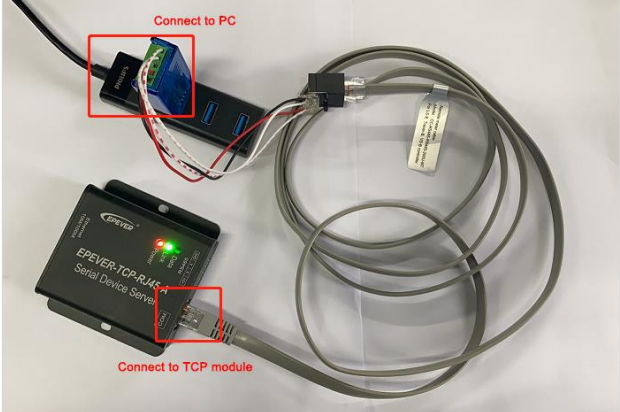
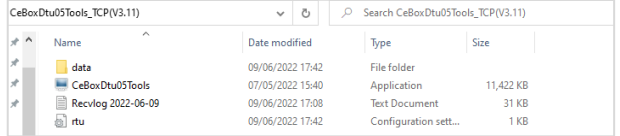
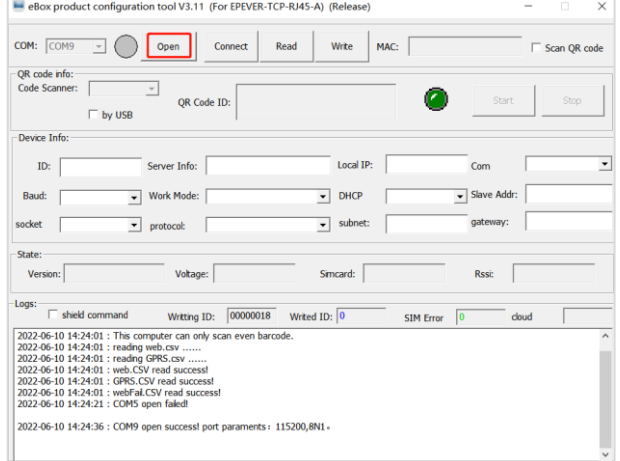
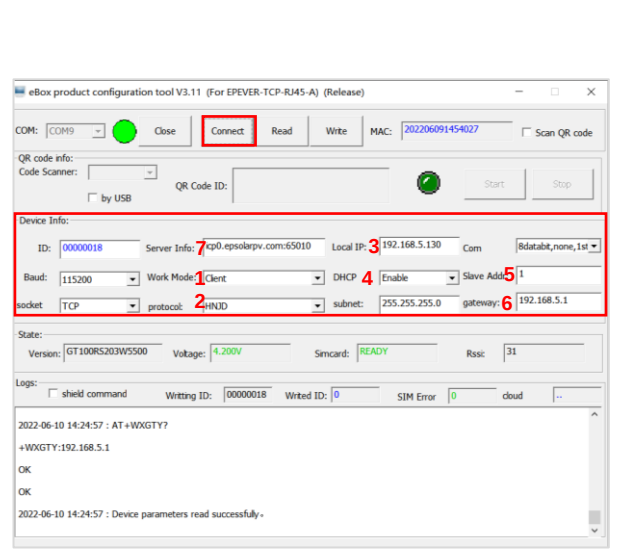
1. Check the local IP address

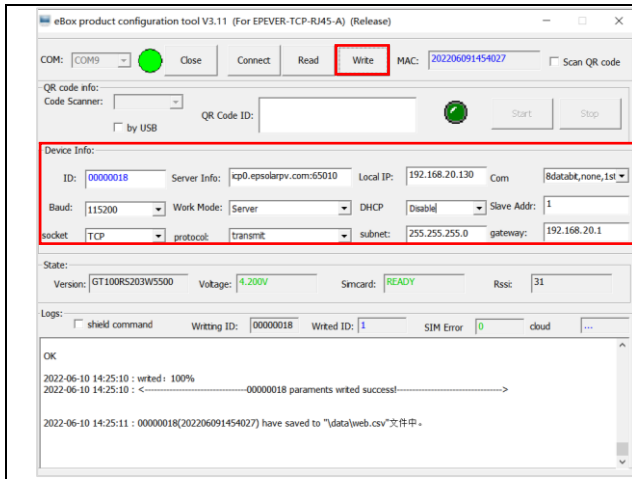
The operating steps are as below:

	1. Pop up the "Run" window by clicking the shortcut key "Win+R" on the PC keyboard, enter the "cmd" command, and press the "Enter" key.
	2. Enter the "ipconfig" command in the pop-up window and press the "Enter" key to view the local IP address.
	3. Shown as in the left figure: Local IP address: 192.168.20.24 Subnet mask: 255.255.255.0 Default Gateway: 192.168.20.1

2. Configure parameters by the TCP tool

The operating steps are as below:

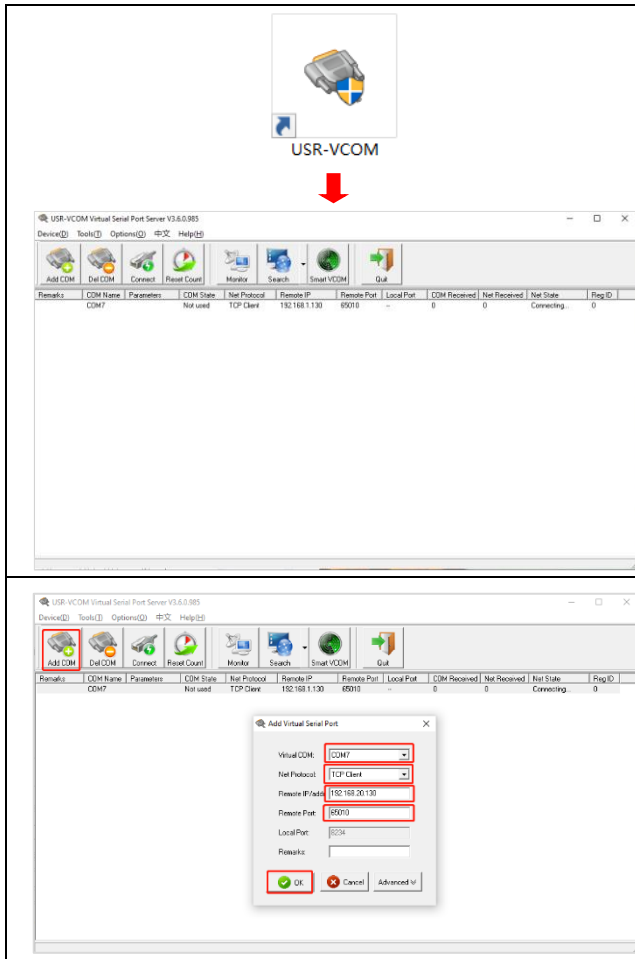
	1. Connect the "COM" port of the TCP module and the PC through the USB to RS485 communication adapter (additional purchased). When the Link indicator is green solid, the connection is successful.
	2. Click to open the "CeBoxDtu05Tools.exe" tool, which can be requested from the after-sales technicians.
	3. Select a serial port from the "COM" drop-down list, and click the "Open" button. Note: Install the serial port driver tool (USB-SERIAL CH340) first; otherwise, the PC cannot identify the serial port. The driver tool can be requested from the after-sales technicians
	4. Click the "Connect" button to read the TCP module parameters. Modify the parameters by the sequence number marked on the left figure : (1) Change the "Work Mode" to "Server." (2) Change the "protocol" to "transmit." (3) The first 3 bits of the "Local IP" item should be consistent with the current PC. The current PC's local IP is 192.168.20.24. Thus the "Local IP" item needs to be changed to 192.168.20.130 (the last bit can be written at will). (4) Change the "DHCP" to "Disable." (5) "Slave Addr": 1 for the controller, 3 for the inverter, and 10 for the inverter/charger. (6) The value of the "subnet" and "gateway" items should be consistent with the current PC. The current PC's subnet is 255.255.255.0, and the default gateway is



192.168.20.1. Change the value of the "subnet" and "gateway" items to the same.
 (7) "Server Info": 65010 is the COM number.
 After modifying the above parameters, click the "Write" button.

3. Add Virtual COM

The operating steps are as below:

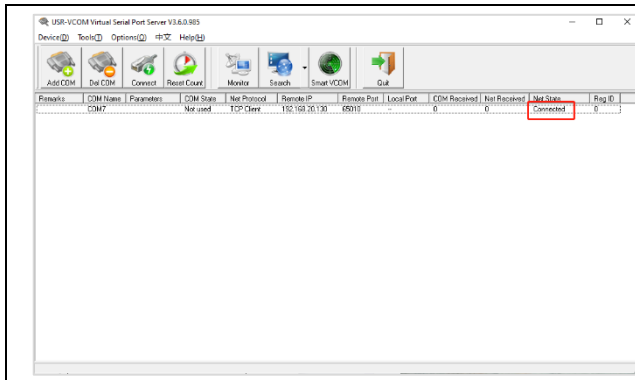


1. Install and open the USR-VCOM software (Version number: V3.6.0.985). The software installer can be requested from the after-sales technicians.

2. Click the "Add COM" icon to add a virtual COM port per the following procedures:

- (1) "Virtual COM": COM1~COM255. For example, select "COM7".
- (2) "Net Protocol": Select "TCP Client."
- (3) "Remote IP/addr": Enter the "Local IP (192.168.20.130)" set by the TCP tool.
- (4) "Remote Port": Automatically display "65010" by the TCP Tool.

After finishing all settings, click the "OK" button.

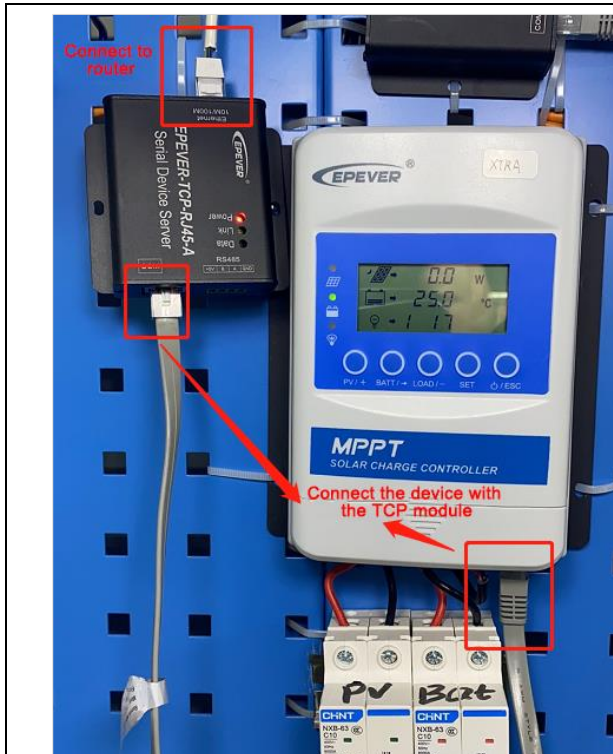


3. The "Net State" column displays "Connected," indicating that the virtual COM has been added successfully.

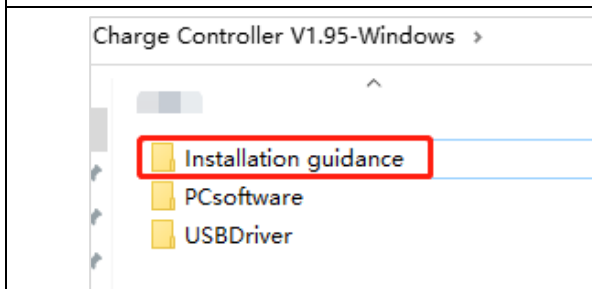
Note: If the "Net State" column displays a failed connection, please check whether the TCP module and the current PC are in the same network.

4. Monitor devices by the PC software

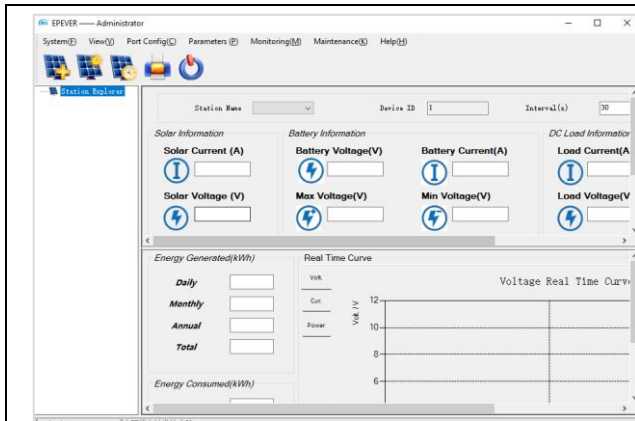
The operating steps are as below:



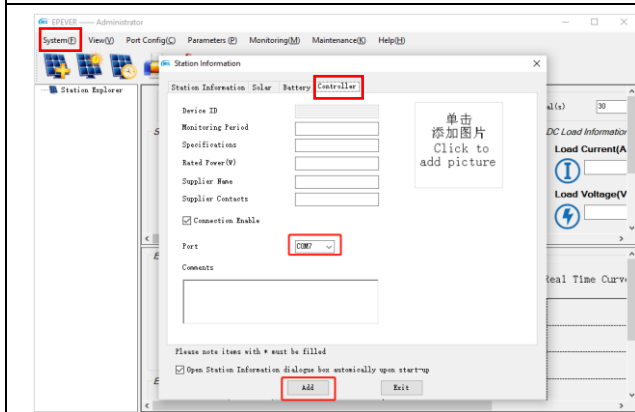
1. Connect the TCP module's "COM" port or RS485 interface with the device. The detailed communication cable refers to chapter [1.2 Applicable products](#). And connect the TCP module's "Ethernet" port to the router by a network cable (The TCP module and the PC must share the same network).



2. Download the PC software "Charge Controller V1.95 Windows" from the EPEVER website: <https://www.epever.com/support/softwares/>. Install the PC software "Solar Station MonitorV1.95" as the *Installation guidance*.

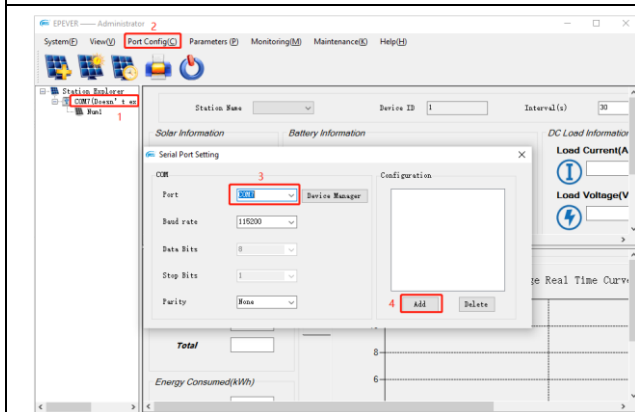


3. Double click the icon  on the PC to open the "Solar Station MonitorV1.95" software. The initial interface is shown in the left figure.



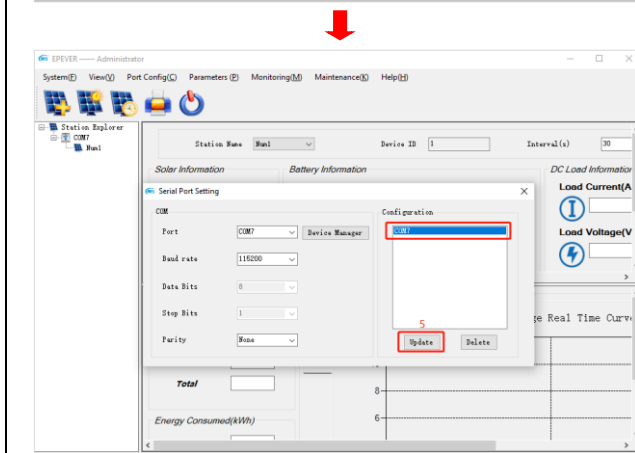
4. Click the "System" menu to pop a "Station Information" box. Then click the "Controller" tab and select "COM7" for the "Port" item ("COM7" is the virtual COM set in chapter [3. Add Virtual COM](#)).

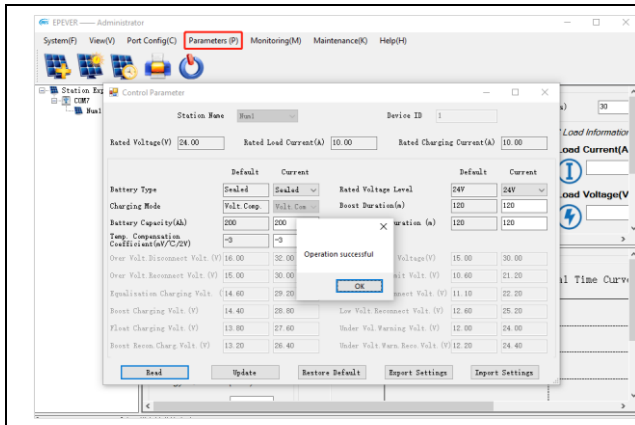
After finishing all settings, click the "Add" button.



5. After adding the "COM7", it displays "COM7 (Doesn't exist or not yet set up)" in the left navigation window. Configure the "COM7" in the following procedures.

- (1) Click the "COM7 (Doesn't exist or not yet set up)" in the left navigation window.
- (2) Click the "Port Config" on the top menu bar to pop up a "Serial Port Setting" box.
- (3) Select "COM7" for the "Port" item.
- (4) Click the "Add" button to add the "COM7" into the "Configuration" blank field; then, the "Add" button automatically becomes the "Update" button.
- (5) Select the "COM7" in the "Configuration" field, and click the "Update" button to finish.



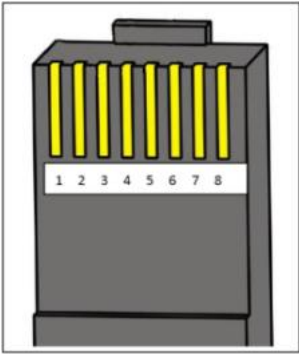


6. Click the "Parameters" on the top menu bar to monitor the devices and modify related parameters.

4 Pin definition

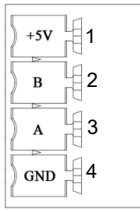
4.1 RJ45 port

Pin	Definition
1	+5VDC
2	+5VDC
3	RS485-B
4	RS485-B
5	RS485-A
6	RS485-A
7	GND
8	GND



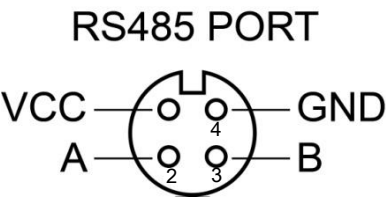
4.2 3.81-4P terminal

Pin	Definition
1	+5VDC
2	RS485-B
3	RS485-A
4	GND



4.3 Water-proof RS485 port

Pin	Definition
1	+5VDC
2	RS485-A
3	RS485-B
4	GND



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