



Shine Master4G-X User Manual

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1.1 Manual description

Dear users, thank you very much for using the Shine Master4G-X data logger (hereinafter referred to as Shine Master) developed and produced by Shenzhen Growatt New Energy Co., Ltd. (hereinafter referred to as Growatt). We sincerely hope that this product will meet your needs and expect you give more opinions on the performance and function of the product. The purpose of this manual is to provide users with detailed product information and instructions for installation, operation, and maintenance.

1.2 Copyright statement

This user manual is copyrighted by Growatt. Any unit or individual may not excerpt or copy part or all of this user's manual without the written permission of the company. It may not be transmitted in any form, including materials and publications. Infringement must be investigated. The version of this manual is V1.0. Growatt owns the final interpretation right of this user manual. If there is any change in product parameters, appearance, packaging, etc., the latest information of the company shall prevail without notice.

1.3 Applicable personnel

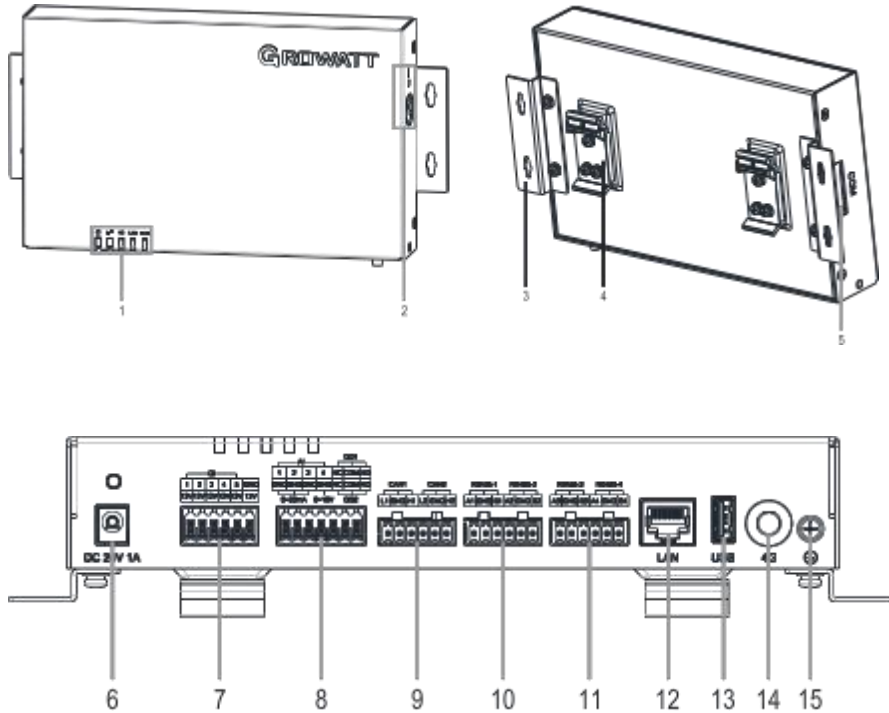
This manual is for professional technicians who install, commission, and maintain the Shine Master and for users who perform daily operations. This manual does not include electrical connections for inverters, combiner boxes, weather stations, smart meters, and anti-reflux devices, as well as related precautions. If necessary, refer to Growatt's corresponding user manual or instruction.

1.4 Manual usage

Please read this manual carefully before using Shine Master4G-X. At the same time, please keep this manual in a safe place so that operators and maintenance personnel can find out. The contents of the manual will be continuously updated and corrected. It is inevitable that there will be slight inaccuracies or errors in the actual contents. Users should refer to the actual product purchased. The latest user manuals can be downloaded from www.ginverter.com, and can also be obtained through Growatt's sales or service channels.

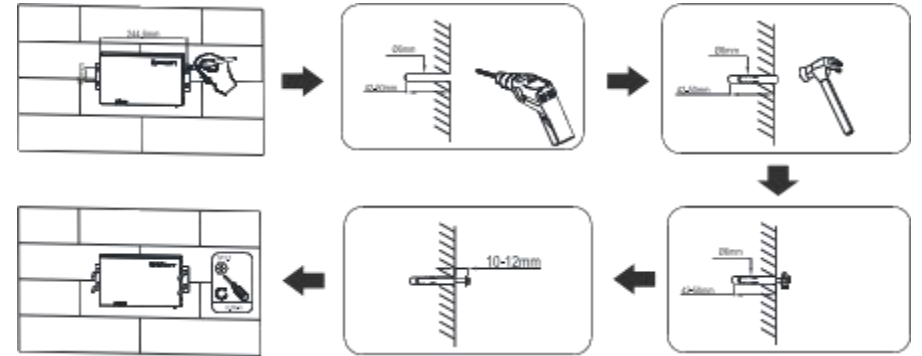
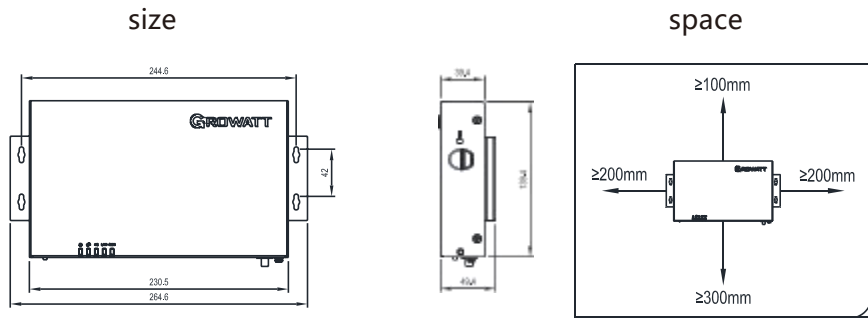
2 Product description

Please read the user manual carefully before installing the device to understand product information and safety precautions.
Insulated tools must be used when installing the equipment. For personal safety, please wear personal protective equipment.



ordinal	name	ordinal	name
1	LED indicator light (POWER、BLE、4G、LAN、RUN)	2	SIM card socket (SIM)
3	Install mounting ears	4	Rail clamps
5	COM port	6	24V Power input port (DC IN 24V, 1A)
7	DI port	8	AI (DO) port
9	CAN port	10	RS485 -1, RS485-2
11	RS485 -3, RS485-4	12	GEport (LAN)
13	USB port (USB)	14	4G antenna
15	Protective Ground point		

3 Installation Requirement



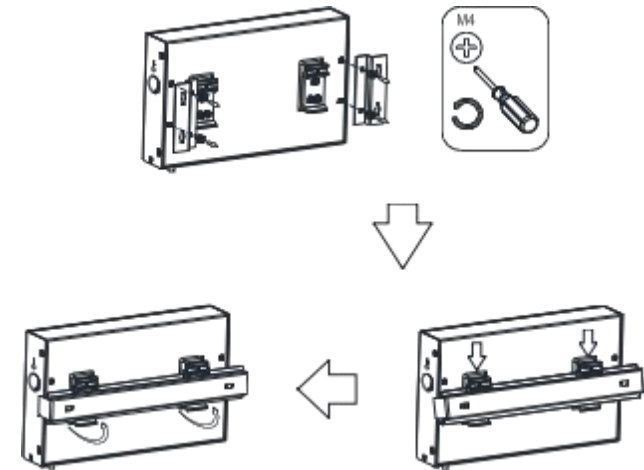
Guide Rail Installation instructions:

Before installation, please prepare a 35mm standard guide rail and install it securely. It is recommended that the effective length of the guide rail is $\geq 260\text{mm}$.

4 Device Installation

4.1 Install Shine Master4G-X

Mounting installation instructions:
 Please choose a flat and firm interior wall for installation;
 When mounting the Shine Master4G-X on a wall, make sure that the cable connection area is facing downwards for easy cable connection and maintenance;
 It is recommended to use the self-tapping screws and expansion solenoids supplied with the box for installation.



5 Electrical connections

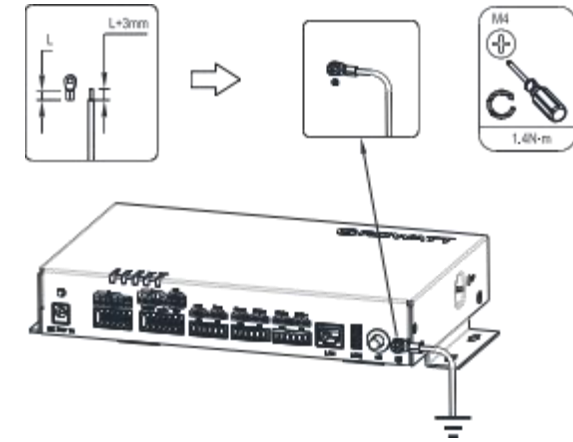
5.1 Cable preparation

type	Recommended Specifications:
Protective ground wire	Cross-sectional area of 4mm ² ~6mm ² or 12AWG ~ 10AWG outdoor copper core cable
RS485 communication line	Cross-sectional area 0.2mm ² ~2.5mm ² or 24AWG ~ 14AWG double or multi-core cables
MBUS cable (optional)	Comes with the box
DI signal line	Cross-sectional area 0.2mm ² ~ 1.5mm ² or 24AWG ~ 16AWG dual-core or multi-core cables
Power output cable	
AI signal line	
DO signal line	
Cable	Distributed with the box

5.2 Install the ground wire

instructions:

To enhance the corrosion resistance of the grounding terminal, it is recommended to apply silicone or paint on the outside of the grounding terminal for protection after the grounding installation is completed.

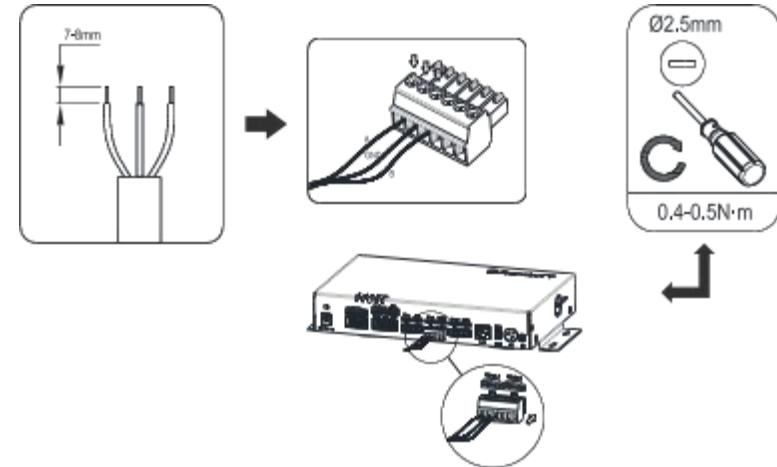


5.3 Install the RS485 communication cable

instructions:

It is recommended that the RS485 communication distance should not exceed 1000m; The Shine Master4G-X can be connected to RS485 communication devices such as inverters, environmental monitors, and electricity meters through the RS485 port;

Please make sure RS485+ is connected to RS485A of Shine Master4G-X, RS485 - RS485B is connected to Shine Master4G-X.

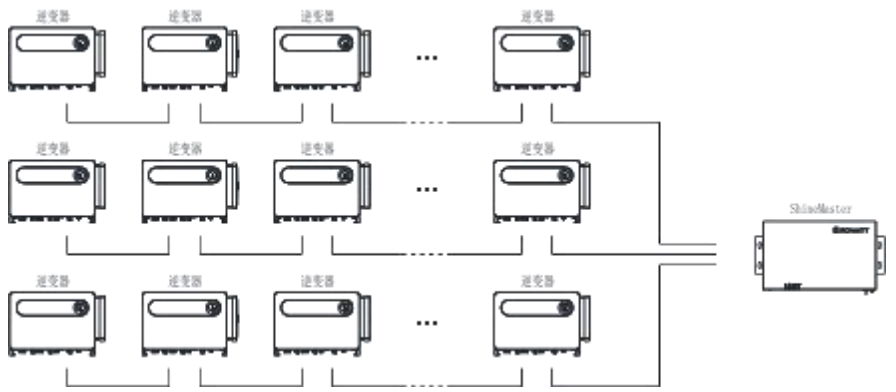


port	logotype	instruction
RS4851、 RS4852、	+	RS485A, RS485 differential line number +
RS4853、 RS4854	-	RS485B, RS485 Differential Signal-

Cascading connections instruction:

It is recommended that the number of devices connected to each RS485 channel be less than 32;

The baud rate, communication protocol, and checksum method of all devices on each RS485 cascaded link should be consistent with the RS485 communication parameters of the ShineMaster4G-X corresponding RS485 port.



5.4 Install the DI signal cable

instruction:
The ShineMaster4G-X can receive remote grid dispatch commands, alarms, and other DI signals through the DI port, supporting only passive dry contact signal input. It is recommended that the signal transmission distance does not exceed 10 meters.

port	instruction
DI1	Support passive dry contact signal input.
DI2	
DI3	
DI4	
DI5	

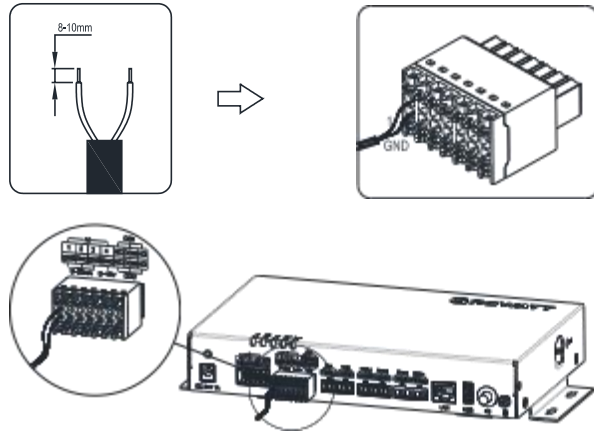
5.5 Install the power output cable

instruction:
In scenarios such as power limitation grid connection or audio-visual alarm, Shine Master4G-X can drive the coil of the intermediate relay through the 12V power output port; it is recommended that the transmission distance does not exceed 10m.

5.6 Install the AI signal cable

instruction:

The Shine Master4G-X can be connected to the AI signal of the environmental monitoring sensor through the AI port; It is recommended that the transmission distance should not exceed 10m; 1, 2, 3, 4 of AI port are connected to AI signal +, GND is connected to AI signal-

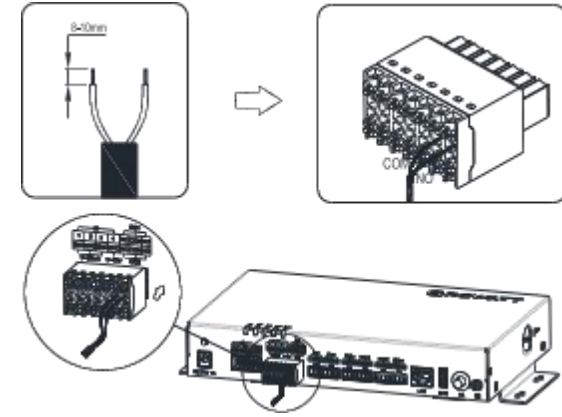


port	instruction
AI1	Support current input of 4mA ~ 20mA, 0mA ~ 20mA.
AI2	
AI3	
AI4	Support 0V~ 10V voltage input

5.7 Install the DO signal cable

instruction:

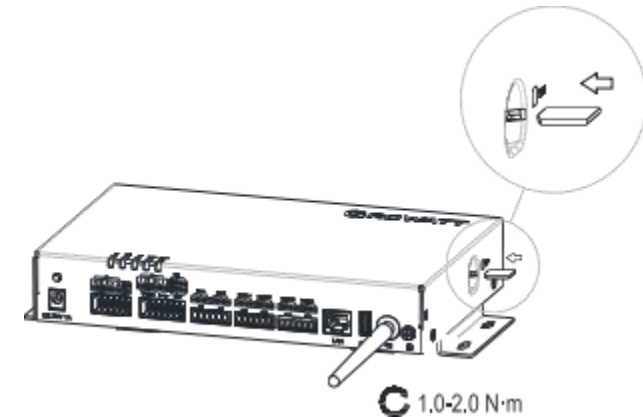
The DO port supports a maximum signal voltage of 12V; It is recommended that the transmission distance should not exceed 10m.



5.8 Install a SIM card and a 4G antenna

instruction:

Please prepare a standard SIM card (size: 15mm×225mm). The installation of the SIM card can be determined by the marking near the SIM card slot. When the SIM card is pressed into the limit position, the SIM card will lock, indicating that the SIM card is correctly installed; when removing the SIM card, push the SIM card inward, and the SIM card will pop out automatically; Install the SIM card according to the silk screen at the SIM card slot;

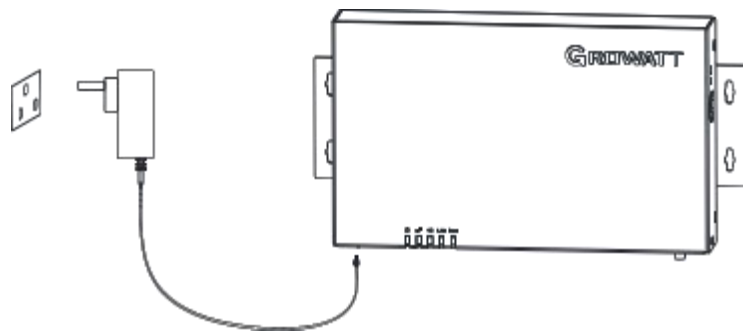


Monthly SIM card traffic requirements		Traffic baseline
inverter	10MB+4MB x Number of inverters	Device performance data can be refreshed every 5 minutes
meter	3MB x Number of meters	
Environmental monitors	3MB x Number of environmental monitors	

6 Power on the system.

1. Power connection

Connect the power adapter cable and close the switch on the side of the AC outlet.



instruction:

The rated input voltage of the power adapter is 100V AC~ 240V AC, and the rated input frequency is 50Hz/60Hz; Please select an AC outlet that matches the power adapter.

2. Observe the LED indicator to check the running status of the Shine Master4G-X.

indicator	meaning
Power indicator	Normally off: The power supply is working abnormally; Solid on: The power supply is working normally.
Bluetooth indicator (not supported yet)	Normally off: Bluetooth is not enabled; 1S flashes 1 time, off 1 time: Bluetooth is enabled, but it is not connected with the mobile APP; Solid on: Bluetooth works normally and connects normally with the mobile APP.
4G indicator	Normally off: 4G function is not supported; 1S flashes 2 times, off 1 time: SIM card is not inserted; 1S flashes 1 time, off 1 time: 4G network is abnormal or SIM no traffic; Solid on: The 4G network is normal.
LAN indicator	Normally off: The network is not connected; 1S flashes 1 time, extinguishes 1 time: A valid IP is obtained, and no network data interaction is carried out, that is, the connection with the server is abnormal.
Status indicator	Normally off: The system is working normally, and there are no alarms or faults; Flashing blue light: The system has an alarm; For example, the connection server is abnormal, the communication of the monitoring device is abnormal, etc Solid red light: The system is faulty. For example, the SD card is working abnormally. The MMC memory chip is working abnormally. The anti-backflow function fails. Lightning protection alarm, third-party alarm signal, etc.

7 Shine master4G-X built-in page operation.

7.1 Built-in page login method

instruction:

Shine Matser4G-X comes with DHCP disabled by default, and the default access IP is 192.168.0.254. Therefore, when using Shine Master4G-X for the first time, please connect Shine Master4G-X to the computer via a network cable to access the built-in page.

7.1.1 Method 1: Access the built-in page by directly connecting the computer with a network cable

Connect the PC directly to Shine Master4G-X via a network cable, and change the computer's IP to 192.168.0.XXX (XXX range is from 2 to 253). (For instructions on changing the computer's IP, please refer to section 7.1.3 "Computer IP Setting Reference") The default access IP for Shine Master4G-X is 192.168.0.254, you can access the built-in page by entering 192.168.0.254 in the web browser.

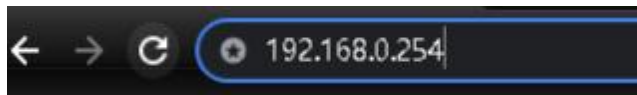


Figure 7-1 Default login IP address



Figure 7-2 Login page

The username is "admin", the password is "admin". After entering, click on login. Upon successful prompt, you will enter the built-in page.



Figure 7-3 Successful login prompt



Figure 7-4 Built-in page

7.1.2 Method 2: Access the built-in page by logging in through the router

instruction:

The Shine Matser4G-X is shipped with DHCP disabled by default. When accessing the built-in page through the router, you must first enable the DHCP function of the Shine Master4G-X.

"Enable the DHCP function of Shine Master4G-X, first refer to "6.1.1 Access the built-in page by directly connecting the computer with a network cable" to access the built-in page, log in with the username: "admin", and the password: "admin", then refer to "7.5.1" point one, "Connect to the network through the router" to enable the DHCP function."



Figure 7-5 Login password



Figure 7-6 DHCP settings

Check and confirm that Shine Master4G-X has enabled DHCP function, connect the PC and Shine Master4G-X to the same router to make them in the same LAN. Check the network segment where the router is located. Taking the TP_LINK router as an example: Click win+R on the PC, enter cmd to enter the command line interface, and enter ipconfig to view the IP assigned to the PC by the router.



Figure 7-7 cmd command



Figure 7-8 Query IP address command

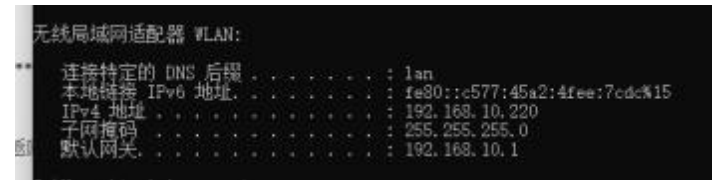


Figure 7-9 Querying the IP address field

It can be seen that the IP address assigned to the computer by the router is 192.168.10.220. It can be confirmed that the router's network segment is 192.168.10.X. Just enter 192.168.10.254 in the browser to log in to the built-in interface.



Figure 7-10 Login IP field



Figure 7 - 11 Login Interface

The username is "admin" and the password is "admin". After entering them, click on login. Once successfully prompted, you will enter the built-in page.



Figure 7 - 12 Login Success Prompt



Figure 7-13 Built-in Page

7.1.3 Reference for Computer IP Settings

(1) By clicking Start in the lower-left corner of the desktop, then Control Panel, and finally Network and Sharing Center.



Figure 7-14 Computer Network and Sharing Center

(2) Click on the "Change Adapter Settings" function key in the top left corner of the toolbar;



Figure 7-15 Change Adapter Settings Options

(3) Find the 'Local Area Connection' icon. After selecting 'Local Area Connection,' double-click with the left mouse button or right-click and choose 'Properties';



Figure 7-16 Local Ethernet Connection

(4) Select Internet Protocol Version 4, then click on the "Properties" in the bottom right corner.



Figure 7-17 Ethernet properties

(5) In the popped-up Internet Protocol Version 4 Properties dialog box, click on "Use the following IP address", then enter the IP address in the blank field below: 192.168.0.XX (XX can be any value between 2 and 253), subnet mask: 255.255.255.0, default gateway: 192.168.0.1, DNS server does not need to be set.



Figure 7-18 IP Address Modification

(6) After the settings are completed, click on "OK" to save the changes.

7.2 内置页面介绍

7.2.1 布局介绍



Figure 7-19 Internal Page Layout

Translate to English: At the top of the built-in page, there are four tab options in section A serving as the main menu, namely System Information, Product Maintenance, System Settings, and Device Monitoring. On the left side of each tab interface in section B, there are submenus, where each item in the submenu has its own independent operation area.

7.2.2 Shine Master4G-X System Information

Clicking on Shine Master4G-X system information allows you to view "Product Information," "Device List," "Communication Information," and other information.



Figure 7-20 Product Information Section

Product Information	Serial number, software version and other information of Shine Master4G-X
list of devices	Registered device information as well as online information
Network Information	Details of wired and wireless networks
RS485	Settings information for RS485-1, RS485-2, RS485-3, RS485-4
CAN	CAN communication information

7.2.3 Shine Master4G-X Product Maintenance



Figure 7-21 Product Maintenance Section

System settings	Serial number setting and time setting for Shine Master4G-X
Software Upgrades	Online upgrade and local upgrade function of Shine Master4G-X software

7.2.4 Shine Master4G-X System settings



Figure 7-22 System Settings Section

Wired communication	Shine Master4G-X connects to the server through the network port
Wireless communication	Shine Matser4G-X Parameter setting for connecting to the server through a 4G network card
RS485	RS485-1, RS485-2, RS485-3, RS485-4 communication parameter setting
CAN	Parameter settings for CAN communication
server	Set the domain name and upload interval of the connected server

7.2.5 Shine Master4G-X Device monitoring



Figure 7-23 Device Monitoring Section

Operational information	View specific information about operating inverters, electricity meters, environmental monitors, PID devices
Historical information	View historical data of operating inverters, electricity meters, environmental monitors, PID devices
Equipment maintenance	View, add, and remove inverters, electricity meters, environmental monitors, PID devices

7.3 Shine Master4G-X Communication settings

7.3.1 Shine Master4G-X RS485 Communication settings

instruction:

The Shine Master4G-X comes with the default settings for four RS485 ports, labeled as RS485-1, RS485-2, RS485-3, and RS485-4, all set at a baud rate of 9600. In actual use, the baud rates for the four RS485 ports can be adjusted according to different installation environments.

(1) Refer to "7.1" "Built-in Page Login Method" to log in to the built-in page. The login account is "admin", and the password is "admin". Choose "RS485" in the list on the left side of "System Settings";



Figure 7-24 RS485 Settings

(2) Select the corresponding RS485 channel from the 'Port' drop-down list, with four available options: RS485-1, RS485-2, RS485-3, RS485-4;



Figure 7-25 RS485 Channel Settings

(3) Select the baud rate from the 'Baud Rate' dropdown list, with options of '4800', '9600', '19200', '38400', and '115200' available;



Figure 7-26 RS485 Baud Rate Settings

(4) Select the parity from the 'Parity' dropdown list, with options of 'None', 'Odd', and 'Even' available;

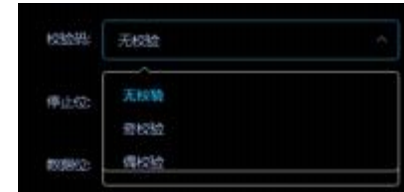


Figure 7-27 RS485 Parity Setting

(5) Select the stop bits from the 'Stop Bits' dropdown list, with options of 1 or 2 bits available;

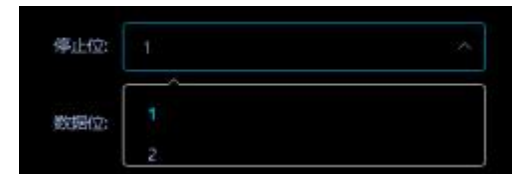


Figure 7-28 RS485 Stop Bit Setting

(6) In the 'Data Bits' dropdown list, select the number of data bits, with options of 6 to 8 bits available;



Figure 7-29 RS485 Data Bit Setting

(7) In the 'Protocol Type' dropdown list, select the Modbus protocol to be used;



Figure 7-30 RS485 Protocol Type Setting

(8) In the 'Master/Slave Mode' dropdown list, select whether to communicate as a master or for data collection;

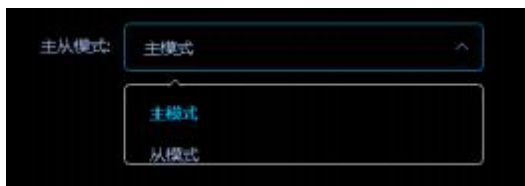


Figure 7-31 RS485 Master-Slave Mode Setting

(9) After setting is completed, click 'Submit' and a prompt will appear saying 'Settings Successful';

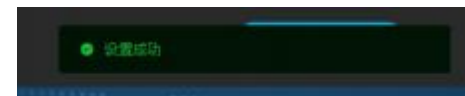


Figure 7-32 Setting Successful Prompt

(10) Check the 'RS485' on the left list of 'System Information' to see if the corresponding RS485 channel settings have been successfully changed;



Figure 7-33 RS485 Configuration

7.3.2 Shine Master4G-X CAN Communication settings

(1) Refer to "7.1" "Built-in Page Login Method" to log in to the built-in page. The login account is "admin", and the password is "admin". Select "CAN" from the list on the left side of the "System Settings";



Figure 7-34 CAN Settings

(2) Select the corresponding CAN channel in the 'Port' drop-down list, with two channels available: CAN1 and CAN2.



Figure 7-35 CAN Port Settings

(3) Select the baud rate from the drop-down list, options include '125K', '250K', '500K'.



Figure 7-36 CAN Baud Rate Settings

(4) In the "Protocol Type" drop-down list, select the Modbus protocol to use.



Figure 7-37 CAN Communication Protocol Settings

(5) After setting up, click "Submit", and it will prompt "Settings Successful"

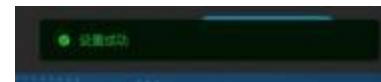


Figure 7-38 Setting Successful Prompt

(6) Check the "CAN" on the left side of the "System Information" list to see if the corresponding CAN channel settings have been changed successfully;



Figure 7-39 CAN Configuration

7.4 Adding, deleting, and querying the Shine Master4G-X monitoring device

instruction:

Before monitoring the photovoltaic equipment with Shine Master4G-X, you need to enter the built-in page "Shine Master4G-X Data Collector Settings" page to add devices;

The built-in page of Shine Master4G-X supports displaying device data information, including "inverter", "electric meter", "environmental monitor", "PID device", and also supports viewing historical data;

The device address is divided into device address and system address. The device address is the communication address of the device itself on RS485, while the system address is a management address assigned by Shine Master4G-X to the device. The system address follows the priority principle, starting from the 01 bit for allocation, with devices added first receiving priority.

7.4.1 Translate to English: Adding and deleting devices

1. Add inverter

(1) Refer to "7.1" "Login Method for Built-in Page" to log in to the built-in page. The login account is "admin", and the password is "admin". Select "Device Monitoring" from the first-level menu, "Inverter" from the second-level menu, and "Device Maintenance" from the third-level menu.



Figure 7-40 Inverter Device Maintenance Interface

(2) Click "Add", and a window titled "Add Data" will pop up;



Figure 7-41 Inverter Addition Interface

(3) Select the RS485 channel where the device is located from the drop-down list of "Channels," which includes RS485-1, RS485-2, RS485-3, and RS485-4;

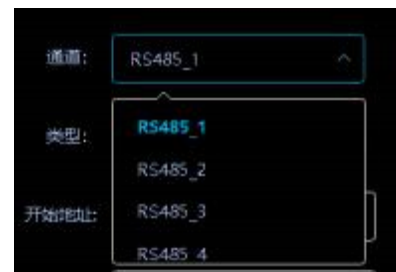


Figure 7-42 Channel Selection

(4) Select the inverter type from the dropdown list under "Type" ;



Figure 7-43 Inverter Type Selection

(5) "Start Address" writes the starting address for adding devices, for example: if the address of the photovoltaic inverter to be monitored is "1", then the start address is 1;
 Note: Each RS485 channel can only add up to 32 devices. The addresses of photovoltaic devices range from 1 to 254. Devices with the same address cannot be connected to the same 485 channel, but devices with different channel addresses can have duplicate addresses.



Figure 7-44 Start Address

(6) Number of Addresses: Shine Master4G-X supports adding multiple addresses of the same type of devices in a continuous manner at once. For example, if there are four photovoltaic inverters to be monitored with addresses 1, 2, 3, and 4, then set the "Start Address" to "1" and the "Number of Addresses" to "4";
 Note: Each RS485 channel can only add up to 32 devices. Assuming starting from address 1, a maximum of 32 devices can be added continuously at one time;



Figure 7-45 Number of Addresses Added

(7) After clicking on "Submit" and receiving a successful prompt, select "System Information" from the primary menu, then choose "Device List" from the secondary menu to check if the inverter has been successfully added.

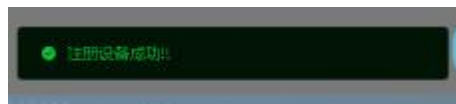


Figure 7-46 Successful Addition Prompt

序号	设备名称	地址	地址	地址	地址	地址
1	逆变器	1048000001	1048000001	1	1	成功
2	逆变器	1048000002	1048000002	2	2	成功
3	逆变器	1048000003	1048000003	3	3	成功
4	逆变器	1048000004	1048000004	4	4	成功

Figure 7-46 Device List

2. Add an electricity meter

(1) Refer to "7.1 "Login Method for Built-in Page" to log in to the built-in page. The login account is "admin", and the password is "admin". Select "Device Monitoring" in the first-level menu, "Electric Meter" in the second-level menu, and "Device Maintenance" in the third-level menu;



Figure 7-48 Meter Device Maintenance Interface

(2) Click "Add", and the "Add Data" window will pop up;



Figure 7-49 Meter Addition Interface

(3) Select the RS485 channel where the device is located from the drop-down list of "Channels," which includes four options: RS485-1, RS485-2, RS485-3, and RS485-4.



Figure 7-50 Channel Selection

(4) Select the type of electric meter from the drop-down list of "Type," which includes options such as "Donghong Single-Phase Electric Meter," "Donghong Three-Phase Electric Meter," "Zhongtai Single-Phase Electric Meter," "Zhongtai Three-Phase Electric Meter," "Ankerui Electric Meter," and "GRT Electric Meter.";



Figure 7-51 Meter Type Selection

(5) "Start Address" is used to input the starting address for adding devices. For example, if the address of the electric meter to be monitored is "1," then the start address should be set as 1;

Note: Each RS485 channel can only add up to 32 devices, and the addresses for photovoltaic devices must be within the range of 1 to 32.



Figure 7-52 Starting Address

(6) Number of Addresses: Shine Master4G-X supports adding multiple devices of the same type with consecutive addresses at once. For example, if you need to monitor four electric meters with addresses 1, 2, 3, and 4, you should input "1" for "Start Address" and "4" for "Number of Addresses".

Note: Each RS485 channel can only accommodate up to 32 devices. Assuming starting from address 1, a maximum of 32 devices can be consecutively added at a time.



Figure 7-53 Number of Addresses Added

(7) After filling out the form, click on "Submit". Once you receive the success prompt, select "System Information" from the first-level menu, then choose "Device List" from the second-level menu to check if the electric meter has been successfully added.

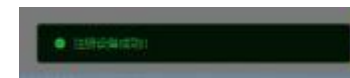


Figure 7-54 Successful Addition Prompt

序号	设备类型	设备地址	端口	通信地址	地址数量	状态
<input type="checkbox"/>	东鸿单向电表	AGD1234567	RS485_1	1	1	成功
<input type="checkbox"/>	东鸿单向电表		RS485_1	2	2	成功
<input type="checkbox"/>	东鸿单向电表		RS485_1	3	3	成功
<input type="checkbox"/>	东鸿单向电表		RS485_1	4	4	成功

Figure 7-55 Device List

3. Add environmental monitoring devices

(1) Refer to "7.1" "Built-in Page Login Method" to log in to the built-in page. The login account is "admin", and the password is "admin". Choose "Device Monitoring" from the primary menu, select "Environmental Monitor" from the secondary menu, and choose "Device Maintenance" from the tertiary menu.



Figure 7-56 Environmental Monitoring Device Maintenance Interface

(2) Click "Add", and the "Add Data" window will pop up;



Figure 7-57 Environmental Monitoring Device Addition Interface

(3) Select the RS485 channel where the device is located from the drop-down list under "Channel," with four options available: RS485-1, RS485-2, RS485-3, and RS485-4.



Figure 7-58 Channel Selection

(4) Select the type of environmental monitoring instrument from the drop-down list under "Type."



Figure 7-59 Device Type Selection

(5) "Start Address" is used to input the starting address for adding devices. For example, if the address of the environmental monitoring instrument that needs to be monitored is "1," then the start address would be 1; Note: Each RS485 channel can only support up to 32 devices, and the addresses for photovoltaic equipment must be in the range of 1 to 32;



Figure 7-60 Start Address

(6) Address Quantity: Shine Master4G-X supports adding multiple addresses for devices of the same type in a continuous manner. For example, if there are four environmental monitoring instruments that need to be monitored with addresses 1, 2, 3, and 4 respectively, then input "1" for the "Start Address" and "4" for the "Address Quantity.";

Note: Only 32 devices can be added to each RS485 channel. Assuming starting from address 1, a maximum of 32 devices can be consecutively added at a time.



Figure 7-61 Number of Environmental Monitoring Addresses to Add

(7) After filling out the form, click "Submit." Once you receive the success prompt, select "System Information" from the first-level menu, then choose "Device List" from the second-level menu to check if the environmental monitor has been successfully added.

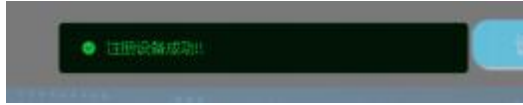


Figure 7-62 Successful Addition Prompt

序号	设备名称	设备ID	地址	设备类型	设备地址	备注
1	环境检测仪	ADD234567	RS485_1	1	1	备注
2	环境检测仪		RS485_1	2	2	备注
3	环境检测仪		RS485_1	3	3	备注
4	环境检测仪		RS485_1	4	4	备注

Figure 7-63 Device List

4. Add a PID device

(1) Refer to "7.1" Built-in page login method "Login to the built-in page, login account is "admin", password is "admin", select "Device Monitoring" in the first-level menu, select "PID device" in the second-level menu, and select "Equipment Maintenance" in the third-level menu;



Figure 7-64 PID Device Maintenance Interface

(2) Click "Add" to pop up the "Add Data" window;



Figure 7-65 PID Device Addition Interface

(3) Translate to English: "Select the RS485 channel where the device is located from the dropdown list of 'Channels', which includes RS485-1, RS485-2, RS485-3, and RS485-4.";



Figure 7-66 Channel Selection

(4) Select the PID device type from the dropdown list of 'Type';



Figure 7- 67 PID Device type selection

(5) “开始地址start address” Write the starting address of the added device , for example : Assume that the address of the PID device that needs to be monitored is "1", then the starting address is 1;Note: Only 32 devices can be added to each RS485 channel, and the addresses of photovoltaic devices can only be 1 - 32;



Figure7- 68 start address

(6) Number of addresses : ShineMaster4G-X can add multiple address with consecutive addresses.For example, 例如 : Assume that there are four PID device addresses that need to be monitored, and the addresses are 1, 2, 3, and 4 respectively. Then write "1" in the "Start Address", ""Number of addresses" enter "4"; Note : devices that can be added are only 32 in each RS485 channel. Assume that from address 1, it can add 32 devices once at most.



Figure7- 69 number of address to add

(7) Filled, click “submit” , after it succeeded,select “system information” in first menu, then select “device list” in secondary menu , check whether PID device is added successfully.



Figure7- 70 hint of successful addition

序号	设备地址	设备名称	设备类型	设备地址	设备地址	设备地址	设备地址	设备地址	设备地址
1	1	逆变器	ADD1234567	RS485_1	1	1	1	1	成功
2	2	逆变器		RS485_1	2	2	2	2	成功
3	3	逆变器		RS485_1	3	3	3	3	成功
4	4	逆变器		RS485_1	4	4	4	4	成功

Figure7- 71 device list

7.4.2 device delete

device delete includes “inverter,meter, “Environmental Monitor ” 、 “ PID device ” ,the way of deleting device, take inverter for example :

(1) refer to “7.1” “login method of interface” , login account is “admin” , password is “admin” , select “device monitor” in first menu , select “inverter” in secondary menu ,select “device maintenance.



Figure 7-72 Device Maintenance Interface

(2) Select the RS485 channel for the photovoltaic inverter from the dropdown list of 'Channels', then click 'Search' to display the photovoltaic devices added under the RS485 channel;

序号	设备地址	设备名称	设备类型	设备地址	设备地址	设备地址	设备地址	设备地址	设备地址
1	1	逆变器	ADD1234567	RS485_1	1	1	1	1	成功
2	2	逆变器		RS485_1	2	2	2	2	成功
3	3	逆变器		RS485_1	3	3	3	3	成功
4	4	逆变器		RS485_1	4	4	4	4	成功

Figure 7-73 Device List

(3) Check the photovoltaic devices that need to be deleted, click 'Delete', and then click 'Confirm';



Figure 7- 74 check device



Figure 7- 75 Delete operation confirmation

(4) reclick "Inquire" after getting hint of success, check whether it deleted successfully.

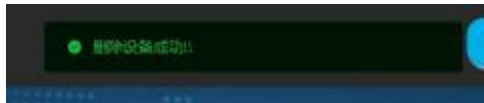


Figure 7- 76 hint of delete successfully



Figure 7- 77 list of devices

7.4.3 check the work information of device

instrucion:

ShineMaster4G-X interface can support display of device data information, including "inverter,meter, "Environmental Monitor" 、 "PID device" , and it can check the history data.

Take "inverter" as an example , check the work information of device.

(1) refer to "7.1" "login interface" , login account is "admin" , password is "admin" , select "device monitor" in first menu , select" inverter" in secondary menu" , select "work information" in third menu" .



Figure 7- 78 figure of device work

7.5 Shine Master4G-X server communication setting

7.5.1 Shine Master4G-X connect net setting

Instruction:

The function of DHCP is closed by default after ShineMatser4G-X leaving factory, If it connects net via router, it needs to start DHCP.

ShineMatser4G-X can connect server via Wired network and 4G network.

1、Connect to server via router

(1) First step,check whether ShineMaster4G-X DHCP is on, refer to 7.1.1, enter interface by connecting computer directly& via cable , login interface , login account is "admin, password is "admin" ,select "wired communication" in left list of "system setting" .



Figure 7- 79 wired communication setting

(2) DHCP is closed after leaving factory , it needs to enable DHCP, then it will gain IP address from router automatically.



Figure 7- 80 Schematic diagram for enable DHCP

(3) After setting, it needs to be restarted to take effect.

2、connect to server via 4G

(1) refer to "7.1 login of interface ", login account is 'admin' , password is "admin" , enter "wireless communication" in left list of "system setting" , set "internet mode" to "enable" ;



Figure 7- 81 wireless communication setting

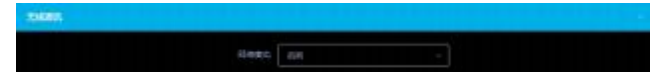


Figure 7- 82 Network mode enablement diagram

(2) "APN Mode" defaults to "Auto Match", If you want to set it manually, set "APN Mode" to "Manual Setting", "User Name" and "Password" are optional and can be left blank;

(3) After setting, it needs to be restarted to take effect.

3、if you need to set ShineMaster4G-X to "definite IP" , you need to set when you use it as blow followed:

(1) Refer to "7.1.1 Access the built-in page through a direct connection to the computer through a network cable", log in to the interface, the login account is "admin", the password is "admin", select "Wired Communication" in the list on the left of "System Settings", and Turn off DHCP in the "Wired Communication" interface;



Figure 7- 83 DHCP Close Schematic diagram

(2) Enter the user's own IP, gateway, subnet mask, DNS and other parameters, and click "Submit". As shown below:



Figure 7- 84 Schematic diagram of fixed IP settings

(3) After setting, it needs to be restarted to take effect.

7.5.2 Shine Master4G-X Server address settings

1、Server address domain name resolution method

(1) Refer to "7.1" "Built-in Page Login Method" to log in to the built-in page. The login account is "admin" and the password is "admin". Select "Server" in the list on the left of "System Settings", select "Open" and enter the corresponding Server port number, server domain name, such as server-cn.growatt.com/server.growatt.com, and data upload time interval;



Figure 7- 85 Server setup diagram

(2) Click "Submit" and you will be prompted to refresh the interface successfully to check whether the modification is successful;

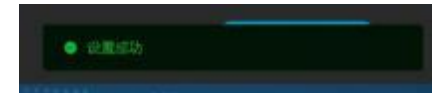


Figure 7- 86 Schematic diagram of successful setting

(3) After setting, it needs to be restarted to take effect.

8 Technical specifications

General specification

Length * width * height	139.5mm*232.0mm*40.0mm
Weight	1.20 kg
Protection level	IP20

Operating environment

Ambient temperature	30°C ~ 60°C (-22°F ~ 140°F)
storage temperature	-40°C ~ 70°C (-40°F ~ 158°F)
Installation	indoor

Communication

RS485	1000 meters maximum for communication distance, can connect 124 devices at most
CAN	100K , 250K, 500K

9 Contact us

Growatt New Energy provides customers with a full range of technical support. Users can contact the nearest Growatt new energy office or customer service point, or they can contact the company's customer service center directly.
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