



User Manual

MICRO STORAGE

HYX-MS-2500



Carefully read this product user instructions before using.
Read and save these instructions.



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1. Safety Instructions

HYXIPower balcony micro storage products store the electricity generated by photovoltaic modules in batteries during the day. At night, energy storage batteries release electricity to provide sufficient power supply for households. They are designed and tested in strict accordance with relevant national safety standards.

The installation, trial operation, operation and maintenance of the product must comply with relevant safety regulations. Incorrect operation or use will endanger:

- Life and personal safety of operators or third parties.
- Other property of the operators or third parties.

Important Safeguards and Warnings

To ensure the installation and operation safety of micro storage and reduce the risk of electric shock, this manual uses the following safety symbols to mark some danger indications and safety precautions. Safeguards and Warnings in the specific operation process will also be explained in detail in the corresponding chapters.

This manual contains important instructions to be followed when installing and maintaining the micro storage. Users should read this manual thoroughly before installing or debugging the micro storage.

For safety, the technicians responsible for the installation, operation and maintenance of this micro storage must have corresponding qualifications, received relevant training and master relevant skills. Installation, operation and maintenance must strictly follow the instructions contained in this manual.

1.1 Safety Instruction

- Do not place this product in high temperature environments or in fire.
- Do not place the machine near heat sources, such as in direct sunlight inside a car, near fire, or beside a heater.
- Avoid exposing it to moisture or submerging it in liquids.
- Do not place the product in unventilated areas during use.
- To avoid scalding, do not directly contact the shell of the micro storage, as the shell temperature can reach up to 80°C.
- Avoid causing a short circuit in the product with wires or other metal objects.
- Before disconnecting the micro storage from the solar module, AC side power grid must be disconnected first.
- Do not dispose of batteries in a fire. The batteries may explode.
- Do not disassemble this product. Consult official channels for service or repair. Improper disassembly or reassembly may pose a risk of fire or personal injury.
- Ensure the product is not subjected to impact, drops, or severe vibration. Secure it during transport to prevent damage. If severely damaged, immediately turn off the power and cease using the product.
- If the product accidentally falls into water, place it in a safe, open area and stay away from it until it is completely dry. Do not reuse a dried product; dispose of it properly as per the instructions in this document.

- Place it on a flat surface to prevent it from falling. If it topples over and is severely damaged, immediately turn it off; place the battery in an open area, away from people and flammable materials, and dispose of it in accordance with local laws and regulations.
- Keep out of reach of children and pets.
- Be sure to completely discharge the machine battery before placing the machine battery in the proper disposal location as per local rules and regulations. Batteries are hazardous chemicals and should not be disposed of in ordinary trash cans. Follow local laws and regulations for battery recycling and disposal.
- The electrical installation of micro storage must comply with local electrical regulations.
- Read all instructions and warning signs in this manual before installing and using the micro storage.
- If the micro storage does not work normally, contact after-sales services of HXYiPOWER. Unauthorized destruction or opening of the micro storage will not be covered by warranty.

1.2 Symbol Description

1.2.1 Symbols Used in the Manual

DANGER

- Indicates dangerous conditions that might cause fatal electric shock risk, serious personal injury or fire.






CAUTION




- To avoid potential safety hazards, the corresponding instructions must be strictly followed.

NOTICE

- This operation is prohibited, and relevant personnel should stop the operation.

1.2.2 Other Symbols

Symbol	Description
	There are potential hazards when the equipment is in operation, so please take precautions when operating the equipment.
	High voltage exists when the equipment is in operation, so when operating the equipment, make sure the equipment is powered off.
	The equipment should be kept away from open flames or sources of ignition.
	At the end of the equipment's life, do not dispose of it with household waste.
	Please use the equipment reasonably, extreme conditions of use, the equipment has the risk of explosion.

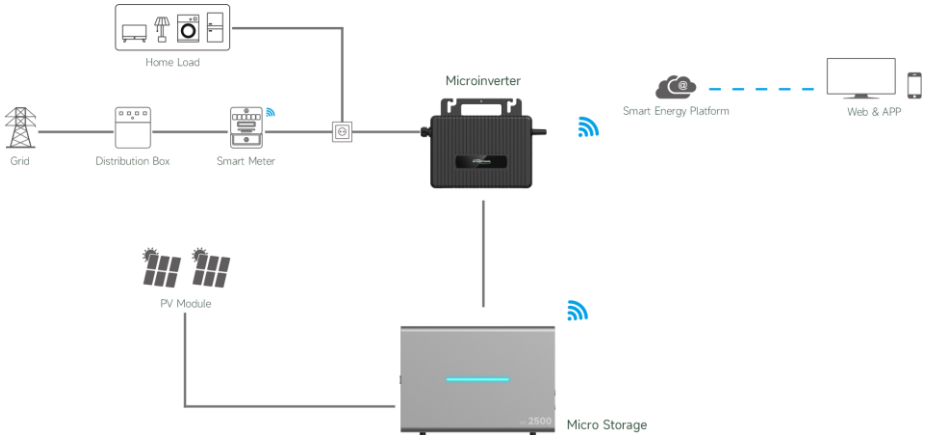
	Observe enclosed documentation
	Protective gloves must be worn.
	CE certification mark.

1.3 Radio Wave Interference Statement

After testing, this micro storage meets the requirements of CE and EMC and is free from electromagnetic interference. This product might cause electromagnetic interference if it is improperly installed.

2. Product Introduction

2.1 Balcony Energy Storage System



2.2 Micro Storage

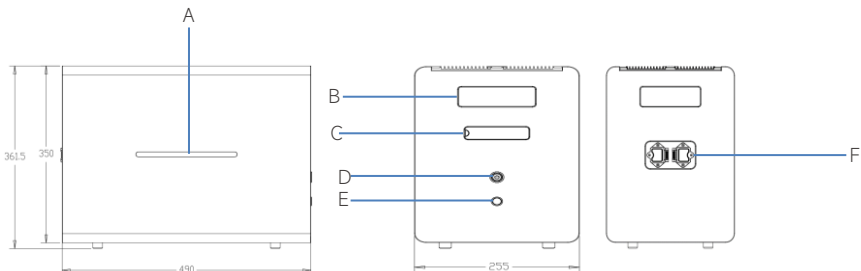
During the day, the electricity generated by solar panels flows through the micro storage. A portion of this power is converted into alternating current (AC) by a microinverter to power your home appliances, the surplus energy is stored in batteries for use at night, saving on energy costs.

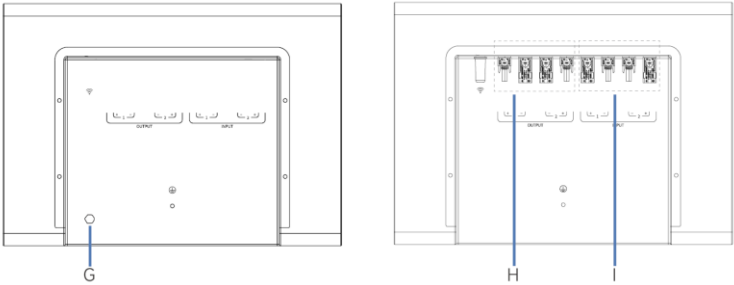
At night, the excess energy stored in the batteries can power a range of high and low-power household appliances in conjunction with the grid, including air conditioners, refrigerators, Wi-Fi routers, laptops, lights, and more.

The default output power of micro storage is 800W, and the max. output power can be adjusted to 1200W through APP.

Additionally, this product provides multiple output ports, including USB-A, and Type-C, go camping and charge DC loads such as your phone and computer.

2.3 Product Appearance





No.	Description
A	<p>Indicator light</p> <ul style="list-style-type: none">• When operating normally, the blue light is displayed.• The red alarm light is displayed.• Battery level indicator: Displays the battery charge percentage, where five bars represent 95-100%, four bars represent 75-95%, three bars represent 50-75%, two bars represent 25-50% and one bar represent 5-25%. When the battery level is between 0-5%, the light will be turned off.• The indicator light in the middle breathes once to both sides - the device starts.• The indicator light on both sides breathes towards the middle once - the device is turned off.• During the charging process, the display of the light shows breathing cycle from the middle to both sides.• During the process of discharging, the display of the light shows breathing cycle from both sides to the middle.• During the upgrade process, the display of the light will cycle from left to right.
B	<p>Handle</p> <p>Specifically for lifting the micro storage.</p>
C	<p>USB-A and Type-C ports</p> <p>Compatible with lamps, computers, phones, and other devices. Please note that when USB-A and Type-C ports are used at the same time, they will output 5V voltage. If used alone, it will output at the maximum power of their own.</p>
D	<p>Power Button</p> <ul style="list-style-type: none">• Short press for 1 second to turn on the device.• Long press for 3 seconds to turn off the device.• During device operation, short press once to check the current battery level.
E	<p>Reset Button</p> <ul style="list-style-type: none">• Press for 1 second to start Bluetooth (default is enabled).• Press and hold for 2 seconds to turn off Bluetooth and Wi-Fi hotspot.

	<ul style="list-style-type: none">• Press and hold for 5 seconds to restore Bluetooth/Wi-Fi to factory settings.• Press and hold the power button and reset button simultaneously for 5 seconds to restore all settings to factory defaults.
F	Battery Expansion Port
G	Vent Valve
H	DC Output Port 1&2
I	PV Input Port 1&2

3. Inspection & Storage

3.1 Unpacking and Inspection

The device has been completely tested and strictly inspected before leaving the factory, but it may still be damaged during transportation, please make a detailed inspection before signing the product.

- Check whether there is any damage to the packing box.
- Check if the goods are complete and in accordance with the packing list.
- Unpack and check if the device inside is intact.
- If there is any damage or incomplete goods, please contact with the shipping company or directly with Zhejiang Hxyi Technology Co., Ltd.
- Provide photos of the damage to facilitate the provision of services.

3.2 Storage

If the product is not immediately put into use, it is necessary to meet the following requirements when storing the product:

- Do not remove the outer packaging of the product.
- The storage temperature should be kept at -0°C to $+35^{\circ}\text{C}$ and the relative humidity should be kept at 5% ~ 95%RH.
- Please place the products carefully to avoid personal injury or device damage caused by tipping the device.
- Avoid chemically corrosive substances, otherwise it may corrode the product.
- During the storage period, regular inspection is required. If insects and rodents bite the inverter or damage the packaging, the packaging material should be replaced in time.
- Please do not dispose of the original packaging of the device. It is better to store the device in the original box after it is dismantled.
- To extend battery life for long-term storage, keep the battery level between 30% and 80%, and turn off the main switch for indoor storage. It is recommended to charge it to 80% every three months.

4. Installation

NOTICE

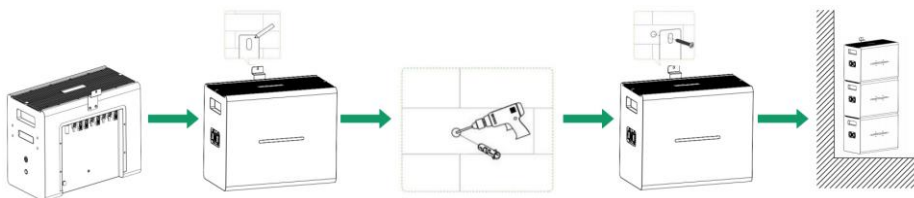
- When wiring, please ensure that the wire labels correspond to the markings on the enclosure.
- When stacking one or more units, wall fixation is required to prevent tipping. A maximum of three units can be stacked.
- Avoid direct sunlight on the product.
- Avoid the DC extension cable from PV panel to micro storage and from micro storage to microinverter to exceed 3 meters.

4.1 Mounting Method-Floor Installation

HYX-MS-2500 supports stacked installation, with a recommended maximum of 4 units (It is recommended to stack 3 units, as the height of 4 units will exceed 1.4 meters).

Fix-bracket can be used to enhance stability as follows:

- Step 1: Install Fix-Bracket onto HYX-MS-2500 (Torque 1.5N·m).
- Step 2: Mark the wall after positioning HYX-MS-2500.
- Step 3: Drill holes($\Phi 12 \times 50\text{mm}$) at the marked spots, and insert expansion plugs.
- Step 4: Secure HYX-MS-2500 to the wall (Torque 6.0N·m).
- Step 5: The stacking should appear as shown in the illustration.



4.2 Application 1: HYX-MS-2500 (×1) +SOLAR Panels (×2)

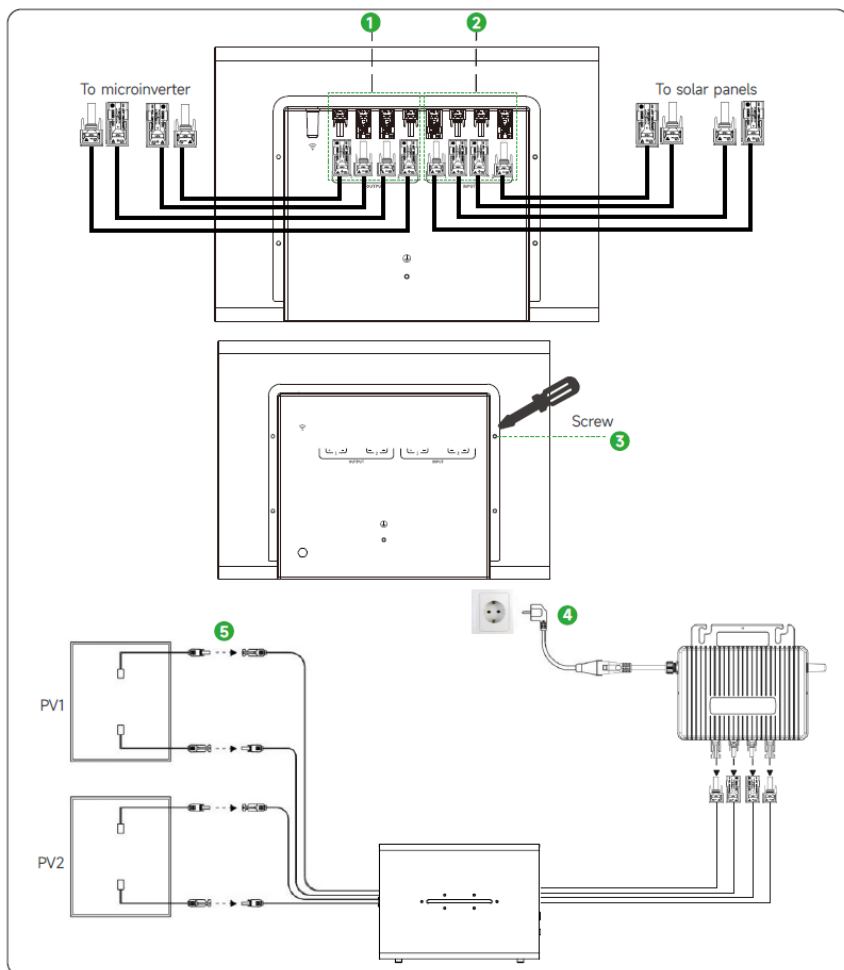
Step 1: Connect DC Output Cable to HYX-MS-2500.

Step 2: Attach PV Input Extension Cable to HYX-MS-2500(This step is required if the solar panels cannot reach the HYX-MS-2500).

Step 3: Put on the cable management cover and tighten the screws (Optional, it is recommended that this step be done).

Step 4: Connect the HYX-MS-2500 output port to the PV port of the microinverter, then plug into household socket.

Step 5: Connect solar panels to HYX-MS-2500.



4.3 Application 2: HYX-MS-2500 (×2) +SOLAR Panels (×4)

Step 1: Connect DC Output Cable to HYX-MS-2500.

Step 2: Attach PV Input Extension Cable to HYX-MS-2500(This step is required if the solar panels cannot reach the HYX-MS-2500).

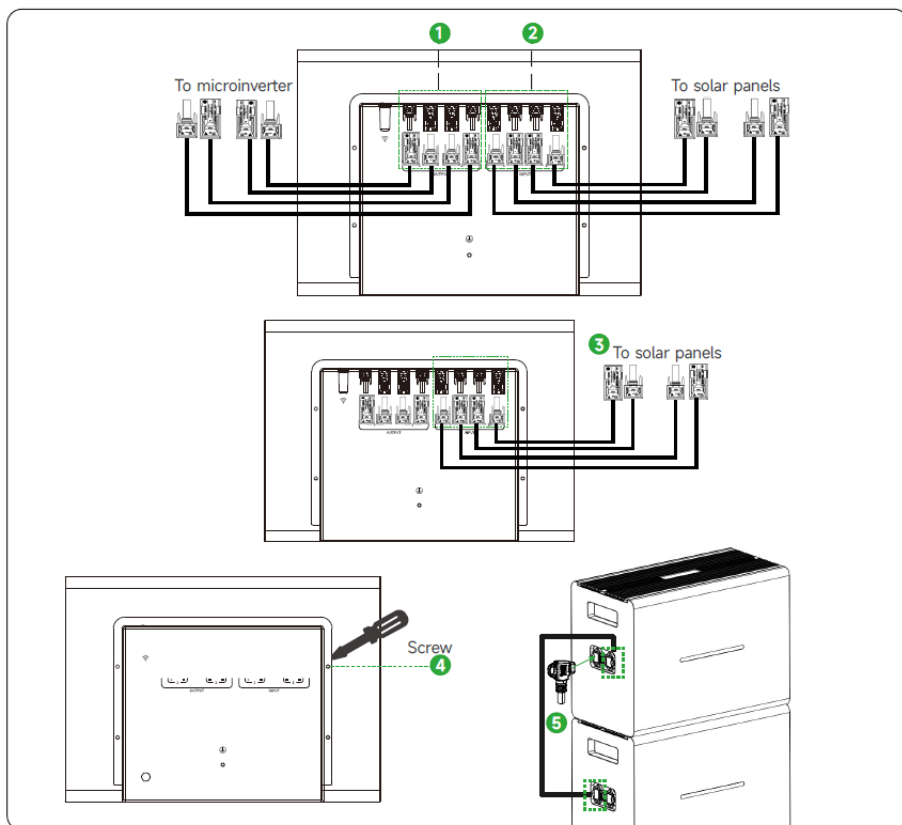
Step 3: Stack 2 units together.

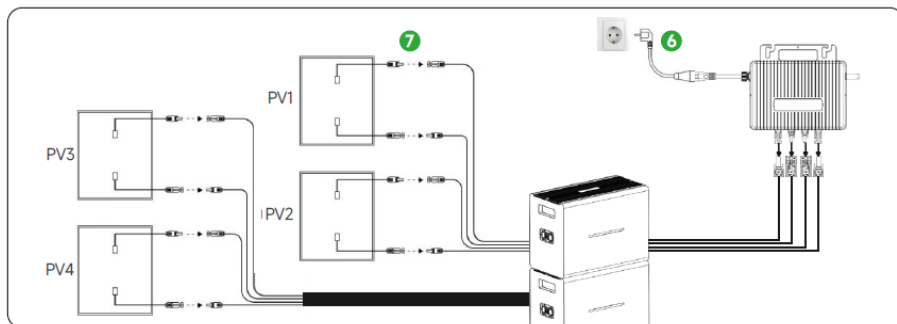
Step 4: Put on the cable management cover and tighten the screws (Optional, it is recommended that this step be done).

Step 5: Connect the two HYX-MS-2500 using the cable with plug included in the package. Using the protect plug to cover the spare battery port.

Step 6: Connect the HYX-MS-2500 output port to the PV port of the microinverter, then plug into household socket.

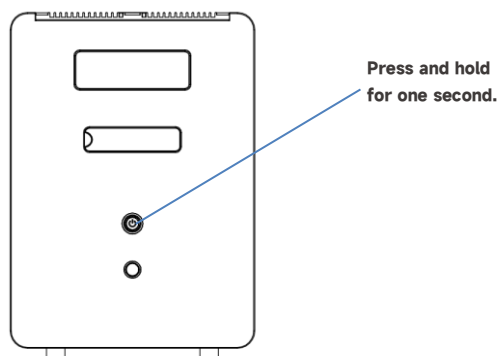
Step 7: Connect solar panels to HYX-MS-2500.





4.4 Using your MS-2500

4.4.1 Power On



4.3.2 Use the App

Installing the APP

Method 1

Download and install the App through the following application stores:

- App Store (iOS)
- Google Play

Method 2

Scan the following QR code to download and install the App according to the prompt information



Account Registration

- Step 1: Click on "Register Now" to proceed to the role selection page 1.
- Step 2: Click on "Register as Owner" to enter the role selection page 2.
- Step 3: Click on "I can install the equipment myself" to enter the balcony PV registration page.
- Step 4: Enter the registration information, including: country/region, email, verification code, and password.



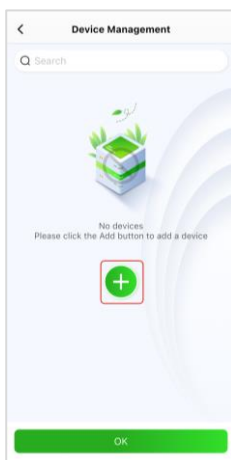
Add Device

The system will automatically create a plant for you. You can then add devices, view the energy flow diagram of the plant, check yield information, and perform other operations.

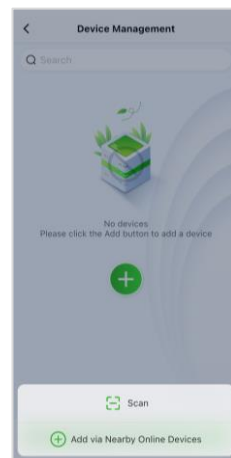
- Step 1: Click on "Add Device" to enter the device management page.
- Step 2: Click on the plus sign and select the method of addition. You can scan the device's QR code, manually enter the device's SN, or add a nearby online device (ensure the device is powered on).
- Step 3: Click "Confirm" to complete the addition. If you only have a microinverter, the addition process is complete, and you can wait for the device to go online. (If you also have a micro storage device, please continue to Step 2). The system will start connecting the micro storage and electricity meter (if any) via Bluetooth and enter the network configuration page.



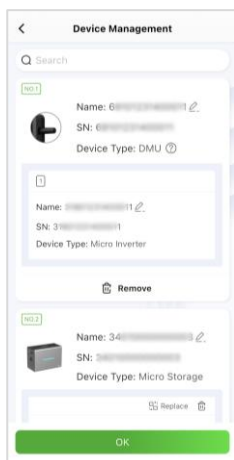
Step 1



Step 2-1



Step 2-2

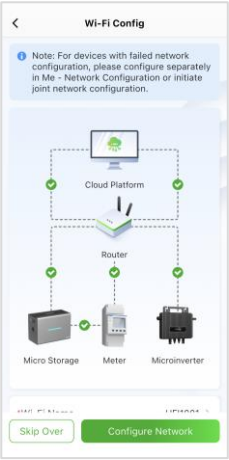


Step 3-1

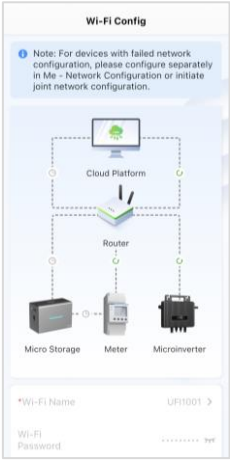


Step 3-2

- Step 4: Select your home Wi-Fi, enter the Wi-Fi password, and start the network configuration. You can view the progress of the network configuration for the micro-inverter, electricity meter, and micro-storage separately. After successful network configuration, click "Next".



Step 4-1

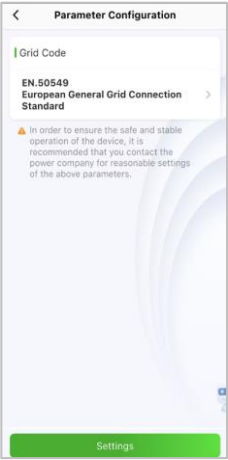


Step 4-2



Step 4-3

Step 5: Set the grid standard code. After setting, the device addition process is complete. You can then wait for the device to go online.



Step 5

5. Alarm Description

Fault Code	Fault Content	Solution
12800 12801	PV1-PV2 input undervoltage	<ol style="list-style-type: none"> 1. If the input voltage is low or zero, ensure that the component is properly connected. 2. Contact the distributor or equipment manufacturer. If the component voltage is within the right range.
13314 13315	PV1-PV2 input overvoltage	<ol style="list-style-type: none"> 1. If the input voltage is too high, ensure that the input voltage of the PV module does not exceed the maximum input voltage of the Micro Storage. 2. Contact the distributor or equipment manufacturer. if the component voltage is within the normal range.
13316 13317	PV1-PV2 input overcurrent	<ol style="list-style-type: none"> 1. If the input current is too high, ensure that the output current of the solar panel does not exceed the maximum input current of the Micro Storage. 2. If the current is within the normal range, contact the dealer or equipment manufacturer.
13840 13841	PV1-PV2 input reverse polarity	<ol style="list-style-type: none"> 1. Check if the MS-2500 input is properly connected to the solar photovoltaic panels. 2. If the connection is normal, but the fault still exists. please contact the dealer or equipment manufacturer.
13322 13323	PV1-PV2 output undervoltage	<ol style="list-style-type: none"> 1. Try to shut down and restart the micro storage. 2. If the fault still exists, please contact the dealer or equipment manufacturer.
13324 13325	PV1-PV2 output overcurrent	<ol style="list-style-type: none"> 1. Try to shut down and restart the micro storage. 2. If the fault still exists, please contact the dealer or equipment manufacturer.
13842 13843	PV1-PV2 output reverse polarity	<ol style="list-style-type: none"> 1. Check if the MS-2500 output port is correctly connected to the microinverter. 2. If the connection is normal, but the fault still occurs. please contact the dealer or equipment manufacturer.
13844	Low temperature alarm	<ol style="list-style-type: none"> 1. If the ambient temperature exceeds the allowable temperature, please improve the installation environment. If the environment is normal, please contact the dealer or equipment manufacturer.
13845	High temperature alarm	Shut down and disconnect the micro storage, wait for the ambient temperature to drop to the micro-storage operating temperature range before restarting the micro-storage. If the fault occurs repeatedly:

		<ol style="list-style-type: none"> 1. Check whether the ambient temperature of the machine is too high. 2. Check whether the machine is in a place that is easy to ventilate. 3. Check whether the machine is in direct sunlight, if so, please provide proper sun protection. 4. If it is confirmed that it is not caused by the above reasons and the fault still exists, please contact the dealer or equipment manufacturer.
13847 13848	Internal communication fault	<ol style="list-style-type: none"> 1. Try to shut down and restart the micro storage. 2. If the fault still exists, please contact the dealer or equipment manufacturer.
13849	Insulation resistance fault	<ol style="list-style-type: none"> 1. Try to shut down and restart the micro storage. 2. Check the impedance of the string and DC cable to ground. If there is a short circuit or the cable insulation layer is damaged, please take corrective measures. 3. If the cable is normal and the fault occurs on a rainy day, confirm again after the weather improves. 4. If it is confirmed that it is not the above reason and the fault still exists, please contact the dealer or equipment manufacturer.
13850	Battery fault	<ol style="list-style-type: none"> 1. Try to shut down and restart the micro storage. 2. If the fault still exists, please contact the dealer or equipment manufacturer.

6. Appendix

6.1 Technical Parameter

Product Model		HYX-MS-2500
PV Input		
Max. PV Input Power [W]		1200
Max. PV input voltage [V]		60
MPPT voltage range [V]		12 – 60
Max. PV input current [A]		18
No. of MPP trackers		2
No. of PV strings per MPPT tracker		1
Battery Output (To Microinverter)		
Nominal output Apparent Power [VA]		800
Max. output Apparent power [VA]		1200
Rated output voltage/range[V]		12-60
Max. output current [A]		18
Battery Output (To External devices)		
USB-A (2 ports)		5/9/12V=2A 24W Max, per port
TYPE-C (2 ports)		5/9/12/15V=3A 20/28V=5A 140W Max, per port
Battery Specification		
Battery Chemistry		LiFePO4
Battery Capacity [kWh]		2.56
Battery Nominal Voltage [V]		51.2
Max. expansion capacity [kWh]		10.24 (up to 4 units)
Max. charging power [W]		1200

Max. charging current [A]	30
Battery Cycle Life	≥6000 (@25°C±2°C, 0.5C/0.5C, 70%EOL)
Other Technical Specification	
Max. output efficiency	98%
MPPT efficiency	99%
Ingress protection rating	IP66
Charging temperature range [°C]	-20~55*
Discharging temperature range [°C]	-20~60
Altitude [m]	3000
Dimension (W x H x D) [mm]	490*350*255
Weight [kg]	30
Display	LED
Cooling concept	Natural
Communication	WiFi&Bluetooth
Warranty	10 years
Certification	CE, ROHS
*1: Support -20°C startup and automatically self-heat the device for a certain time to the charge temperature range.	

6.2 Contact Information

If you have any questions about this product, please contact us.

In order to provide you with faster and better after-sales service, we need your assistance in providing the following information.

- Equipment model: _____
- Serial number of the device: _____
- Fault code / name: _____
- A brief description of the fault phenomenon: _____

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The manual is subject to change without notice while the product is being improved.



Zhejiang Hyxi Technology Co., Ltd.

Building 1, No. 57 Jiang'er Road, Changhe Street, Binjiang District,

Hangzhou, Zhejiang Province, China

www.hyxipower.com

support@hyxipower.com