HYXI

User Manual

AC-COUPLED MICRO ESS

HYX-MS5000AC



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

© ZHEJIANG HYXI TECHNOLOGY CO., LTD. All rights reserved.

This document cannot be copied fully or partially, transferred, or distributed in any form without the prior written permission of ZHEJIANG HYXI TECHNOLOGY CO., LTD (hereinafter referred to as "HYXI").

TRADEMARKS



and other HYXI trademarks are the trademarks or registered trademarks of HYXI All other trademarks mentioned herein are the properties of their respective owners.

Contents

About the Manual 1
Overview 1
Scope of Application 1
For Readers 1
Use of the Manual 1
Use of Symbols 2
1 Product Overview 3
1.1 Safety Instructions 3
1.2 Symbols on the Label 5
1.3 Radio Wave Interference Statement 5
2 Inspection & Unpacking 6
2.1 Inspection 6
2.2 Packing List of AC-Coupled Micro ESS 6
2.3 Packing List of Smart Meter (Optional) 7
2.4 Packing List of P1 Meter (Optional) 8
3 Product Overview 10
3.1 Product Introduction 10
3.2 Model Description 10
3.3 Product Dimensions 10
3.4 Product Appearance 11
3.5 Explanation for RGB LED Ring 12
4 Installation 13
4.1 Installation Site 13
4.1.1 Environment Requirements 13
4.2 Installation Tools Requirement 14
5 Mechanical Installation 15
6 Electrical Connection 16
6.1 Grounding Connection 16
6.2 Grid Connection 17
6.3 Off Grid Connection 19
7 System Commissioning 20
7.1 Power On / Off 20
7.2 Network Status Confirmation 20
8 Human-Computer Interaction 21
8.1 Installing the App 21

8.2 APP Configuration 21
9 Appendix 22
9.1 Technical Parameter 22
9.2 Contact Information 24

About the Manual

This manual describes HYXI AC-Coupled Micro ESS in terms of unpacking, product overview, installation, electrical connections, button and light explanation, customer service, and safety Instructions.

AC-Coupled Micro ESS can be used with Smart Meter and some third-party devices, which is updated periodically.

Overview

To ensure the proper installation and use of the product and its superior performance, before installation and operation of the product, please read the operating instructions in detail and follow all safety precautions in the instructions.

Scope of Application

This manual is intended for the following device:

- HYX-MS5000AC

For Readers

This manual is intended for professional technicians who need to install, operate and maintain the product and for users who need to check the product parameters.

All installation operations must be carried out by professional technicians and only by professional technicians.

Use of the Manual

Please read the manual carefully before using the product. The content of the manual will be updated and corrected, but it is inevitable that there is a slight discrepancy or error with the actual product. Users should refer to the actual product purchased and obtain the latest version of the manual by downloading from www.hyxipower.com or through sales channels.

Use of Symbols

To ensure user safety and property protection during product use, relevant information is provided and highlighted with the following symbols.

⚠ DANGER

- Indicates a high potential hazard that, if not avoided, could result in death or serious injury.

⚠ CAUTION

- Indicates a low potential hazard which, if not avoided, could result in moderate or minor injury.

ⓘ NOTICE

- Indicates a potential risk which, if not avoided, could result in the equipment not functioning properly or in property damage.

1 Product Overview

HYXI AC-Coupled Micro ESS (HYX-MS5000AC) is an ac-coupled energy storage system, offering different working modes. It can be charged by the grid and supply reliable power to both the grid and household loads. They are designed and tested in strict accordance with relevant national safety standards.

For safety, all operations including transportation, storage, installation, usage and maintenance must comply with applicable laws, regulations, standards and specifications. 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

This manual contains important instructions when installing and maintaining the AC-Coupled Micro ESS. You should read this manual thoroughly before installing or debugging it.

For safety, the technicians responsible for the installation, operation and maintenance of the AC-Coupled Micro ESS 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 Instructions

Pre-installation power safety:

- Before beginning any installation or cable work, always de-energize and verify the equipment is completely powered off.
- When the equipment is energized, never install or remove cables.

Personnel & operational qualifications:

- Only qualified professionals or personnel with manufacturer-approved training may install, operate, or maintain this equipment.
- Use dedicated insulated tools for all work to prevent electric shock and short circuits.

Personal protective measures:

- Before starting work, remove all conductive personal items (e.g., rings, necklaces, watches).
- If there is any risk of contact with wet or damp objects, do not operate the equipment.

Equipment inspection & environment:

- Before installation, verify the equipment is undamaged. Do not power on until correct installation is confirmed by a qualified professional.
- Install the equipment in a dry, well-ventilated area, clear of liquids and flammable or explosive materials.
- Ensure ventilation openings and heat dissipation paths remain unobstructed at all times.

Hazard prevention & emergency response:

- Working on live equipment can cause severe electric shock, explosion, or fire, resulting in serious injury, death, or property damage.
- Non-standard operations can increase the risk of fire and electric shock.
- Stop work immediately and report any situation that poses a risk of personal injury or equipment damage.
- Do not touch energized equipment, as surfaces may be hot.

Grounding & electrical connection safety:

- For equipment requiring grounding, always connect the grounding cables first during installation and remove them last during disconnection.
- Before performing any installation or removal, ensure all power cables and their associated switches are disconnected.
- Do not damage or misuse grounding cables.
- Equipment terminals are only for electrical connections and must be installed in compliance with all local electrical codes and standards.

Grid connection & repair compliance:

- Before operating the system in on-grid mode, obtain approval from the local utility company.
- Any repairs must be conducted using qualified, compliant parts, installed only by an authorized contractor or service representative of HYXiPOWER Co., Limited. Components must be used only for their intended, certified purposes.

1.2 Symbols on the Label

Symbol	Description
	Risk of danger! There are potential hazards when the equipment is in operation, please take precautions when operating the equipment.
	Beware of electric shock! High voltage exists when the equipment is in operation, so when operating the equipment, make sure the equipment is powered off.
	Keep away from open flames or sources of ignition.
	There is a fatal danger of high voltage ! Disconnect power for at least 30 minutes before servicing the inverter.
	Do not dispose of the product together with the household waste.
	Please use the equipment reasonably, extreme conditions of use, the equipment has the risk of explosion.
	Observe enclosed documentation.
	CE marking. The product complies with applicable EU requirements.

1.3 Radio Wave Interference Statement

After testing, this AC-Coupled Micro ESS 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 Inspection & Unpacking

2.1 Inspection

The equipment 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.

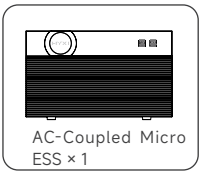
- Check whether there is any damage to the packing box.
- Check if the goods are complete and in accordance with the packing list.
- Unpack and check if the equipment inside is intact.

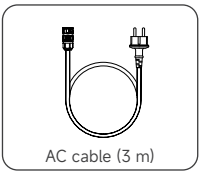
If there is any damage or incomplete goods, please contact with the shipping company or directly with Zhejiang Hyxi Technology Co., Ltd.

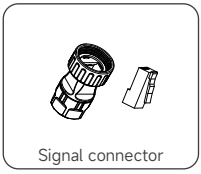
Provide photos of the damage to facilitate the provision of services.

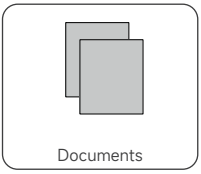
2.2 Packing List of AC-Coupled Micro ESS

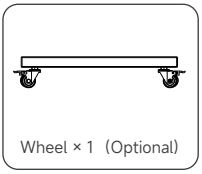
Model: HYX-MS5000AC


AC-Coupled Micro ESS × 1


AC cable (3 m)

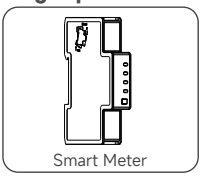

Signal connector

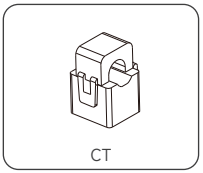

Documents

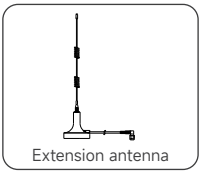

Wheel × 1 (Optional)

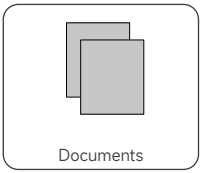
2.3 Packing List of Smart Meter (Optional)

Single-phase smart meter

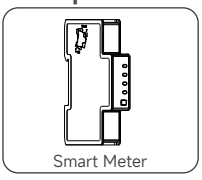

Smart Meter

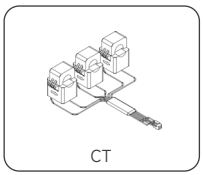

CT

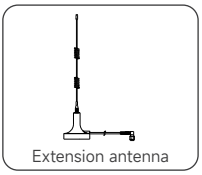

Extension antenna

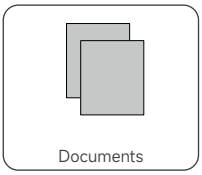

Documents

Three-phase smart meter


Smart Meter


CT


Extension antenna


Documents

NOTICE

- The Smart Meter Series is a versatile energy metering solution designed for homes, office buildings, retail stores, manufacturing facilities, and other types of buildings. The smart meter supports DIN-rail installation inside the distribution box, making it especially suitable for new construction and electrical wiring projects.
- The smart meter series supports Wi-Fi for remote monitoring and control, and Bluetooth for device inclusion and configuration. As a energy meter, it can monitor and report key parameters such as accumulated energy, voltage, current, and power factor in real time.

NOTICE

- For detailed information about the installation, parameters, specifications, etc., of the meter, please refer to the instruction manual provided with the meter.

NOTICE

- Before installation, please be sure to read the safety instructions and installation guide carefully. Follow the instructions strictly to ensure all connections are firm and reliable. If you are not familiar with electrical installation, it is recommended to seek assistance from a professional electrician. They have the necessary knowledge and experience to ensure a safe and proper installation. Please note that incorrect installation may cause equipment damage, electrical faults, or even personal injury.

2.4 Packing List of P1 Meter (Optional)



P1 Meter × 1

NOTICE

- For detailed information about the installation, parameters, specifications, etc., of the meter, please refer to the instruction manual provided with the meter.

NOTICE

- Installation and operation of the device can only be performed by qualified personnel. Only people that are authorized to install, connect and use this device, who have the proper knowledge about labeling and grounding electrical equipment and circuits and can do so in accordance with local (safety) regulations, are considered qualified personnel in this document.

Device Compatibility

Item	Description
Supported Meter Protocols	• The P1 meter is compatible with most smart meters that use the DSMR 5.0 or 4.0 protocols. These protocol versions are usually displayed on your smart meter. • We are continuously working to expand the list of compatible devices. Our primary focus is supporting DSMR 5.0 models to ensure optimal performance.
Optimal Performance with DSMR 5.0	The P1 meter has been tested with selected DSMR 5.0 meters from leading Dutch brands. For best results and real-time energy management, we recommend using a DSMR 5.0 meter. The P1 meter is powered directly by a DSMR 5.0 smart meter when they are connected.
Limitations with DSMR 4.0	• Although DSMR 4.0 smart meters are generally compatible with the P1 meter for basic data reading, the data update frequency is limited to once every 10 seconds due to the DSMR 4.0 protocol. This limitation can affect the real-time responsiveness and effectiveness of the Energy Management System (EMS). • When connecting the P1 meter to a DSMR 4.0 smart meter, external power is required. The P1 meter must be powered through an adapter plugged into a nearby wall outlet. Ensure that a wall outlet is available near the electrical panel.

Recommended Actions for DSMR 4.0 Users	If you have a DSMR 4.0 meter: • Consider using Smart Meter for high-frequency data acquisition. This option requires wiring by a professional electrician. • Alternatively, you can contact your grid operator to request a DSMR 5.0 meter upgrade. Availability and costs may vary depending on your operator and local regulations.

3 Product Overview

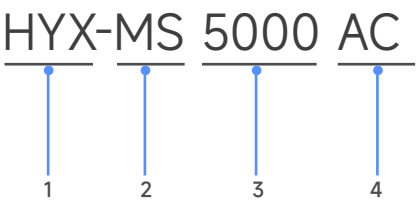
3.1 Product Introduction

AC-Coupled Micro ESS is an ac-coupled energy storage system, offering different working modes. It can be charged by the grid and supply reliable power to both the grid and household loads. They are designed and tested in strict accordance with relevant national safety standards.

3.2 Model Description

This manual involves the following product models:

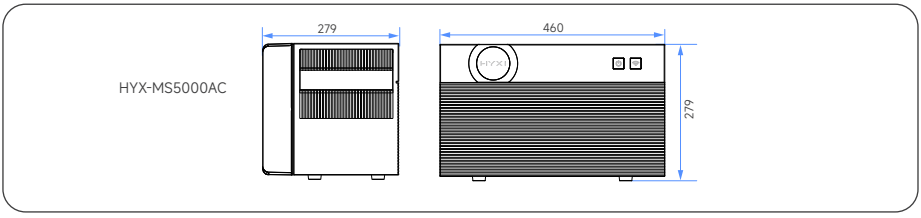
Product name	Product model
AC-Coupled Micro ESS	HYX-MS5000AC



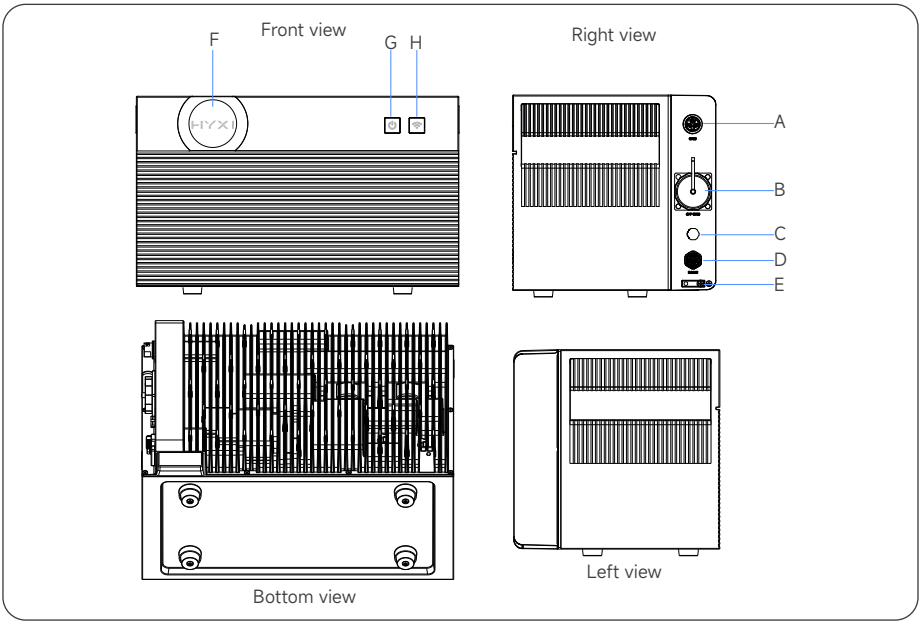
No.	Item	Description
1	Brand name	HYX: Zhejiang Hyxi Technology Co., Ltd.
2	Series name	MS: Micro Storage
3	Battery capacity	5000: 5000Wh
4	Product category	AC: AC-Coupled

3.3 Product Dimensions

HYX-MS5000AC: 460 (W) × 279 (H) × 279 (D) mm



3.4 Product Appearance

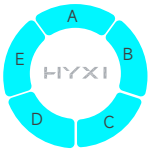


No.	Item	Description
A	GRID Port	Output power to the grid and input energy from the grid
B	OFF GRID Port	For your essential appliances during a blackout
C	Vent Valve	/
D	RS485 Port	A standard network cable port used for thrid-party EMS to control your system Pin7 RS485A, Pin8 RS485B, Pin1~6 unused
E	Grounding Point	Connecting safety ground wire
F	RGB LED Ring	Display the operating status of the device
G	Power Button	Turn on/off the system
H	IoT Button	Turn on/off the WiFi/BLE

3.5 Explanation for RGB LED Ring

Button	Action	Function
Power Button 	Press for 2 seconds	Turn the device on
	Press for 5 seconds	Turn the device off
	Press once (when the device is on)	Check the current battery level
IoT Button 	Press once	Enable internet connection
	Press for 5 seconds	Reset bluetooth and Wi-Fi
Power Button IoT Button	Simultaneously press for 5 seconds	Reset network configuration

Button	Description	Status
Power Button 	Solid white	Normal operation
	Solid orange	Malfunction / warning
	Off	Powered off
IoT Button 	Solid white	Normal internet connection
	Flashing white	Internet connection enabled / reset
	Solid orange	Router connection failed
	Flashing orange	Router connection succeeded, server connection failed.
	Off	Internet connection disabled

RGB Light	Description	Status
	The light breathes once from zone A to zone E.	Powered on
	The light breathes once from zone E to zone A.	Powered off
	The light illuminates toward zone E from the current zone, and then breathes again.	Charging
	The light fades toward zone A from the current zone, and then breathes again.	Discharging
	The light changes according to battery level.	Battery level
	The lights breathes from zone A to zone E.	Upgrading firmware

4 Installation

4.1 Installation Site

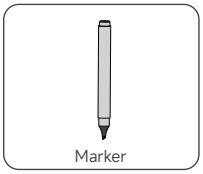
4.1.1 Environment Requirements

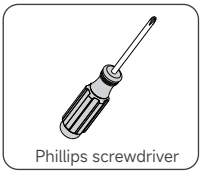
- Do not place the device near an area exposed to direct sunlight, fire, or explosive materials.
- Ensure the site is protected from potential hazards such as floods.
- The maximum operating altitude is 3,000 m.
- Preferred installation surfaces include solid brick-concrete structures, concrete walls, or floors.

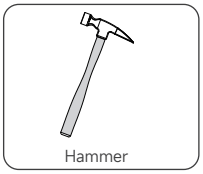
4.2 Installation Tools Requirement

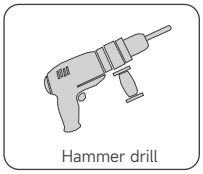
Installation tools include, but are not limited to, the following recommended tools. And if necessary, other auxiliary tools can be used on site.

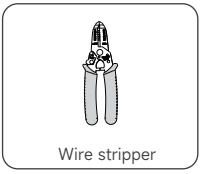
The following tools are not included in this package. Please make sure they are ready before installation and electrical connections.

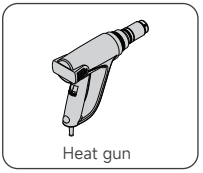

Marker

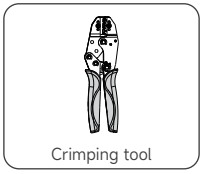

Phillips screwdriver

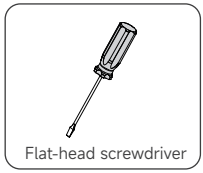

Hammer


Hammer drill


Wire stripper


Heat gun


Crimping tool

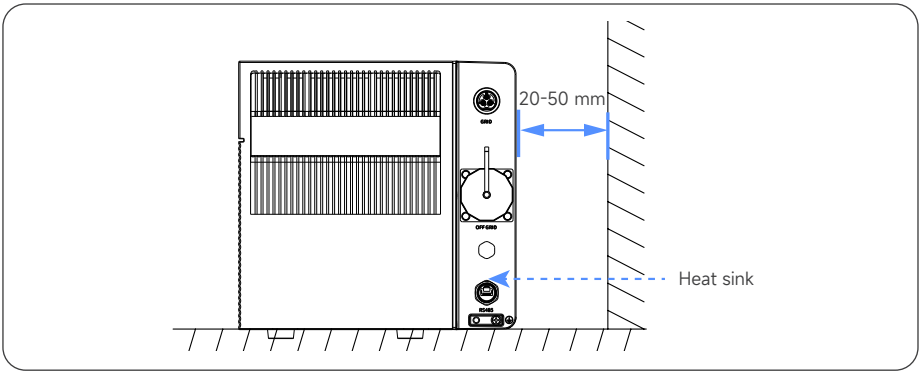

Flat-head screwdriver

5 Mechanical Installation

NOTICE

- When wiring, please ensure that the wire labels correspond to the markings on the enclosure.
- Ensure the device is off during installation.
- Ensure the heat sink on the back of the AC-Coupled Micro ESS faces the wall.
- Position the AC-Coupled Micro ESS in good network signal conditions to connect to the network.
- Keep 20 to 50 mm away from the wall.

Place the MS5000AC in appropriate position.



6 Electrical Connection

6.1 Grounding Connection

AC-Coupled Micro ESS must be connected to the external ground point, otherwise there is a risk of electric shock.

The following tools and supplies are not included in the package. Ensure that you have them ready before proceeding with the electrical connections.

Required supplies	Specifications
Grounding cable	1 mm^2, yellow/green
OT terminal	Suitable for the 1 mm^2 Grounding cable and the M5 screw
Heat shrink tubing	Caliber: 8 mm Length: 25 mm
Heat gun	/
Phillips screwdriver	PH2

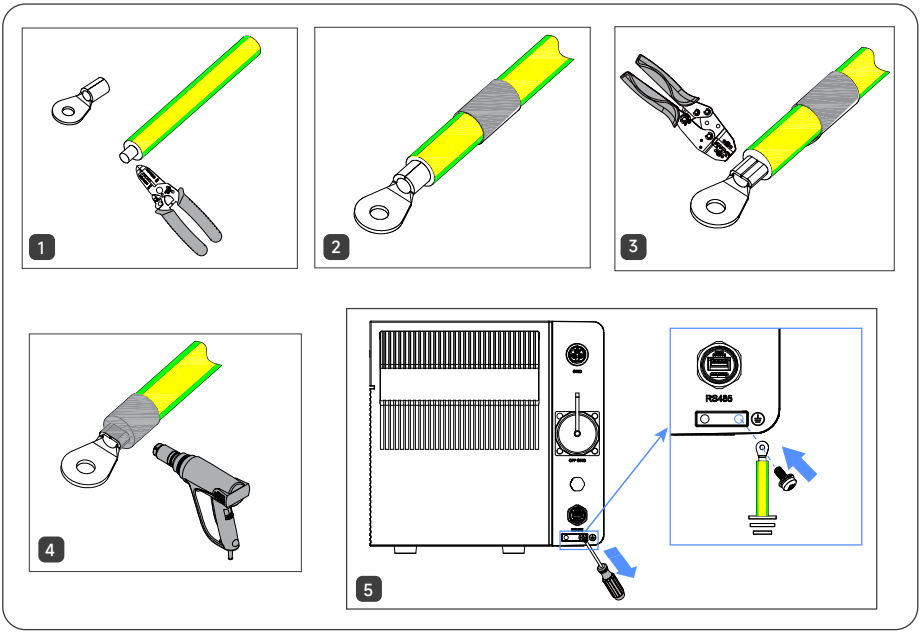
Step 1: Strip the insulation layer of the grounding cable.

Step 2: Insert the heat shrink tubing and OT terminal into the grounding cable.

Step 3: Use a crimping tool to crimp the OT terminal.

Step 4: Wrap the wire crimping area with the heat shrink tubing, then heat it with a heat gun.

Step 5: Loosen the pre-installed grounding screw and use it to secure the grounding cable. (Torque: 1.5±0.1N.m)



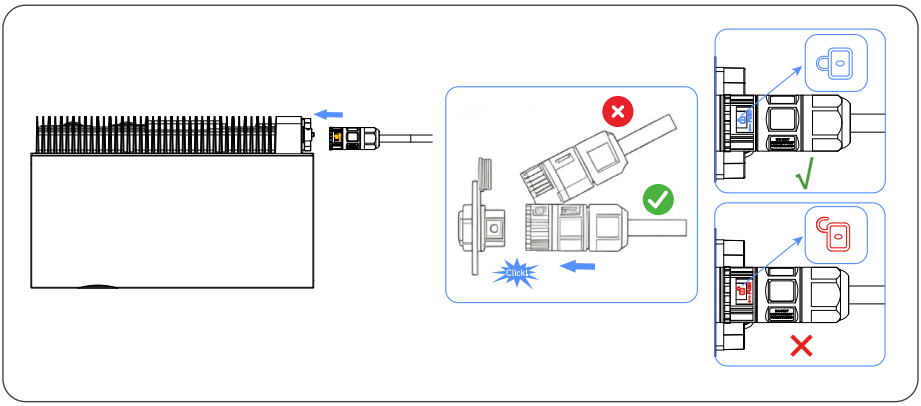
6.2 Grid Connection

Connect the grid terminal to the grid port.

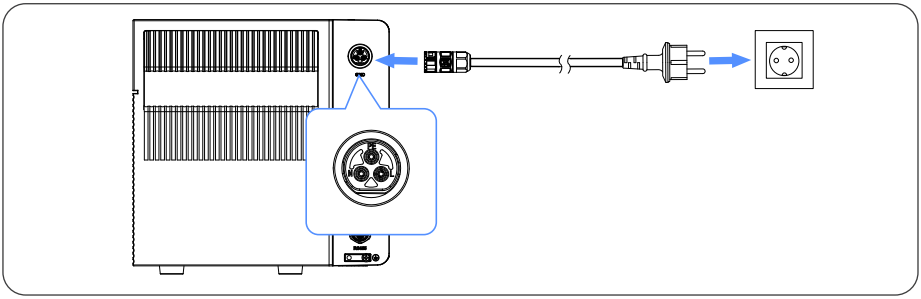
Step 1: Align the connectors: Align the D-shaped keying features on male and female connectors.

Step 2: Insert straight: Push the connector straight into the unit until a “click” is heard. Do not insert at an angle.

Step 3: Verify the connection: Check that the lock indicator is fully visible, connectors are securely seated with no visible gap.



Connect AC-Coupled Micro ESS to a home outlet using the included AC cable (3 m).



NOTICE

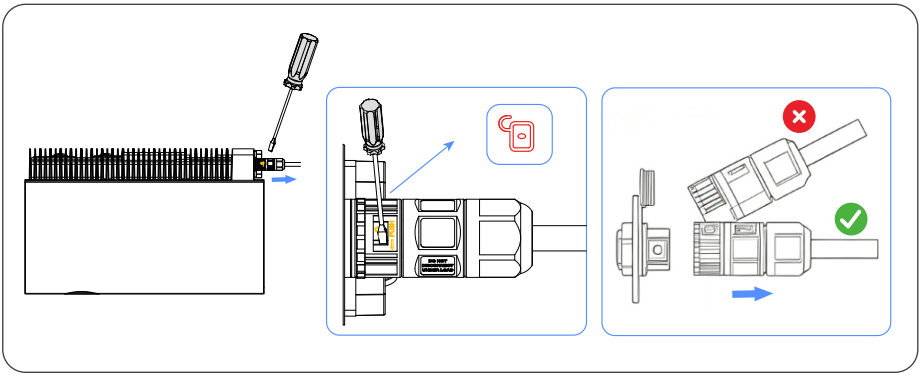
- For Malaysia and Thailand, the compatible local adapter is required. Here, the general version is used as an example.

Removing the grid terminal

Method 1: Unlock with a flat-head screwdriver

Step 1: Unlock the connector: Use a flat-head screwdriver to move the locking mechanism left until the unlock symbol is fully visible.

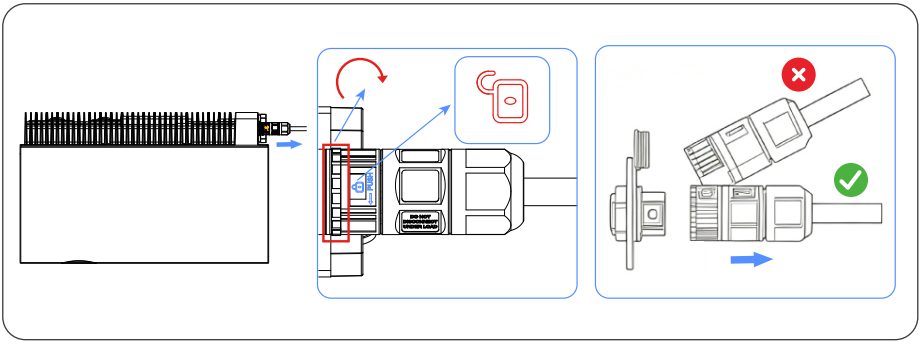
Step 2: Remove the connector: Hold the connector and pull it straight out along its axis. Do not twist or wiggle.



Method 2: Unlock by hand

Step 1: Unlock the connector: Rotate the locking ring by hand until the unlock symbol is fully visible.

Step 2: Remove the connector: Hold the connector and pull it straight out along its axis. Do not twist or wiggle.

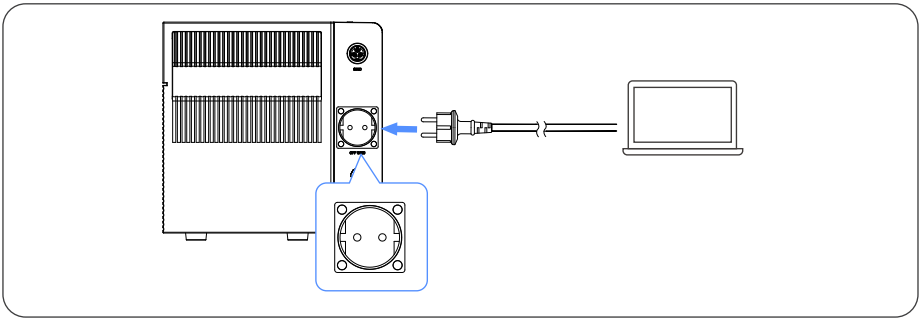


NOTICE

- Do not connect the device to the municipal power grid simultaneously for both grid connection and backup power. Doing so will result in a circuit break or damage to the device.
- The default nominal grid-connected output power is 800W. You can increase the grid-connected output power via the app. Enabling this function must comply with local regulations and can only be performed by authorized personnel !

6.3 Off Grid Connection

Power loads using the off grid port.



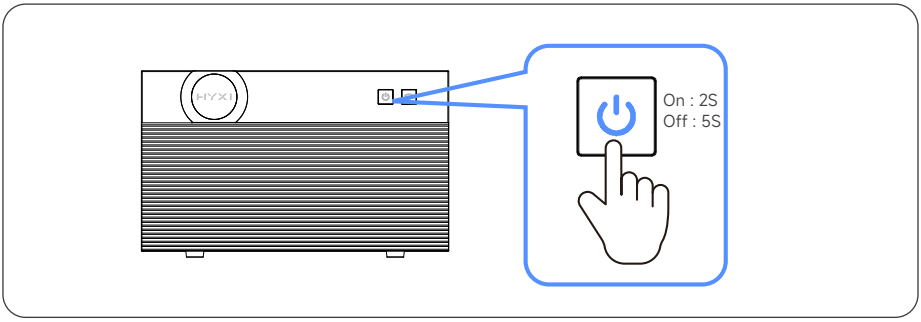
NOTICE

- For Malaysia and Thailand, the compatible local adapter is required. Here, the general version is used as an example.

7 System Commissioning

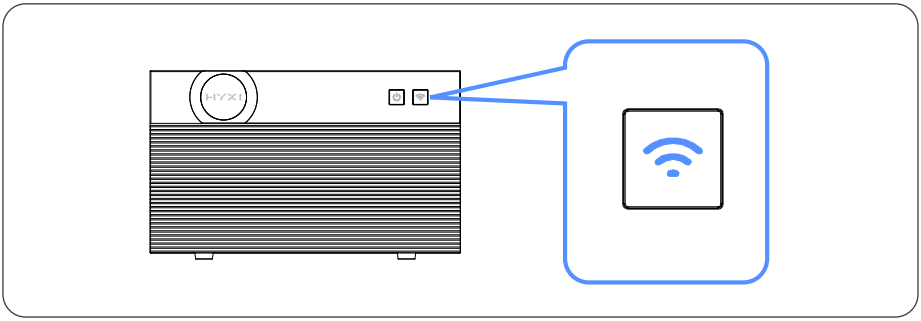
7.1 Power On / Off

- Press the power button for 2 seconds to turn AC-Coupled Micro ESS on.
- Press the power button for 5 seconds to turn AC-Coupled Micro ESS off.



7.2 Network Status Confirmation

When the system is powered on, AC-Coupled Micro ESS will enter networking mode automatically. Confirm that the IoT button is flashing white. If the initial network connection is not completed within 60 minutes and there is no AC input available, it will automatically shut off.



⚠ CAUTION

- Always connect the device to the original Wi-Fi network of the primary router for configuration and long-term operation.
- Do NOT connect the device to networks extended by Wi-Fi repeaters / Wi-Fi extenders. Such networks may cause network isolation, unstable data transmission and heartbeat disconnection, resulting in pairing failure, frequent offline issues, abnormal remote control and abnormal data reporting.
- Wi-Fi name (SSID) contains keywords such as 'EXT', '_2.4G_EXT', '_5G_EXT', 'Repeater'. Even if the SSID does not have the above identifiers, it may still be an extender based network, please do not judge solely by the Wi-Fi name.

8 Human-Computer Interaction

8.1 Installing the App

Method 1

Download and install the HYXI App through the following application stores:

- App Store (iOS)
- Google Play

Method 2

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

8.2 APP Configuration

For specification configuration, please scan the following QR code to check HYXI APP_User Manual.

9 Appendix

9.1 Technical Parameter

Product Model	HYX-MS5000AC
AC Output (on-grid terminal)	
Max. AC Output Apparent Power [VA]	2500
Rated AC Output Apparent Power [W]	800 (Default) / 2500 (*Premium)
Rated AC Output Voltage/Range [V]	220 or 230 or 240 / 183 - 276
Rated AC Frequency/Range [Hz]	50/45~55 or 60/55~65
Rated AC Output Current [A]	3.64/3.48/3.34 (Default) 10.42/10.87/11.37 (*Premium)
Max. AC Output Current [A]	10.42/10.87/11.37
Power Factor Range	>0.99 (Default)/0.8 Leading~0.8 Lagging (Adjustable)
THDi (Rated Power) [%]	<3%
AC Input (on-grid terminal)	
Max. AC Input Apparent Power [VA]	2500
Rated AC Input Voltage/Range[V]	220 or 230 or 240 / 183 - 276
Rated AC Frequency/Range [Hz]	50/45~55 or 60/55~65
Power Factor Range	>0.99(Default)/0.8 Leading~0.8 Lagging(Adjustable)
THDi (Rated Power) [%]	<3%
AC Output (off-grid terminal)	
Max. AC Output Power [VA]	3000, 10s
Rated Output Power [W]	2500
Rated Output Current [A]	10.42 / 10.87 / 11.37
Rated AC Output Voltage / Frequency [V] / [HZ]	220 / 230 / 240, 50 / 60
THDu (Linear Load)	<3%
Battery Data	
Battery Chemistry	LiFePO4
Battery Rated Voltage [V]	16
Battery Rated Energy [Wh]	5024
Max. Charge Power [W]	2500
Max. Discharge Power [W]	2500
Battery Cycle Life	⩾10000 (@25° C±2° C, 60%EOL)*
Other Technical Specification	
Display	LED & APP
Ingress Protection Rating	IP66
Operating Ambient Temperature Range [° C]	-20~55*
Humidity [%]	5% ~ 95% (No Condensing)
Altitude [m]	3000
Dimension(W x D x H) [mm]	460*279*279
Weight [kg]	42
Cooling Concept	Natural
Communication	WiFi&Bluetooth

Standard	
Safety	IEC62109-1/-2
EMC	IEC62619, UN38.3, IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4
Grid Connection Standard	VDE4105, IEC61727/62116, CEI 0 21, EN50549-1, G98, C10-11, UNE217002

* Premium: Enabling this function must comply with local regulations and should only be performed by authorized personnel !

* Support -20° C startup and automatically self-heat the device for a certain time to the charge temperature range.

9.2 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: _____

_____

_____

_____

Version: UM_HYX-MS5000AC_V1.3-202610_EN
The manual is subject to change without notice while the product is being improved.



Zhejiang Hyxi Technology Co., Ltd.

Address: Building 1, No. 57 Jiang'er Road, Changhe Street, Binjiang District, Hangzhou, Zhejiang Province, China
Website: www.hyxipower.com
E-mail: support@hyxipower.com