HYXI | HYXiPOWER

User Manual

DATA MANAGEMENT UNIT

HYX-DMU-PM / HYX-DMU-PS

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

TRADEMARKS

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About the Manual

This manual describes HYX-DMU-PM/PS in terms of safety precautions, product introduction, installation method, electrical connection, maintenance and technical parameters.

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-DMU-PM
- HYX-DMU-PS

HYX-DMU-PM, hereinafter referred to as the “PM”.

HYX-DMU-PS, hereinafter referred to as the “PS”

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.

The latest version of the manual is available for download at 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.

⚠ WARNING

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

⚠ 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 Safety Precautions

⚠ DANGER

Risk of Electric Shock!

- Do not install current transformers (CTs) when current is present in the sensed circuit. Ensure CT cables are properly installed in terminal blocks before energizing the circuit.
- Do not operate HYXI equipment in any way not specified by the manufacturer. Improper use may result in severe personal injury, fatalities, or equipment damage.
- When wiring the PM and PS units at the sub-board, ensure the sub-board is completely de-energized before conducting any wiring work.

⚠ DANGER

Risk of Electric Shock! Risk of fire!

- Do not attempt to repair the PM or PS units, as they contain no user-serviceable components. Any form of tampering or disassembly will void the warranty. If PM or PS malfunction, contact HYX for support and refer all servicing to qualified personnel.
- Only qualified personnel are authorized to perform troubleshooting, installation, or replacement of the PM/PS units.
- Do not make any connections to unused terminals or terminal blocks on the PM or PS.

⚠ WARNING

- Before installing or operating the PM or PS units, carefully read all instructions and cautionary markings contained in the technical documentation and on the PM/PS equipment itself.
- All wiring must be performed in strict compliance with all applicable local electrical codes and regulations.
- Install the HYX PM/PS as instructed in this manual to ensure reliable operation and maintain warranty coverage.

⚠ CAUTION

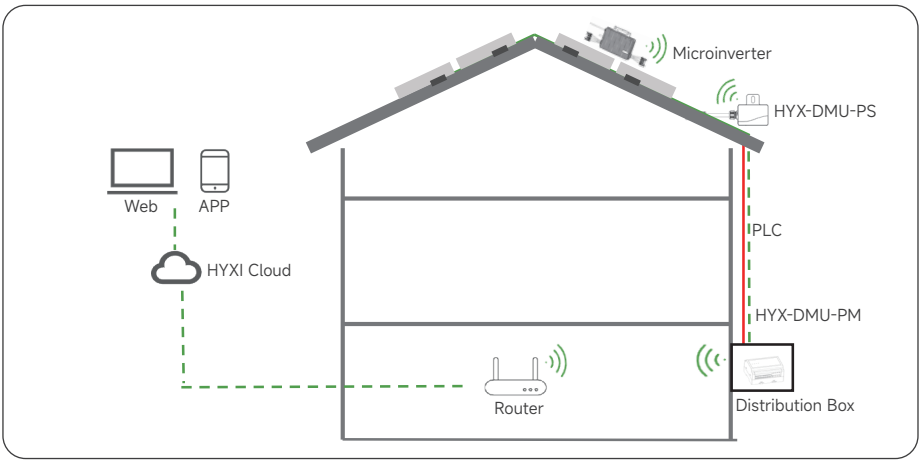
- Do not dispose of the product as household waste.

2 Product Overview

The PM and PS act as information portals for the inverters, enabling stable communication and providing the latest photovoltaic system equipment information during system monitoring. The PM communicates with the PS via on-site AC power lines. The PS collects operational data from each microinverter and uploads it to the HYX Smart Cloud Platform for display via the PM.

The HYX Smart Cloud Platform provides rich and intuitive system performance information. Users can access the platform anytime via computer or mobile phone to view the system's real-time operating status and historical data.

For system communication, a single PM can manage up to 6 PS devices, and each PS can manage up to 80 microinverters.



2.1 Product Model

This manual involves the following product models:

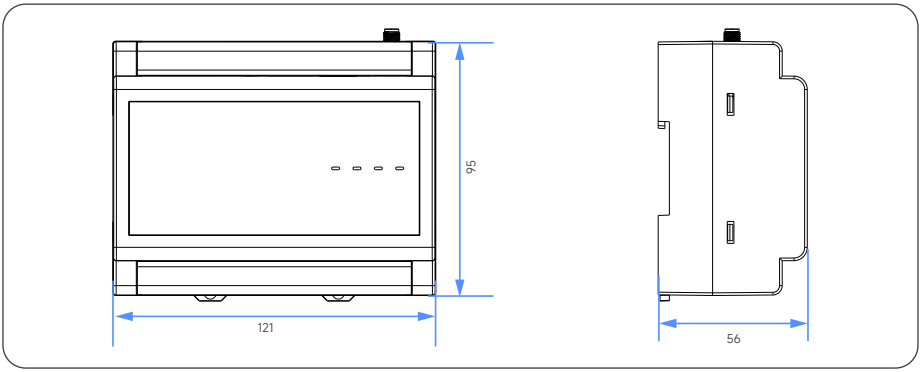
HYX-DMU PM/PS

1 2 3

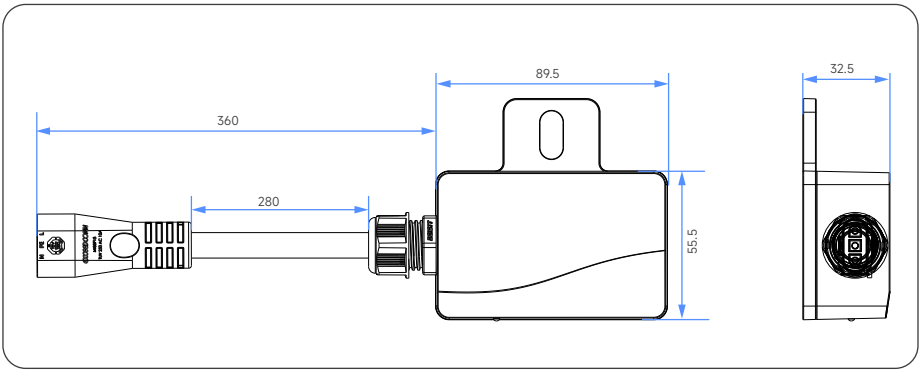
No.	Item	Description
1	Brand name	HYX: Zhejiang HYXI Technology Co., Ltd.
2	Product name	DMU: Data Management Unit
3	PM/PS	PM: PLC Master Gateway
		PS: PLC Slave Gateway

2.2 Product Dimension

PM: (Unit: mm)

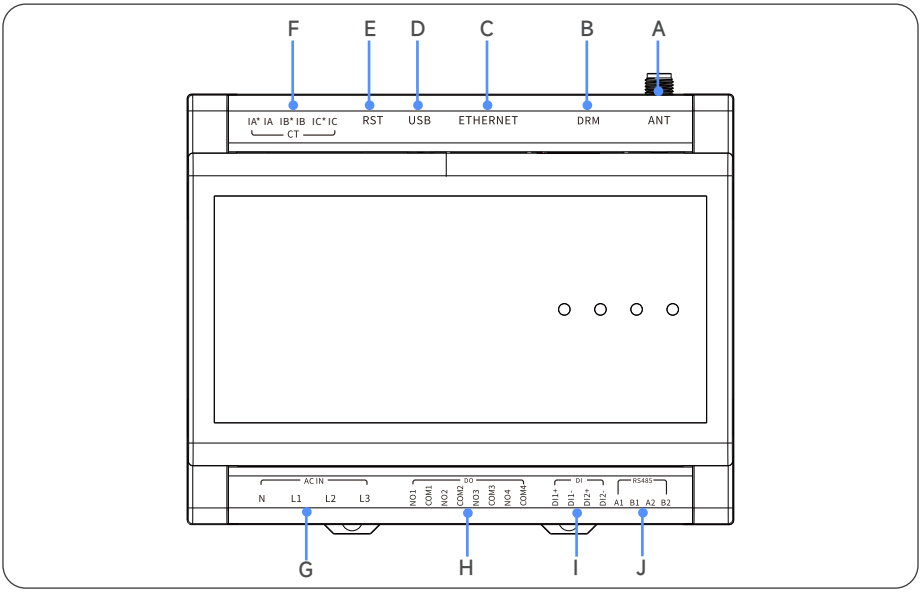


PS: (Unit: mm)



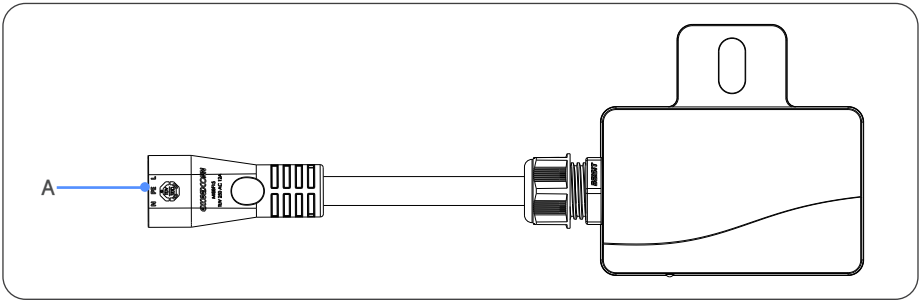
2.3 Product Ports

PM (WIFI Version) :



No.	Item	Description
A	ANT Antenna Port	For wireless connection between PM and router (WIFI or 4G)
B	DRM Port	For connecting external third-party equipment
C	Ethernet Port	For connecting ethernet
D	USB Port	For local upgrade
E	RST Port	Reset button
F	CT Port	For connecting external current transformers to achieve anti-reverse current protection
G	AC IN Port	For supplying power to equipment
H	DO Port	Relay output port
I	DI Port	Used to communicate with other equipments
J	RS485 Port	Used to exchange data with third-party equipment

PS (WIFI Version) :

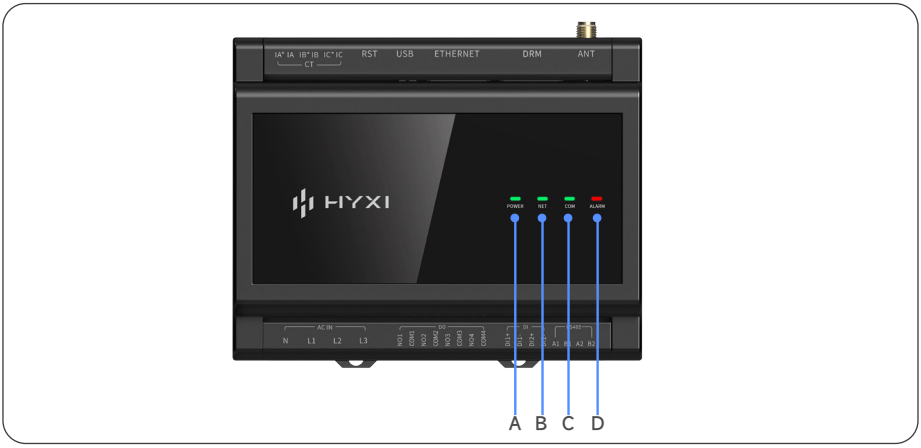


No.	Item	Description
A	AC Cable	For supplying power to equipment

2.4 LED Indicator Panel

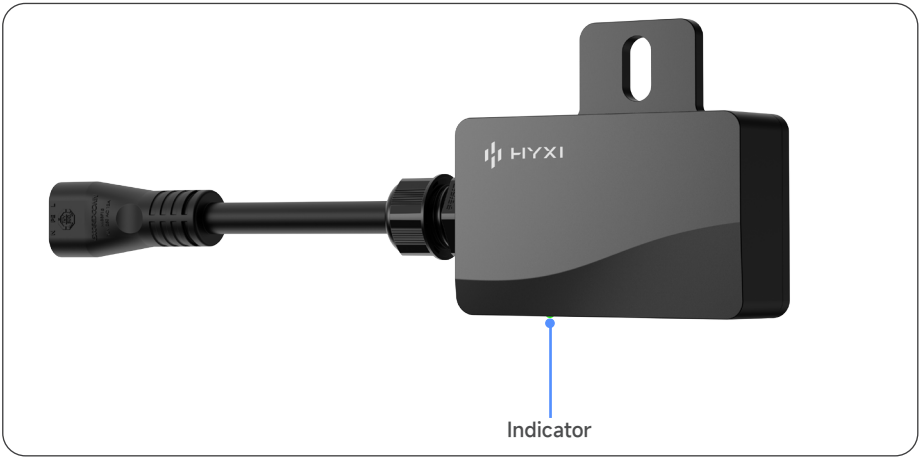
The LED indicator is used as a human-computer interaction interface to indicate the current working status of the PM.

PM



No.	Item	LED status	Device status
A	Power: Power indicator	ON	Power on
		OFF	Power off
B	NET: Network communication	Green light flashing	Configuration in progress
		Green light off	Configuration failed
		Steady green light	Normal communication
C	COM: Communication	Steady green light	All communication is normal.
		Green light flashing	Some microinverter communication is normal.
D	ALARM: Fault condition	Red light flashing	Fault alarm
		Red light off	Normal

PS



No.	LED status	Device status
Indicator	Steady green light	Normal communication
	Green light rapid flashing	Communication failed
	Green light slow flashing	Master device communication success
	Red light on	Fault alarm

3 Inspection & Storage

3.1 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.

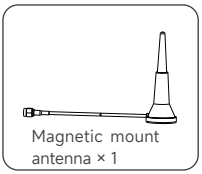
- Check whether there is any damage to the packing box.
- Check if the goods are complete and in accordance with the packing list.
- Unpack and check if the equipment inside is intact.

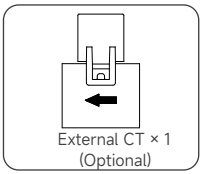
If there is any damage or incomplete goods, please contact with the shipping company or directly with Zhejiang Hyxi Technology Co., Ltd.

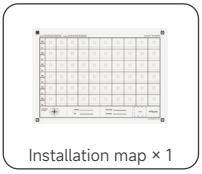
Provide photos of the damage to facilitate the provision of services.

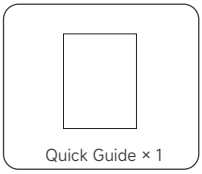
3.2 Packing List

PM

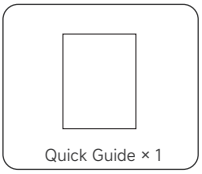

Magnetic mount antenna × 1


External CT × 1 (Optional)


Installation map × 1


Quick Guide × 1

PS


Quick Guide × 1

NOTICE

- If HYX-DMU-PM and HYX-DMU-PS are packaged separately, the package contains the accessories listed above. If HYX-DMU-PM and HYX-DMU-PS are combined in packaging, the above duplicate accessories will only have one.

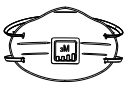
3.3 Storage

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, and check it regularly (recommended to check it once every 3 months). If found to be bitten by insects or damaged, please replace the packaging immediately. If PM\PS has been unpacked and not put into use immediately, put PM\PS in its original packaging and seal it with tape.
- Store in an appropriate temperature and humidity environment (storage temperature: -40°C~ +85°C , relative humidity: 5% ~ 95%RH, no condensation). The ambient air must not contain corrosive or flammable gases.
- Store in a clean, dry place, and prevent dust and water vapor from being eroded.
- When the storage time is two years or more, PM\PS needs to be checked and tested by professional personnel before it can be put into use.

4 Pre-Installation Preparation

4.1 Protective Equipment


Dust mask


Goggles


Insulated shoes


Protective gloves

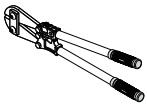
4.2 Installation Tools

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

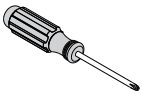
The following tools are not included in this package. Please make sure they are ready before installation and electrical connections.


Wire stripper


Diagonal Pliers

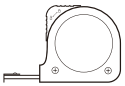

Wire cutter


Flat-head screwdriver


Philips screwdriver


Utility knife


Marker


Measuring Tape


Cable Tie


Multimeter

5 Mechanical Installation

5.1 Installation Requirement

Choosing the optimal installation location for the master gateway PM is crucial for ensuring its safe operation, extended lifespan, and guaranteed performance.

- Indoor installation only.
- Do not tilt installation. If installing horizontally, ensure the installation location allows for easy reading of the indicator light information.
- Temperature and humidity must meet the following requirements: -40° C to 65° C, 0% to 95%.
- Protect from moisture, dampness, and corrosive substances.
- The installation space should allow for sufficient heat dissipation to facilitate future maintenance, and provide adequate clearance based on the surrounding environment.
- Avoid installation within reach of children.

5.2 PM Installation

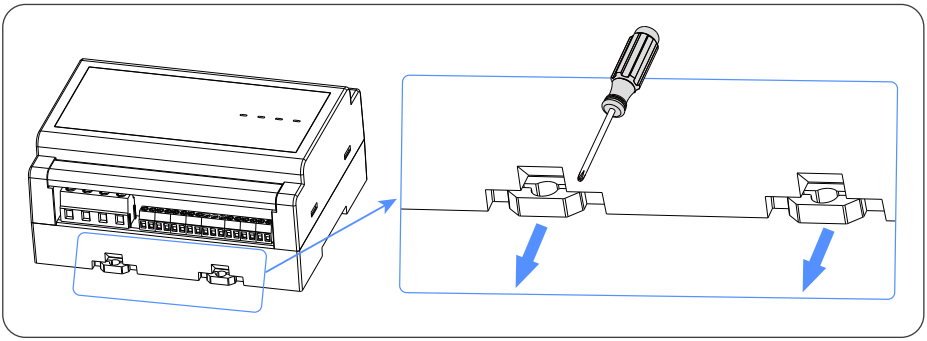
Din rail installation or wall mounting can be selected as needed.

5.2.1 Din Rail Mounting

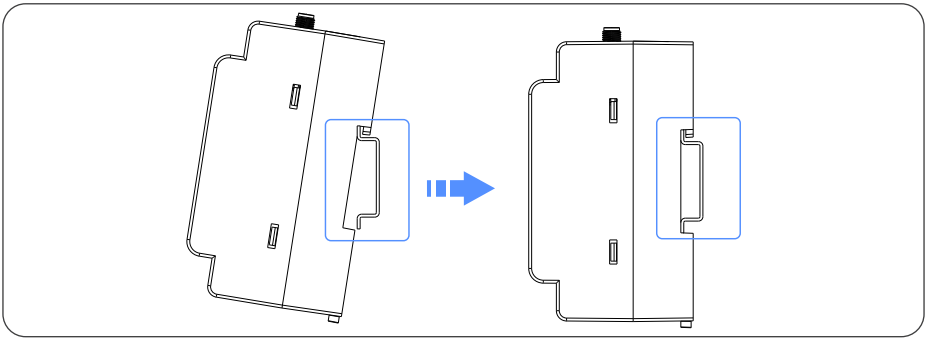
NOTICE

- PM is installed on a DIN35mm standard rail in the AC distribution box. The distribution box must meet IP54 or higher standards, and additional surge protectors are required depending on the actual site conditions.

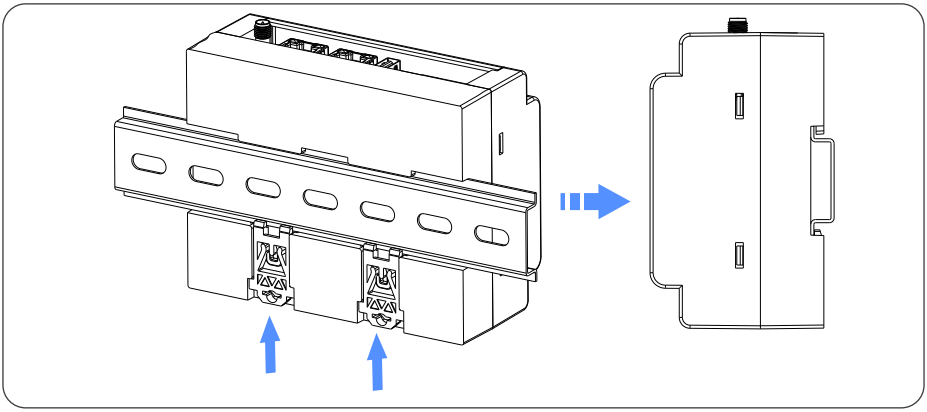
Step 1: Use a phillips screwdriver to hook the PM latch and push part of the latch outward.



Step 2: Slightly tilt the PM and insert the hook on the back of the PM into the Din rail.



Step 3: Push the hook upwards to ensure a secure connection between the PM and the Din rail.

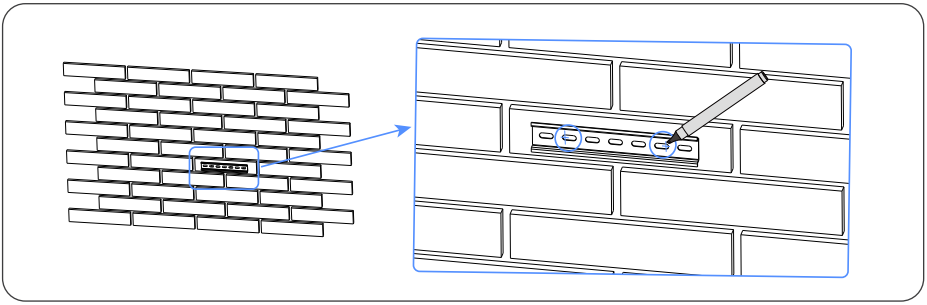


5.2.2 Wall Mounting

NOTICE

- Mount the device on an indoor wall that is flat, dry and easy for cable routing. The mounting screws shall be prepared by users; M4 screws are generally recommended, with lengths selected according to the wall material (e.g., 20–40 mm).

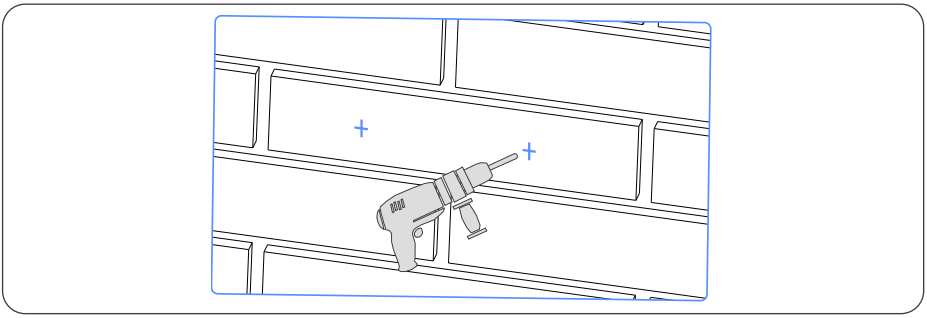
Step 1: Attach the DIN rail to the wall and mark the positions of the screw hole with a marker.



Step 2: Choose the appropriate drill bit based on the wall material for drilling:

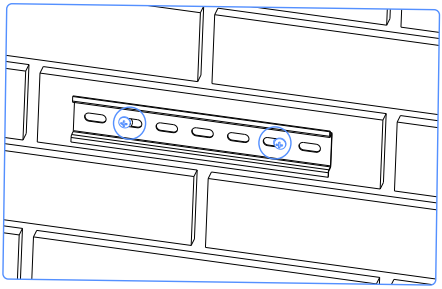
» Concrete/brick walls: Drill holes using an impact drill, and the depth should be slightly greater than the length of the expansion tube.

» Wooden walls: Drill holes directly, and the hole diameter should be slightly smaller than the diameter of the self-tapping screw.

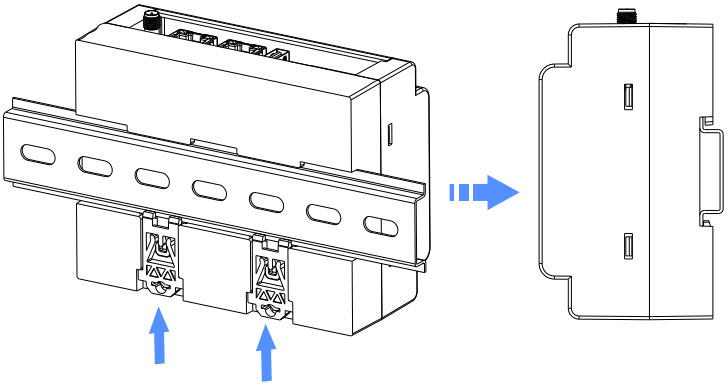


Step 3: Fixing the Din rail.

- » Concrete/brick walls: Insert expansion tubes and secure the Din rail with screws.
- » Wooden walls: Secure the Din rail directly with self-tapping screws.
- » Metal walls: Secure with machine screws and nuts.

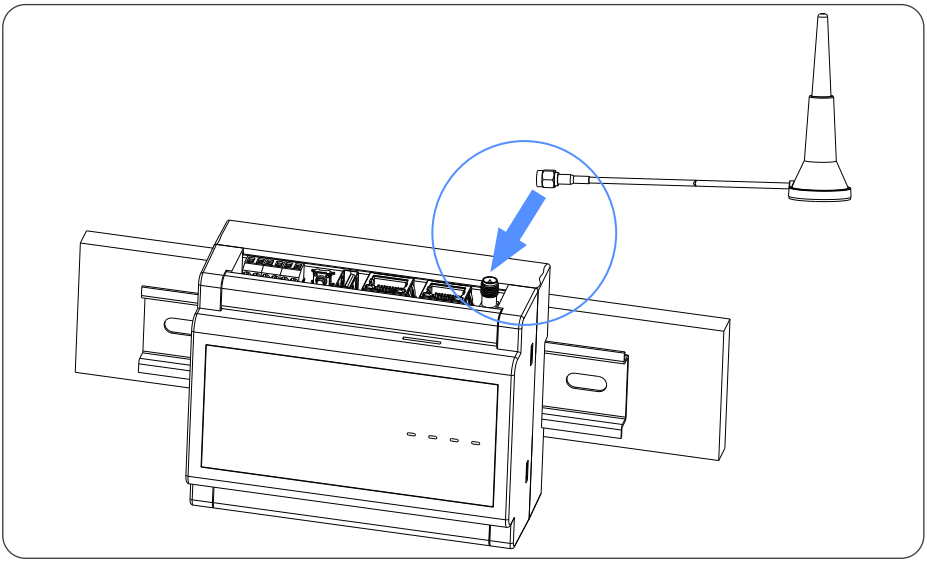


Step 4: Secure the PM onto the Din rail, then push up the hook to ensure a tight connection between the PM and the Din rail.



5.2.3 Antenna Installation

Connect the end of the magnetic mount antenna with the nut to the ANT port and tighten the nut.



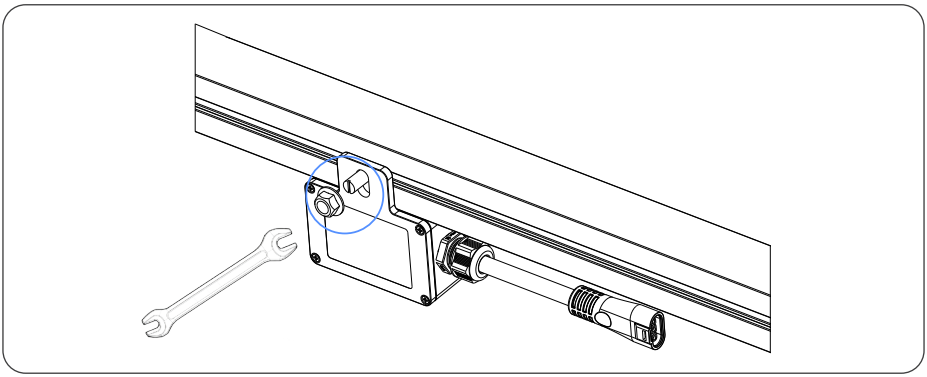
5.3 PS Installation

NOTICE

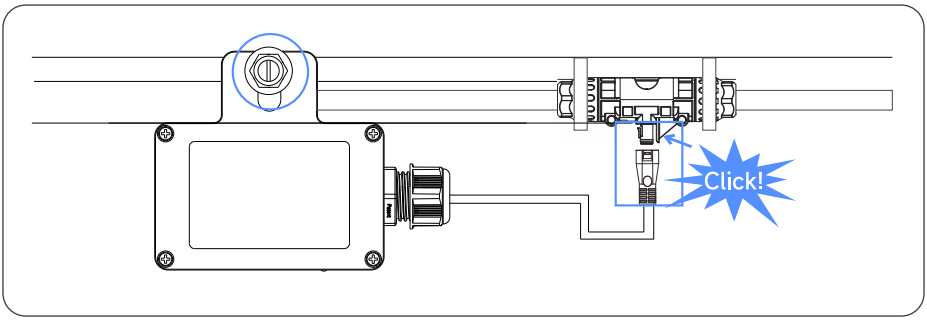
- Install the PS as close as possible to the microinverter to minimize cable length and improve communication quality.
- Do not expose it to direct sunlight or damp conditions caused by rainfall; for optimal protection, mounting it below the PV module is recommended.

The PS is mounted on the module bracket and powered via a T-junction connector.

Step 1: Insert a M8*25 screw near the rack position of the microinverter. Pass the M8*25 screw through the mounting hole of the HYX-DMU-PS, and then tighten the nut to secure the HYX-DMU-PS.



Step 2: Insert the AC connector of the HYX-DMU-PS into the T-junction connector until you hear a "click," ensuring a secure installation.



6 Electrical Connection

6.1 AC IN Port

The AC input port connects to the power supply via the power cord.

Grid type	L1	L2	L3	N
Three phase	√	√	√	√
Singel phase	√	×	×	√

6.2 DO Port

The PM is equipped with four-channel relay output signal interfaces, these interfaces are used to drive the on/off operation of external contactors for controlling high-power loads.

Signal interface	Description
NO1、COM1	Normally open contact, relay contact capacity 5A@250VAC/30VDC, resistive load.
NO2、COM2	
NO3、COM3	
NO4、COM4	

6.3 DI Port

PM provides two passive dry contact input signal interfaces.

Signal interface	Description
DI1+、DI1-	The first channel of passive dry contact signal input, non-polarized.
DI2+、DI2-	The second channel of passive dry contact signal input, non-polarized.

6.4 RS485 Port

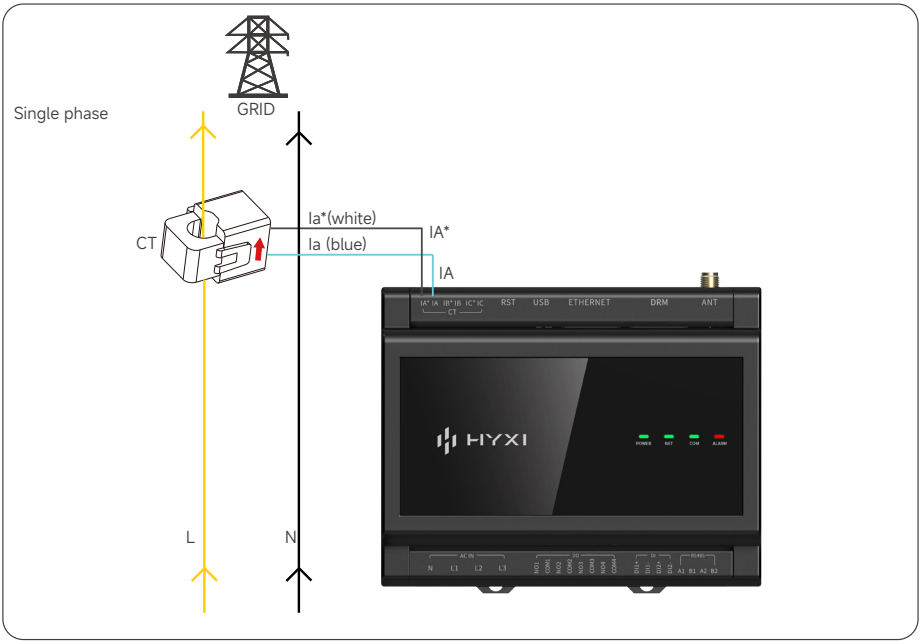
PM provides two RS485 differential transmission communication signals.

Signal interface	Description
A1、B1	The first channel of RS485 differential transmission communication signal, used to connect to the RS485 port of an external meter.
A2、B2	The second channel of RS485 differential transmission communication signal, reserved interface for connecting third-party devices.

6.5 CT Port

The PM integrated meter chip has interfaces including IA*, IA, IB*, IB, IC*, and IC. It measures the current, power, and energy of electrical equipment in real time via an external current transformer (CT ring).

To achieve anti-reverse current protection, the current transformer must be installed on the mains side to accurately obtain power flow information at the grid connection point. Please refer to the diagram for specific installation instructions.



7 Human-Computer Interaction

7.1 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:

7.2 APP Configuration

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

8 Appendix

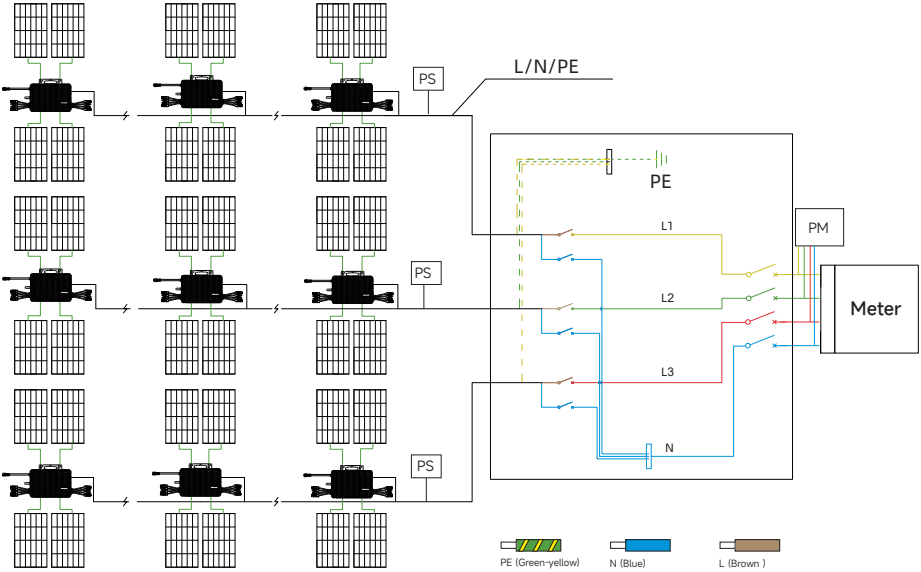
8.1 Technical Parameter

Product Model	HYX-DMU-PM
Communication with PS	
Signal Type	HPLC
Maximum Communication Distance	200 m
Maximum Number of Sub Devices for Communication	6
Communication with HYXI Cloud Platform	
Wired Networking Method	RJ45×1, 10/100Mbps Auto-Negotiation
Wireless Networking Method	Wi-Fi: 802.11b/g/n
Upload Interval	5 Minutes
Extended Communication Ports	
RS485 Port	COM×2, 9600bps/19200bps/115200bps, Modbus-RTU
DRM Port	Supports DRM0~9 Modes (Australia Only)
DI/DO Port (Digital I/O)	2×DI / 4×DO
USB 2.0 Port	Supports local upgrade
CT Port	3×CT, accurate up to 1%
Interaction	
Indicator Light	LED×4
APP	HYXI
Electrical Parameters	
AC Power Input	Single phase: 80VAC~288VAC, 50Hz/60Hz, L+N Three phase: 346VAC~415VAC, 50Hz/60Hz, 3W+N
Mechanical Parameters	
Operating Temperature Range [° C]	-40° C ~ 65° C
Dimension (W x D x H) [mm]	121*95*56
Weight [kg]	0.33
Mounting Method	DIN Rail mounting (DIN 35mm Rail)
Protection Class	IP20

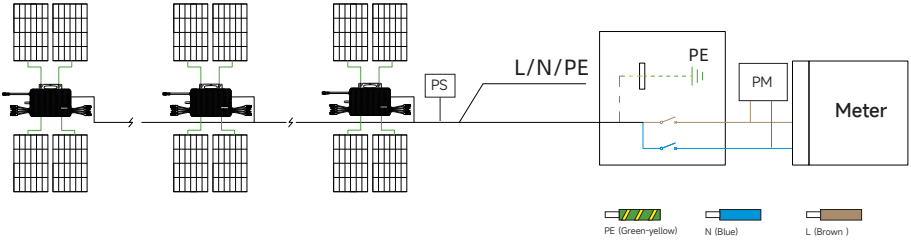
Product Model	HYX-DMU-PS
Communication with Microinverter	
Signal Type	Wi-Fi
Maximum Communication Distance	15 m
Maximum Number of Microinverter for Communication	80
Communication with PM	
Signal Type	HPLC
Maximum Communication Distance	200 m
Interaction	
Indicator Light	LED×1
Electrical Parameters	
AC Power Input	Single phase: 80VAC~288VAC, 50Hz/60Hz, L+N
Mechanical Parameters	
Operating Temperature Range [° C]	-40° C~85° C
Dimension (W x D x H) [mm]	89.5*55.5*32.5
Weight [kg]	0.15
Mounting Method	Bracket installation
Protection Class	IP66

8.2 Wiring Diagram

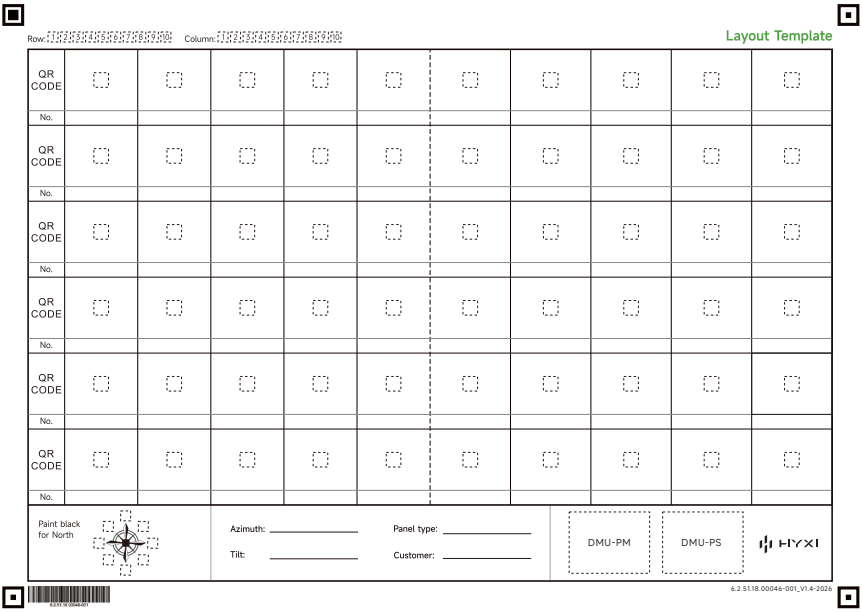
8.2.1 230V / 400 V Three-phase Grounding Map



8.2.2 230V Single Phase Grounding Map



8.3 Installation Map



8.4 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 equipment: _____
- Fault code / name: _____
- A brief description of the fault phenomenon: _____

_____

_____

_____

Version: UM_HYX-DMU-PM/PS_V1.2-202604_EN
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