HYXI

User Manual

ECOSAVVY SERIES STRING INVERTER

HYX-S8K/10K/10K5-S2



Carefully read this user manual before use.
Read and save these instructions.

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About the Manual

Overview

This manual provides the user with product information, detailed installation and use, troubleshooting and daily maintenance of the string inverter.

To ensure the proper installation and use of the inverter and its superior performance, before handling, installation, operation and maintenance of the inverter, please read the instruction manual in detail and follow it.

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 devices:

- HYX-S8K-S2
- HYX-S10K-S2
- HYX-S10K5-S2

For Readers

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

⚠ 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

1.1 General Safety

NOTICE

- The "DANGER", "WARNING", "CAUTION", and "NOTICE" items in the manual do not include all safety precautions that should be observed. All work should be carried out in combination with the actual situation on site.
- This equipment should be used in an environment that meets the requirements of design specifications. Otherwise, it may cause equipment failure, and the resulting equipment functional abnormalities or component damage, personal safety accidents, property losses, etc., are not within the scope of equipment quality assurance.
- The installation, operation and maintenance of the equipment should comply with local laws, regulations and codes. The safety precautions in the manual are only supplementary to the local laws and regulations.
- If an external residual current device (RCD) (type A is recommended) is mandatory, the switch must be triggered at a residual current of 300 mA (recommended). RCD of other specifications can also be used according to local standards.

1.2 Public Grid

NOTICE

- All electrical connections must meet local and national electrical standards.
- The inverter may only be connected to the grid with the permission of the local electricity authority.

1.3 Photovoltaic String

DANGER

- When performing electrical connection, you must wear personal protective equipment.
- Use a multimeter DC block to measure the positive and negative DC cable polarity to ensure that the polarity is correct and the voltage is within the allowable range.
- After the DC cable is connected, make sure that the cable is tightly connected and not loose.

1.4 Inverter

DANGER

- Before plugging or unplugging the PV connector or AC connector, use a multimeter to measure to make sure there is no voltage or current.
- Make sure that the voltage and frequency of the grid connection point are in accordance with the grid connection specification of the inverter.
- Do not open the inverter housing when the inverter is operating or energized to protect personnel and property safety.
- After removing all electrical equipment and disconnecting the inverter, wait at least 5 minutes for the internal capacitors to discharge.
- The protective ground of the inverter must be securely connected. For multiple inverters, ensure that all inverters are connected to the protective ground.
- When multiple inverters are installed, ensure that all inverter enclosures are connected equipotentially to the protective ground.
- The protective ground is installed first; the protective ground is removed last when the equipment is dismantled.

WARNING

- After the inverter is installed, labels and warning signs shall be clearly visible, and obscuring, altering or damaging them is prohibited.
- After the inverter is shut down, there is still a risk of burns. After the inverter has cooled down, wear protective gloves before operation.

1.5 Personnel Requirements

NOTICE

- The personnel responsible for the installation and maintenance of HYXI equipment must first undergo strict training to understand the various safety precautions and master the correct operation methods.
- Only qualified professionals or trained personnel are allowed to install, operate and maintain the equipment.
- The personnel who operate the equipment, including operators, trained personnel, professionals should have the special operating qualifications required by the local country, such as high voltage operation, special equipment operation qualification, etc.

2 Product Overview

2.1 Product Description

HYX-S(8~10.5)K-S2 is a single-phase string inverter. Its main function is to convert the DC power generated by the PV modules into AC power and feed the electrical energy into the grid.

- HYX-S8K-S2
- HYX-S10K-S2
- HYX-S10K5-S2

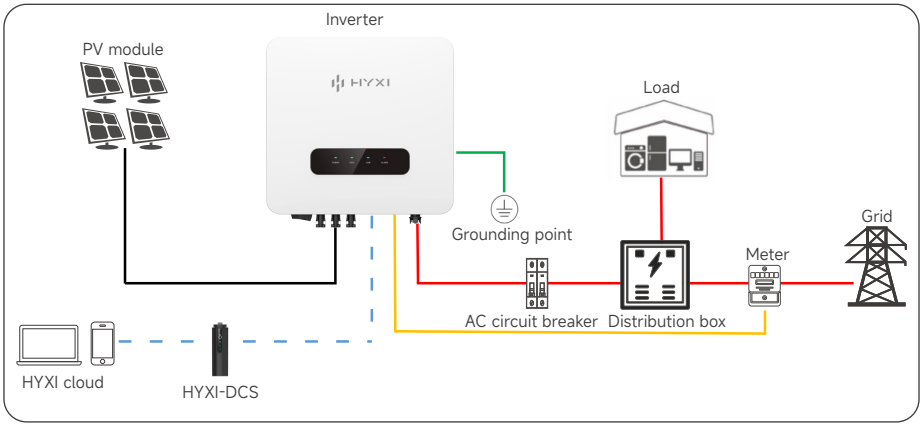
2.2 System Diagram

The PV grid-connected power generation system is composed of PV modules, inverter, meter, load and grid.

The inverter is the core component of the PV grid-connected power generation system.

The solar energy is transformed into DC energy by the PV modules, and then transformed into sinusoidal AC energy with the same frequency and phase as the public grid by the PV grid-connected inverter, and feeds this energy into the grid.

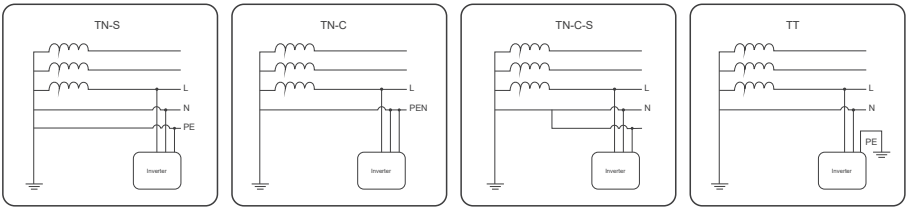
The photovoltaic grid-connected inverter is only applicable to solar PV power generation grid-connected systems, and only uses crystalline silicon solar cells with ungrounded positive and negative electrodes as DC input.



2.3 Supported Grid Forms

The grid forms supported by string inverters are TN-S, TN-C, TN-C-S, TT.

The N-to-PE voltage shall be less than 30 V.



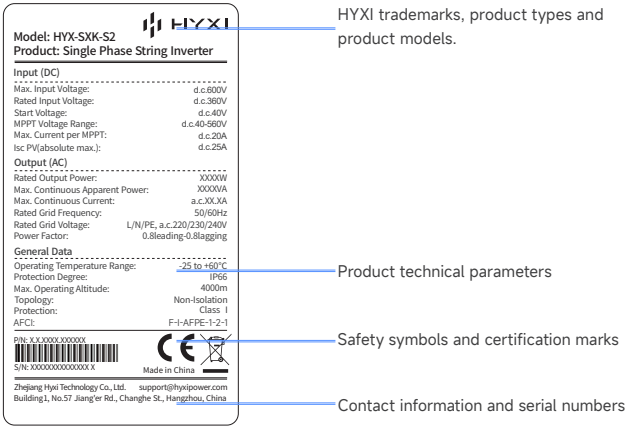
⚠ WARNING

- The inverter is only applicable to the grid-tied PV system described in this manual.
- Since the inverter is transformerless type, it is required that both the positive and negative terminals of the PV module cannot be grounded. Otherwise, the inverter will not operate normally.
- During the installation and operation of the inverter, make sure that the positive or negative pole of the PV module will not be short-circuited to the ground. If short-circuited, it may cause an AC/DC short circuit of the inverter, resulting in equipment damage, and the resulting damage will not be covered by the warranty.

⚠ CAUTION

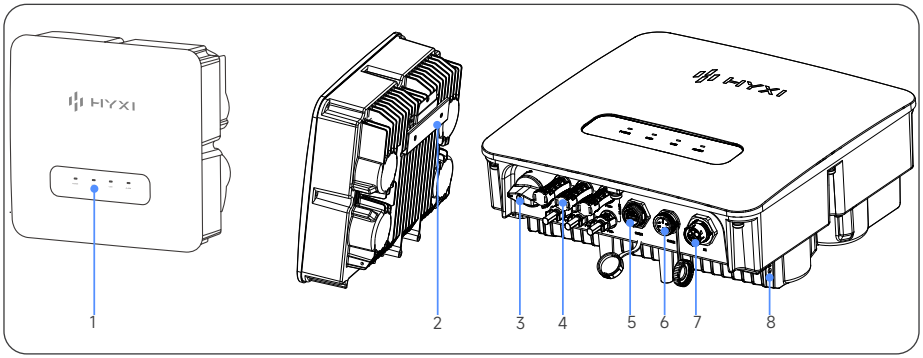
- For TT type grids, the zero line voltage to ground must be less than 30V.
- Never connect local loads, such as household appliances, lighting loads, etc., between the inverter and the AC circuit breaker.

2.4 Nameplate Description



* This label is for illustrative purpose only, please refer to the actual content.

2.5 Product Appearance



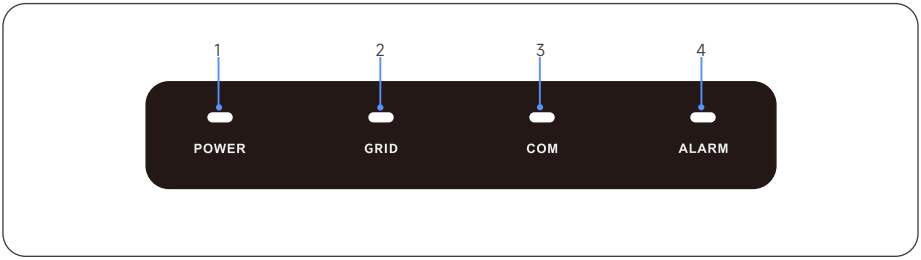
No.	Item	Description
1	LED indicator panel	Indicates the current operating status of inverter
2	Mounting bracket	Mounting the inverter
3	DC switch	On/Off DC input
4	DC input terminal (PV+/PV-)	Photovoltaic string input
5	COM1	HYX-DCS port
6	COM2	Smart meter & CT connection port
7	AC output	AC output to grid
8	PE	Grounding port

2.6 Symbol Description

Symbol	Description
	There is a fatal danger of high voltage ! Disconnect power for at least 30 minutes before servicing the inverter.
	Do not touch the inverter housing while it is in operation.
	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.
	Risk of danger ! There are potential hazards when the equipment is in operation, please take precautions when operating the equipment.
	Observe enclosed documentation.
	CE marking. The product complies with applicable EU requirements.
	Do not dispose of the product together with the household waste.

⏚	Grounding point. Reliably grounded before connecting to the power supply.

2.7 LED Indicator

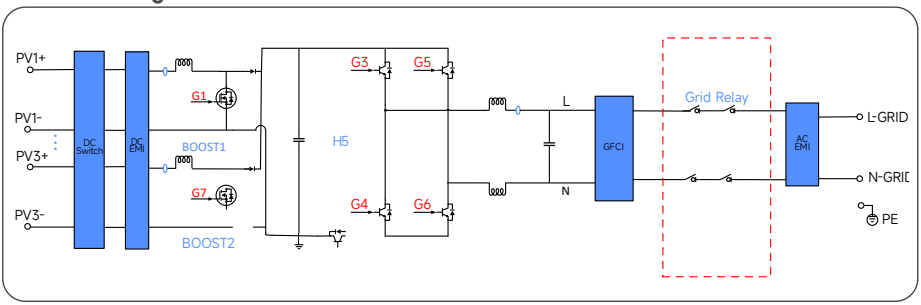


No.	Indicator	Status	Description
1	POWER	ON	Inverter powered on
		OFF	Inverter powered off
2	GRID	ON	Grid normal
		Blink 1	Grid abnormal
		Blink 2	Grid disconnected
3	COM	ON	Communication normal
		OFF	Meter communication fault
4	ALARM	OFF	Normal (no alarm)
		Blink 1	Inverter internal alarm
		Blink 2	Other alarm

Blink 1: Flashes once at 1.5-second intervals; Blink 2: Flashes twice at 0.2-second intervals.

2.8 Description of Principles and Functions

Schematic Diagram



Description of Principles

Item	Description
DC switch	The DC switch is used to cut off the DC current when necessary to ensure the safe operation of the inverter and the safety of personnel.
EMI filter	The EMI filter filters out electromagnetic interference inside the inverter to ensure that the inverter can meet the requirements of EMC standards.
DC input	The DC input is equipped with two MPPTs to ensure maximum power even under different PV input conditions.
Inverter	The inverter unit converts the DC power into grid-compliant AC power and feeds it into the grid.
AC filter	The AC filter filters the high frequency component of the inverter output current to ensure that the output current meets the grid requirements.
Output relay	The output relay isolates the inverter AC output from the grid and keeps the inverter safely off the grid in case of inverter or grid failure.
AC Surge protector	The AC surge protector provides a drain circuit for overvoltage energy on the AC side to prevent AC side overvoltage from damaging the inverter's internal circuit.

Description of Functions

The inverter converts DC power into AC power that meets the requirements of the grid and feeds it into the grid. The functions of the inverter can be summarized as follows:

Item	Description
Data storage	The inverter stores operating information, fault records, and other system information.
Parameter configuration	Users can configure the parameters of the inverter via HYXI APP to meet various needs or to optimize its operation.
Communication interface	• The inverter provides a communication port for accessing the communication module and uploading monitoring data to the monitoring backend via wireless communication. • When the communication equipment is successfully established, users can view inverter-related information and configure its operating parameters, protection parameters, etc., via the HYXI Smart Energy Management Platform.
Protection functions	The inverter is equipped with protection functions, including islanding protection, DC reverse connection protection, AC short-circuit protection, leakage current protection, surge protection, etc.
Earth fault alarm	The device gives an alarm if there is a grounding fault. If the AC side is poorly grounded or not grounded, the LED indicator turns red.

3 Inspection & Storage

3.1 Safe Transport of the Inverter

When transporting the inverter, the original or equivalent packaging should be used, and the maximum layers for original carton is six, as this ensures safe transport.

3.2 Unpacking and Inspection

The equipment has been completely tested and strictly inspected before leaving the factory, but it may still be damaged during transportation. Please perform a detailed inspection before accepting delivery of the product.

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

3.3 Inverter Storage

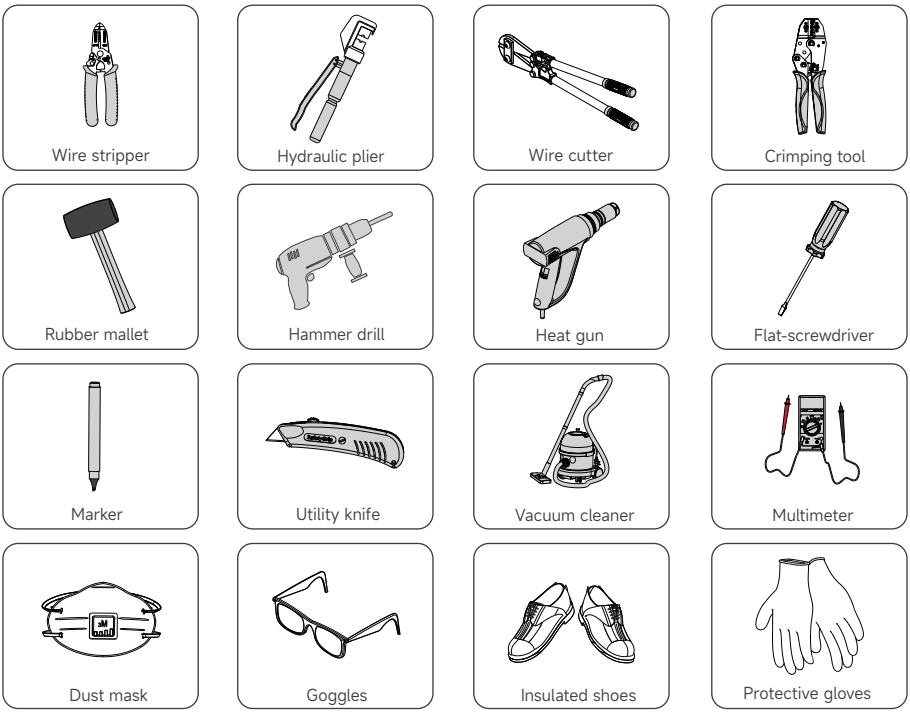
If the inverter is not immediately put into use, it is necessary to meet the following requirements when storing the inverter:

- Do not remove the outer packaging of the inverter.
- The inverter needs to be stored in a clean and dry place and protected from dust and water vapor.
- The storage temperature should be kept at -30°C to +60°C and the relative humidity should be kept at 0% to 100%RH.
- When stacking multiple inverters, it is recommended that they be placed in the same number of layers as originally shipped.
- Please place the inverters carefully to avoid personal injury or equipment damage caused by tipping the equipment.
- Avoid chemically corrosive substances. Otherwise, it may corrode the inverter.
- 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.
- After long-term storage, the inverter needs to be inspected and tested by professionals before it can be put into use.
- Do not dispose of the original packaging of the equipment. It is better to store the equipment in the original box after it is dismantled.

4 Pre-Installation Preparation

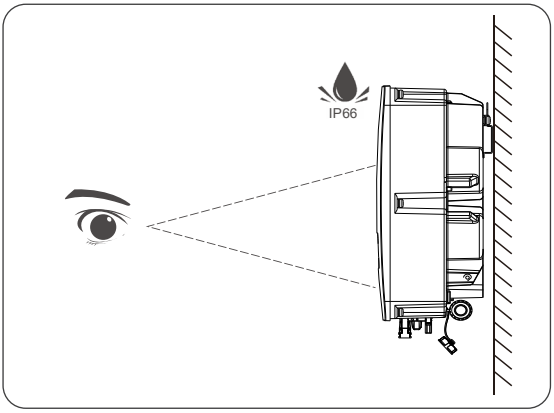
4.1 Installation Tools

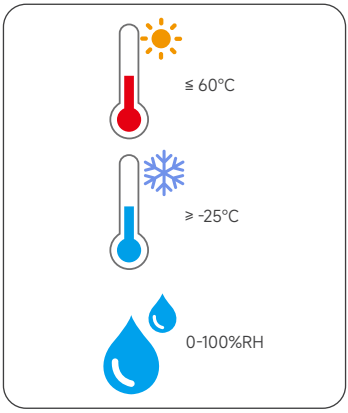
Installation tools include, but are not limited to, the following recommended tools. And if necessary, other auxiliary tools can be used on site.



4.2 Installation Environment

- The inverter has IP66 protection level and can be used for indoor or outdoor installation.
- The installation location should be convenient for electrical connection, operation and maintenance.
- No flammable and explosive materials should be present in the installation environment.
- It must not be installed in a location that is accessible to children.
- Temperature should meet: -25 to +60°C ; Humidity should meet: 0 ~ 100% RH.
- Avoid direct sunlight, rain and snow on the inverter, and choose a sheltered place for the installation to extend the life of the inverter.
- Make sure the inverter has smooth ventilation and heat dissipation.
- The inverter will generate some noise during operation, so it is not recommended to install it in the living area.



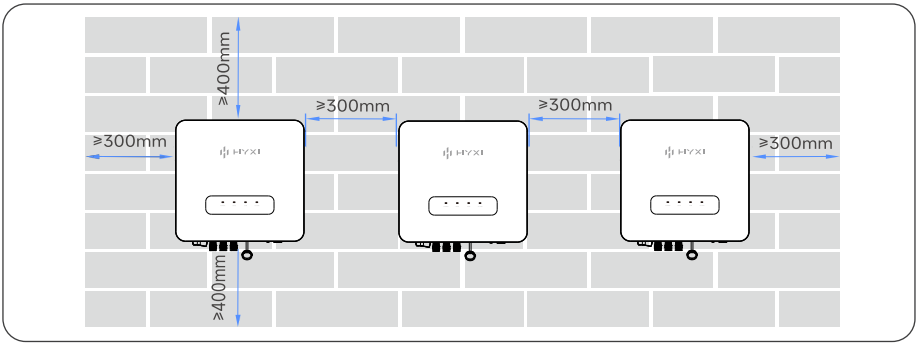


4.3 Installation Angle

- The mounting carrier has a load-bearing capacity of at least 4 times the weight of the inverter, and the carrier has fireproof characteristics.
- It is recommended that the inverter be installed vertically or tilted back ≤ 15° to facilitate the heat dissipation of the machine.
- Do not tilt the inverter forward, backward, upside down or sideways.

4.4 Installation Space

Make sure there is enough space around the inverter to ensure ventilation. The installation space requirements for a single inverter are shown in the figure below.



5 Mechanical Installation

5.1 Installation Precautions

⚠ DANGER

- Before installing the inverter, make sure that the inverter is free of any electrical connections.
- Make sure to avoid the utility alignments in the wall before drilling holes to avoid any danger.

⚠ CAUTION

- The instructions in the manual must be followed when handling and placing the equipment.
- Improper handling of the equipment may result in minor, serious or critical injuries.
- The equipment heat sink must be kept uncovered to ensure adequate cooling inside the equipment.

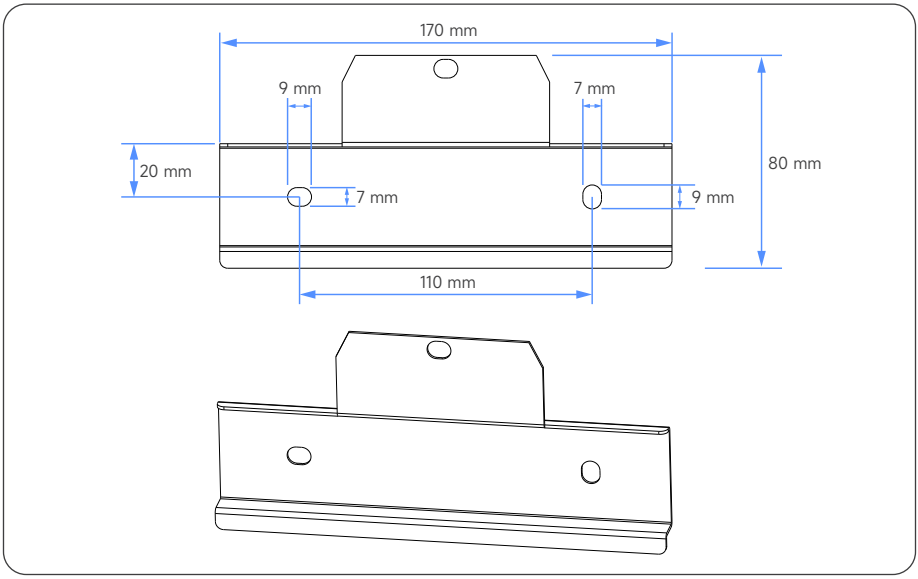
5.2 Handling the Inverter

Before installation, the inverter needs to be removed from the packing box and moved to the selected installation site. When moving the inverter, the following guidance instructions need to be observed:

- Always pay attention to the weight of the inverter.
- Use the handles on both sides of the inverter to lift the inverter.
- One or two installers move the inverter together, or use a suitable moving tool.
- Do not loosen the unit unless it is securely fastened.

5.3 Installing the Inverter

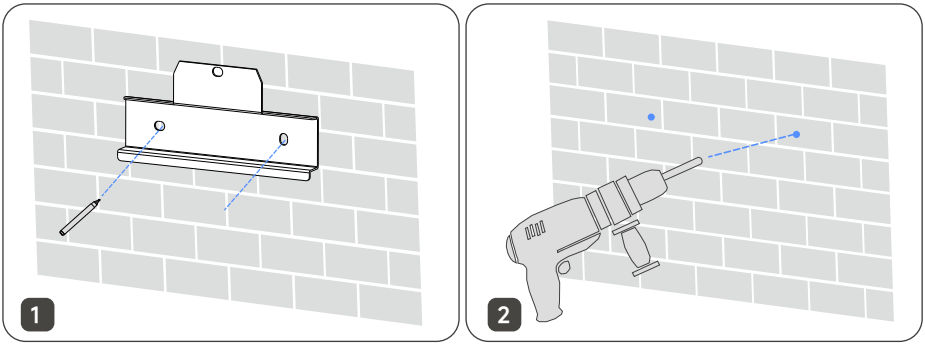
Bracket Dimension:



Installation Procedure:

Step 1: Place the bracket horizontally on the wall, and select the hole position shown in the figure below and mark the drilling position.

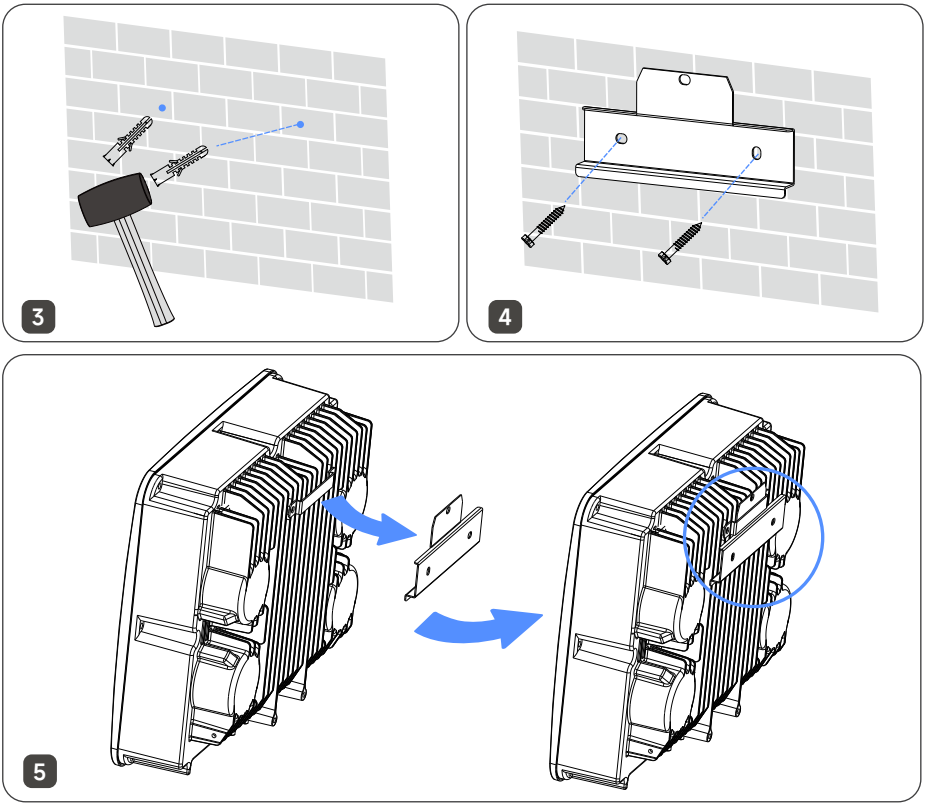
Step 2: Drill holes (Ø 10 drill bit) at the location shown below; the depth of the hole is about 70 mm.



Step 3: Place the expansion tubes into the holes.

Step 4: Place the bracket, and secure it with self-tapping screws.

Step 5: Hang the inverter to the bracket, and ensure the inverter is securely fastened to the mounting lugs of the bracket.



6 Electrical Connection

⚠ DANGER

- High voltage may be present in the inverter.
- Exposure of the PV module to sunlight will generate dangerous voltages.
- Do not close the AC/DC circuit breaker before completing the electrical connection and prevent misconnection.
- Make sure that all cables are not energized before making electrical connections.

⚠ WARNING

- Any improper operation during wiring may result in equipment damage or personal injury or death.
- The wiring operation must be done by professional technicians only.
- The cables used in the PV power generation system must be firmly connected, intact, well insulated and of appropriate specifications.

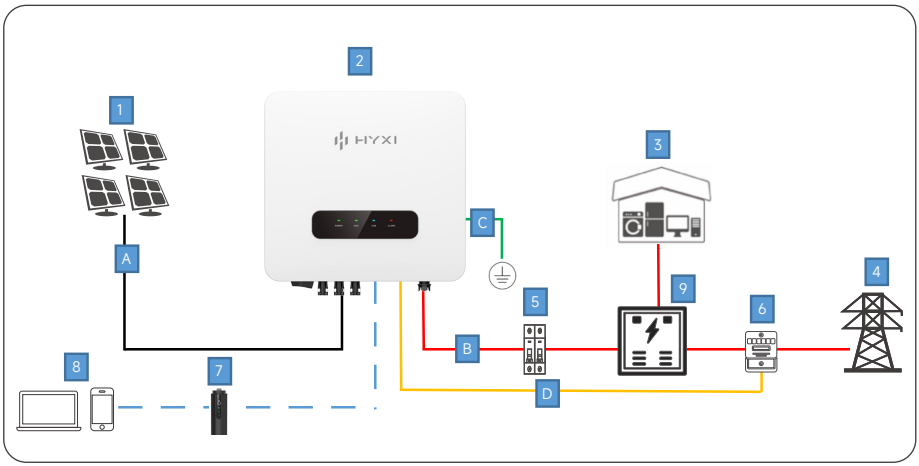
⚠ WARNING

- Since the inverter is transformerless, the positive and negative terminals of the PV string must not be grounded. Otherwise, the inverter will not operate properly.
- Before connecting the AC side, the PV string and the communication connection, please make an external ground connection.
- The ground connection of the external protective earth terminal is not a substitute for the connection of the PE terminal in the AC wiring, but must ensure that both are reliably grounded. Otherwise, HYXI will not take any responsibility for the possible consequences.

⚠ CAUTION

- The wiring process must follow the relevant rules of the local power grid and the relevant safety instructions of PV modules.
- All electrical installations must comply with the electrical standards of the country and region where they are installed.
- The inverter can be connected to the grid only after obtaining the permission of the local power department.

6.1 Electrical Connection Overview



No.	Item	No.	Item
1	PV module	5	AC circuit breaker
2	HYX-S(8-10.5)K-S2	6	Meter
3	Load	7	HYX-DCS
4	Grid	8	HYXI cloud
9	Distribution box		

No.	Cable	Type	Specification
A	DC cable	Common outdoor PV cable in the industry	Conductor crosssectional area: 4~6 mm^2 Cable outer diameter: 5.5~9 mm
B	AC cable	Not using the PE equipotential point at the AC output port: two-core (L and N) outdoor copper cable Using the PE equipotential point at the AC output port: three-core (L, N, and PE) outdoor copper cable	Conductor crosssectional area: 8~16 mm^2 Cable outer diameter: 6 AWG
C	Additional grounding cable	Single-core outdoor copper cable and M5 OT terminal	Outdoor single-core copper wire Conductor crosssectional area: 4~6 mm^2
D	Communication cable	Outdoor shielded twisted pair cable	Outdoor shielded twisted-pair wire that meets local standards. Conductor crosssectional area: 0.25~1 mm^2

6.2 Grounding Connection

⚠ WARNING

- In the PV power generation system, all non-current-carrying metal parts and equipment enclosures should be grounded (e.g., PV mounting structures, etc.).
- The external grounding terminal of a single inverter shall be grounded nearby.
- When there are multiple inverters, the external grounding terminals of all inverters and the grounding points of PV mounting should be connected to the equipotential line (depending on the site conditions) to ensure that the external grounding of all inverters is grounded.
- Please ensure that the grounding procedure has been completed before any other operation.
- The cross-sectional area of the secondary grounding cable must be the same as the cross-sectional area of the PE core in the AC cable.

NOTICE

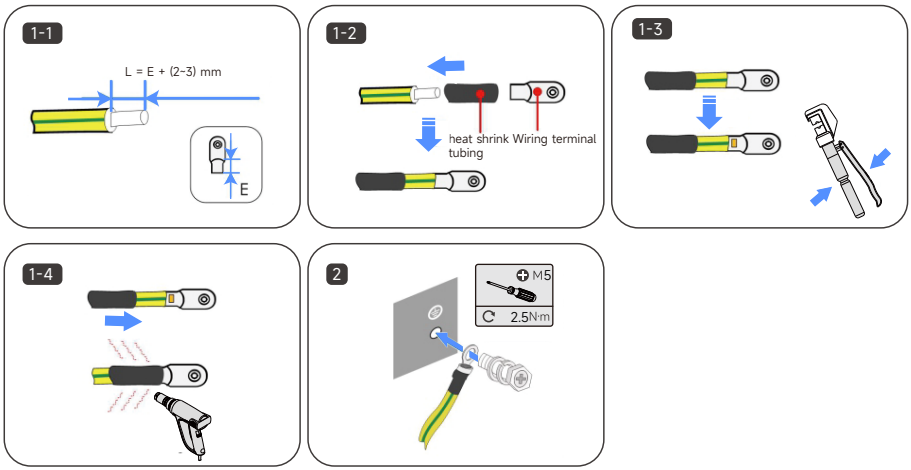
- The secondary grounding cable and terminal block are to be prepared by users.

Grounding Procedure:

Step 1: Make the cable and crimp the terminal block.

Step 2: Remove the screws from the grounding terminal and use a screwdriver to secure the cable.

Step 3: Apply silicone or paint to the grounding terminal to improve its corrosion resistance.



6.3 AC Side Connection

⚠ DANGER

- Before connecting to the grid, make sure that the grid voltage and frequency meet the requirements of the inverter, refer to the "Technical Parameter" for detailed parameters. Otherwise, contact the power company to solve the problem.
- Inverters can only be connected to the grid with the permission of local power company.
- To ensure that the inverter can be safely disconnected under load, each inverter must be equipped with a separate two-pole AC circuit breaker as protection device. AC breaker recommended specification: 2P, effective value of current: 50A.
- Multiple inverters must not share a single AC circuit breaker.
- No load can be connected between the inverter and the AC circuit breaker.

⚠ WARNING

- The inverter features an integrated leakage-current monitoring and protection unit. The inverter will rapidly disconnect from the grid when detecting leakage current exceeding its internal protection threshold of 300 mA.
  If an external residual-current device (RCD) is installed for additional personnel-safety protection, select an RCD with rated residual operating current ≥ 30 mA.

AC Circuit Breakers

An independent two-pole circuit breaker must be installed on the output side of the inverter to ensure safe disconnection from the grid. The recommended specifications are as follows.

Inverter Model	Recommended Specification
HYX-S8K-S2	50A
HYX-S10K-S2	60A
HYX-S10K5-S2	60A

Leakage-Current Protection

The inverter integrates leakage-current protection. It trips and disconnects from the grid when leakage current exceeds the internal protection threshold of 300 mA.

This 300 mA threshold applies only to the inverter-integrated fault-protection function. It is not intended for direct personal-shock protection. For personnel-safety requirements, install an external RCD rated ≥ 30 mA.

AC Side Wiring

Step 1: Disconnect the AC circuit breaker and secure it against reconnection.

Step 2: Disassemble the AC connector: remove the terminal block and the swivel nut.

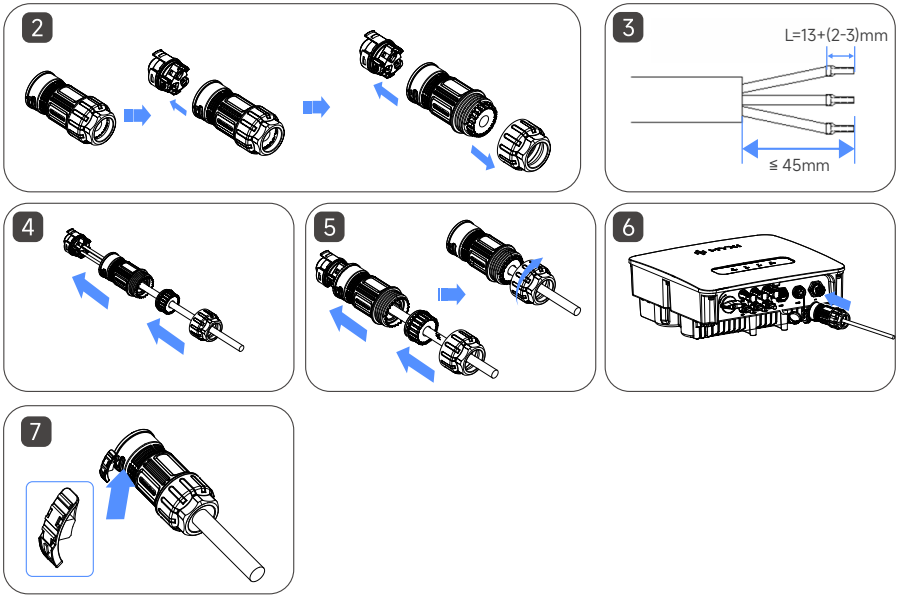
Step 3: Strip the AC cable as shown in the figure below.

Step 4: Thread the AC cable through the swivel nut, sealing ring and connector enclosure. Then place the L,N,PE conductors onto the terminal block, then tighten the screws.

Step 5: Assemble the terminal block into the connector enclosure. An audible click indicates successful engagement. Then tighten the swivel nut.(Torque 2.0± 0.5N·m)

Step 6: Connect the assembled AC connector to the AC terminal of the inverter.

Step 7: Use the clasp to remove the AC connector from the inverter.



6.4 PV Connection

⚠ DANGER

- Electric shock hazard !
- Pay attention to safety before electrical connection, as PV modules exposed to sunlight will generate dangerous voltages.

⚠ WARNING

- Before connecting the PV module to the inverter, ensure that the PV module is well insulated from the ground.
- During the installation and operation of the inverter, ensure that the positive pole or negative pole of the PV string is not short-circuited to the ground. If short circuit occurred, it may cause AC and DC short circuit of the inverter, resulting in equipment damage, and the resultant damage will not be covered by the warranty.

⚠ CAUTION

- Make sure that the voltage and maximum short-circuit current of each PV string are within the allowable range of the inverter, for more details please refer to the "Technical Parameter".
- PV modules of different brands or models are mixed in the same PV string, or connected in different directions in the same PV string angle or inclination of photovoltaic modules may not damage the inverter, but will lead to system performance degradation !
- When the input voltage ranges from 560 to 600V, the inverter will switch to the standby state. When the voltage resumes to the MPPT operating voltage range, i.e. 40~560V, the inverter will return to normal operation.

Assembling PV Connectors

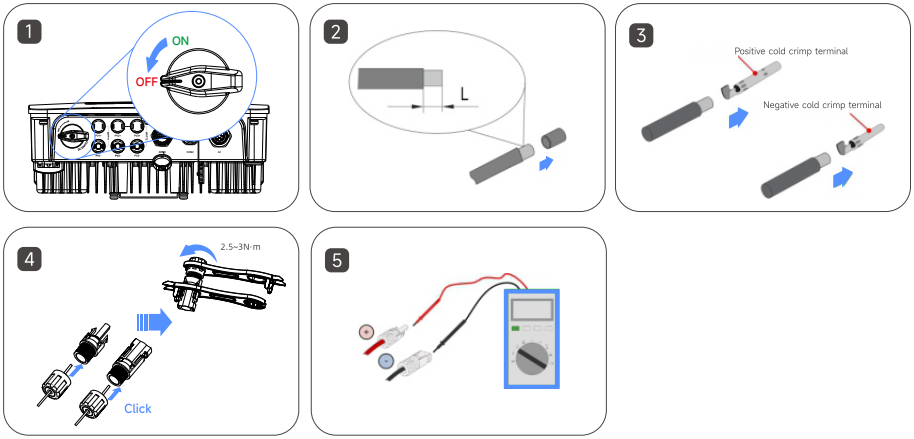
Step 1: Turn the DC switch to "OFF" manually, and make sure the inverter is powered off.

Step 2: Strip the insulation of PV cables by approximately 7 mm.

Step 3: Use a hydraulic plier to crimp the cables.

Step 4: Insert the cables into the PV connectors, and then fasten the swivel nuts. Pull the cable gently to make sure it is tightly connected. Use 2.5~3N·m force to tighten the swivel nuts and the connectors.

Step 5: Use a multimeter to check the correct polarity of the PV cables.



⚠ DANGER

- High voltage may be present in the inverter!
- Make sure that all cables are not energized before performing electrical operations.
- The AC circuit breaker switch must not be closed until the inverter electrical connections are complete.

⚠ CAUTION

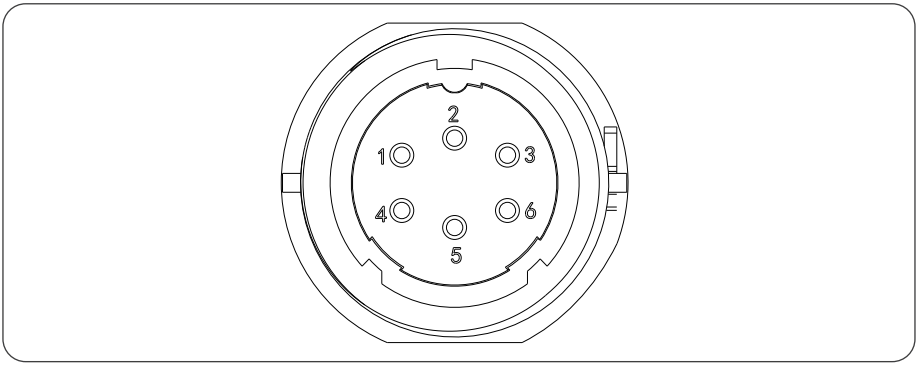
- If the DC input polarity is reversed, the inverter will be in a fault or alarm condition and will not operate properly.

6.5 Communication Connection

6.5.1 Description of Communication Connection

Pin definition

Port	Pin	Description	Function
RS485-1	1	RS485 A1 RS485 differential signal +	Connect to smart meter
	2	RS485 B1 RS485 differential signal -	
RS485-2	3	RS485 B2 RS485 differential signal -	Reserved for RS485 communication
	4	RS485 A2 RS485 differential signal +	
CT	5	AC current sensor +	CT signal input
	6	AC current sensor -	



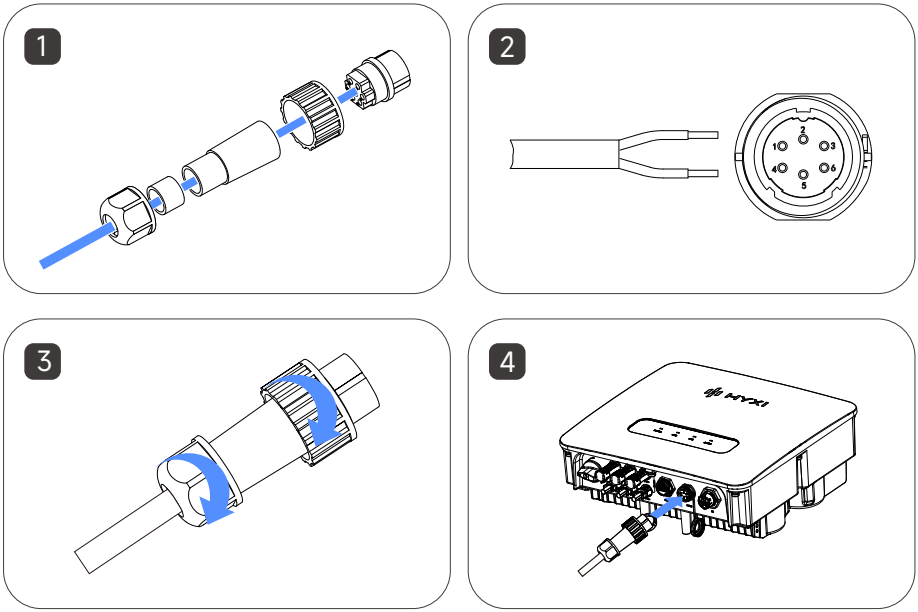
Communication Connection Steps

Step 1: Pass the RS485 communication cable through in sequence as shown in the figure below.

Step 2: Crimp the cable to the corresponding pins on the wiring terminal.

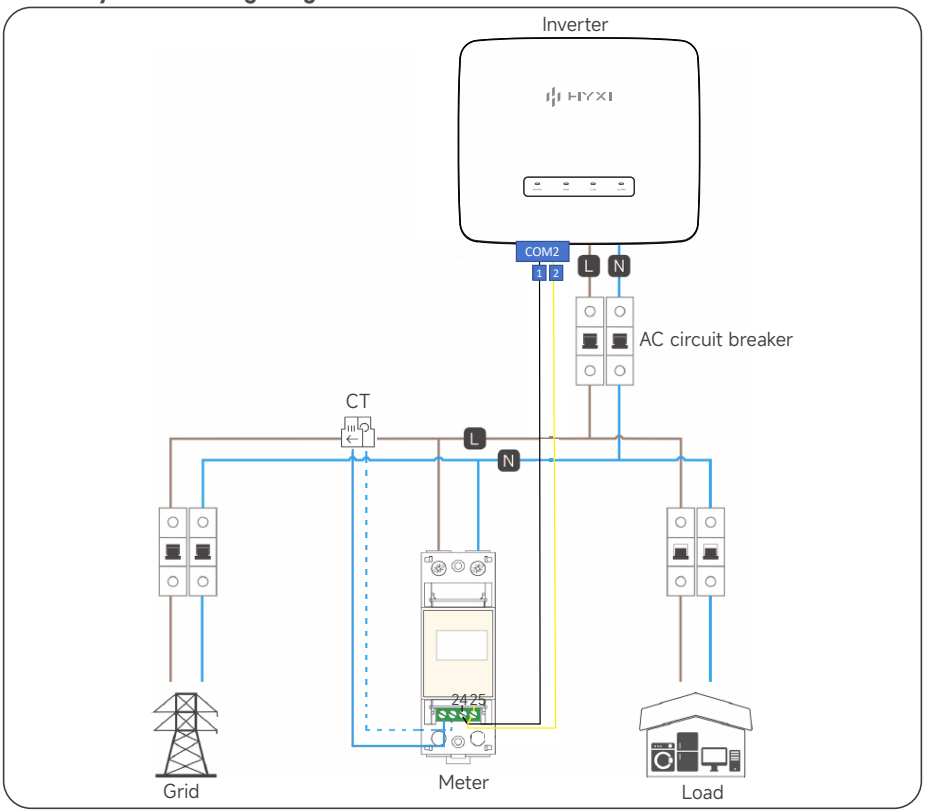
Step 3: Sequentially tighten the waterproof nut and swivel nut.

Step 4: Insert the assembled communication terminal into the COM2 port of the inverter.

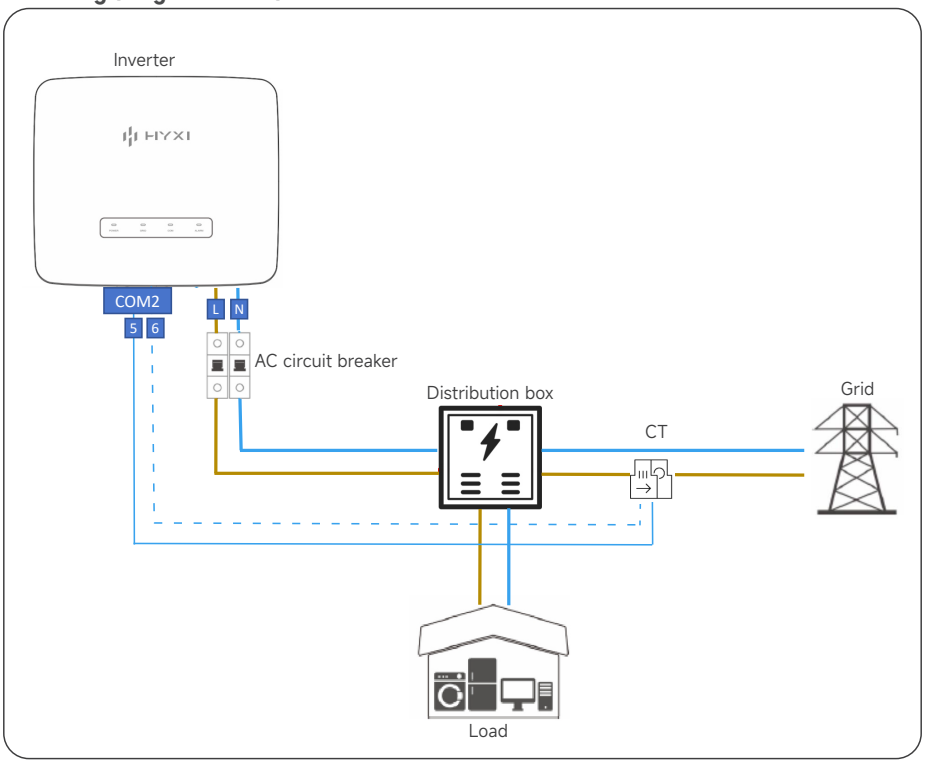


6.5.2 Zero-Export Wiring Diagram

Electricity Meter Wiring (Single Inverter)



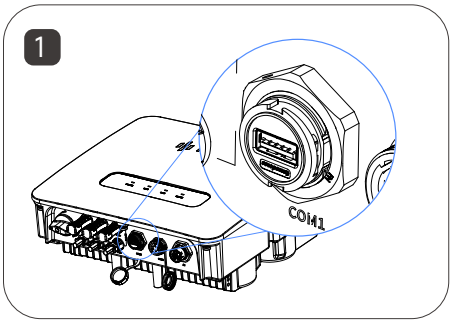
CT Wiring (Single Inverter)

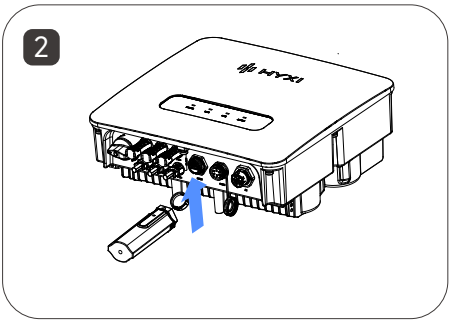


6.6 DCS Connection

Step 1: Remove the waterproof cover of COM1 terminal.

Step 2: Insert DCS into the COM1 terminal and tighten it to ensure it is secure.





7 System Commissioning

7.1 Checking Before Power-On

- Check that the installation location of the inverter meets the requirements of "4.2 Installation Environment" and ensure easy installation, disassembly, operation and maintenance of the inverter.
- Check that the mechanical installation of the inverter meets the requirements of "5 Mechanical Installation".
- Check that the electrical connections of the inverter meet the requirements of "6 Electrical Connection".
- Check that all switches are in the "OFF" position.
- Make sure no tools are left inside the machine.
- AC circuit breakers are selected in accordance with this manual and local standards.
- All safety signs and warning labels are securely attached and clearly visible.
- Verify that the PV open-circuit voltage complies with the inverter DC-side parameter requirements.

⚠ CAUTION

- To ensure safe, normal and stable operation of PV power generation system, all newly installed, renovated and repaired grid-connected PV generation system and its grid-connected inverter must be inspected before operation.

7.2 Power-On the Inverter

Step 1: Make sure that all items checked in "7.1 Checking Before Power-On" are satisfied.

Step 2: Close the grid-connected AC circuit breaker and turn on the DC switch of the inverter.

Step 3: Observe the LED status of the inverter. (Refer to "2.7 LED Indicator" for details)

7.3 Power-Off the Inverter

⚠ CAUTION

- After the inverter has been shut down, there is still a risk of burns. After the inverter has cooled down, it is necessary to wear protective gloves before operating the inverter.
- Shut down the inverter when maintenance or repair work needs to be performed. Follow the steps below to disconnect the inverter from the AC and DC power sources, as failure to do so may result in injury or damage to the equipment.

Step 1: Use HYXI APP to issue a shutdown command.

Step 2: Disconnect the external AC circuit breaker and prevent reconnection due to misuse.

Step 3: Disconnect the external DC circuit breaker and turn the DC switch to "OFF" state.

Step 4: Wait for at least 5 minutes until the internal capacitors are fully discharged.

Step 5: Use a current clamp to check the DC cable to make sure there is no current.

7.4 Disassembling the Inverter

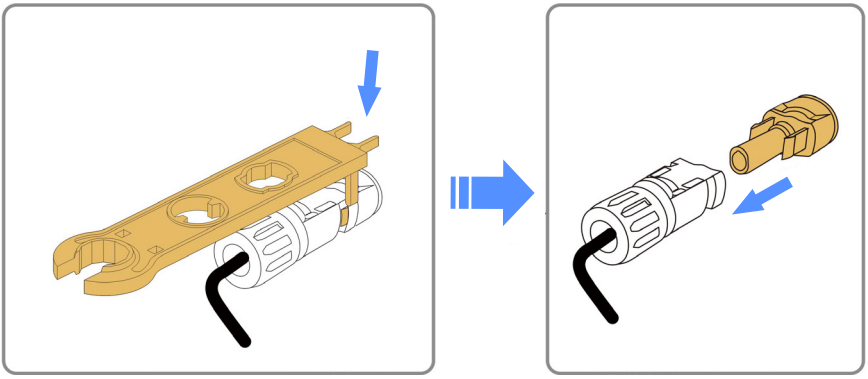
⚠ CAUTION

- Danger of burns and electric shocks!
- After disconnecting the inverter from the grid and the PV modules, wait at least 5 minutes before touching the internal conductive components.

NOTICE

- Before dismantling the inverter, both AC and DC must be powered off.
- If the inverter has more than two DC terminals, the outer DC connector needs to be removed before the inner DC connector can be removed.

Step 1: Refer to "6 Electrical Connection" and follow the steps in reverse order to disconnect all electrical connections from the inverter. To remove the DC connector, use the MC4 wrench to loosen the locking part of the DC connector and install the waterproof plug.



Step 2: Refer to "5 Mechanical Installation" and follow the steps in reverse order to remove the inverter.

Step 3: If necessary, remove the mounting bracket.

Step 4: If the inverter is to be put into use at a later date, store the inverter properly as described in "3.3 Inverter Storage".

7.5 Disposing of the Inverter

⚠ CAUTION

- Some parts of the inverter, such as capacitors, may cause environmental pollution. Do not dispose of this product with household waste, and dispose of it in accordance with the regulations for disposal of electronic waste used at the installation site.

8 Maintenance

In the solar photovoltaic grid-connected power generation system, the inverter can automatically complete the operation of grid-connected power generation and stop-start without human control.

In order to ensure and extend the service life of the inverter, in addition to using the inverter in strict accordance with the contents of this manual, it is necessary to perform the necessary routine maintenance and repair of the inverter.

8.1 Maintenance Precautions

⚠ DANGER

- Disconnect the grid-side AC circuit breaker, then disconnect the DC switch.
- Wait at least 5 minutes until the internal components are discharged before performing maintenance or service operations.
- Use test equipment to verify that no voltages or currents are present.

⚠ CAUTION

- When performing electrical connections and maintenance, post warning signs to prevent non-personnel from entering the electrical connection or maintenance area.
- Do not restart the inverter until all faults impacting its safety performance have been resolved.
- The inverter contains no user-serviceable internal parts. Do not replace its internal components without authorization.
- Please contact HYXI after-sales service for maintenance. HYXI shall not honor any warranty for equipment subject to unauthorized disassembly.

8.2 Routine Maintenance

Inspection Content	Inspection Method	Maintenance Interval
Save inverter operation data	• Use monitoring software to read the inverter data in real time and regularly backup the data recorded by the monitoring software. • Save the operation data, parameters, and logs of the inverter recorded in the monitoring software to a file. • Check the monitoring software and view various parameter settings of the inverter through the hand-held keyboard.	Once every three months

Inverter operation condition	• Observe whether the inverter is firmly installed, and whether there is damage or deformation. • Listen to the inverter for abnormal sounds. • When the system is connected to the grid, check various variables. • Check whether the inverter housing is heating normally, and use a thermal imager to monitor the system heating.	Once every six months
Inverter cleaning	Check the humidity and dust in the environment around the inverter, and clean the inverter if necessary.	Once every six months
Electrical connection	• Check whether the system cable connection is loose and the inverter wiring terminals are loose. • Check the cable for damage,especially if there are cuts on the skin that contact the metal surface.	Once every six months
Safety functions	• Check the inverter LED indicators and system shutdown function. • Simulate the shutdown and check the shutdown signal communication • Check the warning label and replace it if necessary.	Once every six months

9 Human-Computer Interaction

9.1 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:

NOTICE

- App version 6.0.7 or higher is required.

9.2 App Configuration

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

10 Appendix

10.1 Technical Parameters

Product Model	HYX-S8K-S2	HYX-S10K-S2	HYX-S10K5-S2
PV Input			
Max. Input Power [W]	16000	20000	21000
Max. Input Voltage [V]		600	
Rated Input Voltage [V]		360	
Start-Up Voltage [V]		40	
MPPT Operating Voltage Range [V]		40 ~ 560	
MPPT Full Load Voltage Range [V]		200 ~ 500	
Max. Input Current per MPPT [A]		20/32	
Max. Short-Circuit Current [A]		25/40	
Number of MPPT		2	
Max. Input Number per MPPT		1/2	
AC Output			
Rated Output Power [W]	8000	10000	10500
Max. Apparent Power [VA]	8800	10000	10500
Rated Output Voltage [V]		1 / N / PE, 220 / 230 / 240V	
Rated AC Grid Frequency [Hz]		50/60	
Rated Output Current [A]	36.4	45.5	47.7
Max. Output Current [A]	40.0	45.5	47.7
Adjustable Power Factor		0.8 leading - 0.8 lagging	
THDi		< 3%	
Efficiency			
Max. Efficiency		98.50%	
European Weighted Efficiency		97.80%	
MPPT Efficiency		99.90%	
Protection			
Active Anti-Islanding Protection		YES	
Residual Current Monitoring		YES	
DC Switch		YES	
AC Short-Circuit Protection		YES	
AC Over Voltage Protection		YES	
AC Over Current Protection		YES	
DC Surge Protection		Type II	
AC Surge Protection		Type II	
Ground Fault Detection		YES	
AFCI		YES	
General Data			
Operating Temperature Range [℃]		-25 ~ +60℃	
Relative Operating Humidity [RH]		0 ~ 100%	
Max. Operating Altitude [m]		4000	
Cooling Concept		Natural cooling	

Product Model	HYX-S8K-S2	HYX-S10K-S2	HYX-S10K5-S2
Display		LED + App (LCD optional)	
Communication		RS485/Wi-Fi/4G (Optional)	
Weight [kg]		≤ 12	
Topology		Non-Isolated	
Dimensions (W × H × D) [mm]		360 × 340 × 136	
Ingress Protection		IP66	
Overvoltage Level		PV II/AC III	

10.2 AFCI Function

Product Model	HYX-S8K-S2	HYX-S10K-S2	HYX-S10K5-S2
Classification		F–I–AFPE–1–3–1	
Rated Channel Current		52A	
Maximum Current per Input Port		20A/32A	
Number of Monitoring Channels		1	
Number of Monitoring Strings per Input Port		1/2	
Arc-Flash Detection and Protection			
Standard		IEC63027	
Protection Coverage		Full Coverage	
Method of Implementation		Integrated	
Functionality		AFPE	
Monitoring String per Input Port		1	
Input Port per Monitoring Channel		3/1	
Monitoring Channels		1	

10.3 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-S8K/10K/10K5-S2 User Manual_V1.0-202609_EN
The manual is subject to change without notice while the product is being improved.

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