AURAWATT

USER MANUAL

TP-L SERIES 8-12KW

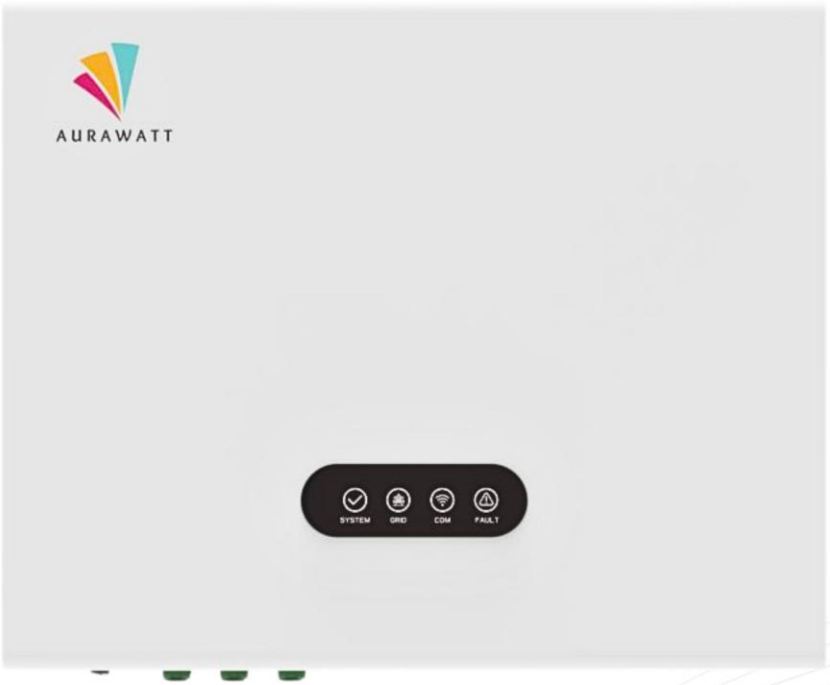


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1. Foreword

This document is designed to introduce the product information, installation and wiring, configuration and testing, troubleshooting, and maintenance of the inverter. You should read this manual carefully before installing and using the product to understand the safety information and familiarize yourself with the product's functions and features.

The developer of the inverter product is AURAWATT. This document may be updated irregularly, and the latest version can be obtained from the official website (www.aurawatt.in).

1.1 Applicable Products and Disclaimers

This document applies to the following Aurawatt TP-L series inverter models:

- AW-TP 8000-L (8.0kW)
- AW-TP 10000-L (10.0kW)
- AW-TP 12000-L (12.0kW)

Disclaimer clause: By using this product, the user is deemed to recognize and accept the entire contents of this statement. Users must strictly follow the manual to install and use the product. Our company will not be liable for corresponding losses or compensation for any damages caused by possible misuse, re-installation, or re-modification, as the company has no control over the user's future specific use.

1.2 Applicable Personnel

This manual is intended for **professional electrical technicians** responsible for the installation and commissioning of inverters for mixed photovoltaic and battery systems. These technicians must be trained, knowledgeable about this product, and familiar with local codes, standards, and electrical systems before operating the equipment.

1.3 Symbol Definition

The following symbols are used to highlight important information:

- **Danger:** Indicates a situation with a **high potential hazard** that could result in death or serious injury if not avoided.
- **Warning:** Indicates a situation with a **moderate potential hazard** that could result in death or serious injury if not avoided.
- **Caution:** Indicates a situation with a **low potential hazard** that could result in moderate or minor injury to personnel if not avoided.
- **Attention:** Highlighting and supplementing content; may also provide tips or tricks to optimize use, help solve a problem, or save time.

2. Safety Precautions

The safety precautionary information in this document must always be observed when operating the equipment. The inverter is electrical equipment that operates under strict safety regulations, but improper operation may lead to serious injury or property damage.

2.1 Generic Safety

- All operations must be carried out by **professional, qualified electrical technicians**.
- Use **insulated tools** and wear personal protective equipment (PPE) when operating the inverter.
- Wear electrostatic gloves, bracelets, and anti-static clothing to protect the inverter from electrostatic damage.
- Damage or injury resulting from failure to install, use, or configure the inverter in accordance with the document is not the responsibility of the equipment manufacturer.

2.2 PV String Safety

- Use the DC wiring terminals supplied with the case to connect the DC cables. Use of other types may lead to serious consequences and damage not covered by the manufacturer.
- Ensure the module bezel and support system are well **grounded**.
- Verify cable connections are tight.
- Use a multimeter to measure the positive and negative terminals of the DC cables to ensure correct polarity and that the voltage is within the allowable range.
- **Do not connect the same PV string to more than one inverter**.
- PV modules must comply with IEC61730 Class A.

2.3 Inverter Safety

- Ensure the voltage and frequency at the on-grid access point meet the inverter's on-grid specifications.
- It is recommended to add protection devices (like circuit breakers or fuses) on the AC side; specifications should be **greater than 1.25 times** the rated current of the AC output.
- The protective ground must be firmly connected. If multiple inverters are used, ensure the protective ground points of all chassis enclosures are equipotential connected.
- If no battery is configured, **it is not recommended to use the LOAD port** to connect the BACK-UP load, as the power consumption risk exceeds the

warranty scope. When the LOAD port is unused, the equipped connector must be installed and locked.

- Inverter markings:
    - **High voltage hazard:** Disconnect from power supply when operating.
    - **Delayed discharge:** Wait **5 minutes** after powering down until the equipment is fully discharged.
    - **Hot surface:** Do not touch during operation; risk of burns.
    - The labels and warning signs on the case must be clearly visible.

2.4 Battery Safety

- Batteries must be **approved** by the inverter manufacturer.
- An **external circuit breaker** is required when connecting the battery to the inverter.
- Read the corresponding battery user's manual carefully.
- A DC breaker is required between the battery and the inverter during installation.
    - *Recommended Breaker Size:* 2-Pole, 50A Rated Current, ≥ 800V Rated Voltage. Circuit breakers must meet lEC 60947-1 and IEC 60947-2 certification.
- Use a multimeter to measure the positive and negative DC cable terminals to ensure correct polarity and voltage.
- **Do not connect the same battery pack to more than one inverter**.

2.5 Personnel Requirements

- Only **qualified professionals or trained personnel** are permitted to perform installation, operation, maintenance, and replacement of equipment or parts.
- Personnel must first undergo rigorous training to understand safety precautions and master correct operating methods.

3. Profile of Product

3.1 Product Introduction and Features

The hybrid inverters, such as the Aurawatt TP-L series, use advanced control algorithms to implement an integrated energy management system. This system controls and optimizes energy flow: PV power is used by loads, excess energy is stored in batteries, and then remaining excess energy is sold to the grid. At night, stored battery energy can be discharged to the loads.

The Aurawatt TP-L series are low voltage three-phase energy storage inverters suitable for residential and small commercial and industrial PV energy storage systems.

Main Product Features:

- **Natural heat dissipation**, fan-less silent design, **IP66 protection level**.
- Charge/discharge circuits use a bi-directional DC/DC BUCK-BOOST single inductor topology for high efficiency.
- Adopt the high-efficiency T-type three-level inverter topology.
- **Dual MPPT**, maximizing PV cell power output using the perturbation observation method.
- Support PV cell input current up to 16A, compatible with large current 210 and 182 modules.
- Support **1.1x output sustained overload** and **1.5x transient overload**.
- Support 110% three-phase unbalanced loads and half-wave loads.
- Integrate AFCI DC arc draw detection (optional).
- Integrate GFCI leakage current detection technology.

Supported Grid Forms: The inverter supports four common grid forms categorized by neutral grounding and electrical equipment grounding: **TN-C, TN-S, TN-C-S and TT**. For grids with N wires, the N-to-ground voltage must be less than 10 V.

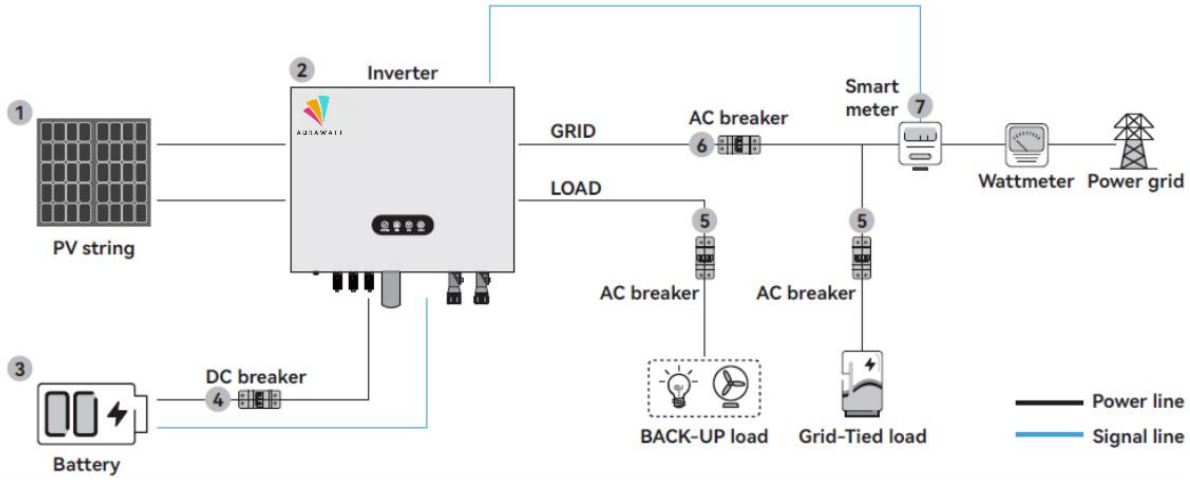
3.2 Application Scenarios

The system is **not suitable for connecting equipment that depends on a stable power supply**, such as life-sustaining medical equipment.

The system generally consists of:

1. PV string (PV modules connected in series)
2. Inverter (Aurawatt TP-L series)
3. Battery (Selected based on matching list)
4. DC breaker (Recommended: 2P, 50A, ≥ 800V)
5. AC breaker (BACK-UP load and ON-GRID load)
6. AC breaker (Voltage specification > 400Vac)
7. Smart meter (SDM630-Modbus V2 recommended for T2 series)

System Wiring Block Diagram:



User-Side Application Scenarios:

- **Customer time-of-use tariff management (TOU):** Regulation of power load based on peak, flat, and low tariff periods.
- **Self-generation and self-consumption:** PV power is prioritized for the load, minimizing reliance on the grid. PV can charge the battery, and excess energy can be sold to the grid.
- **Improvement of power quality:** The energy storage system can smooth voltage and frequency fluctuations.
- **Improve power supply reliability (off-grid backup mode):** Energy storage supplies reserve energy to end-users during an outage fault.

3.3 Operating Mode

3.3.1 System Operation Mode

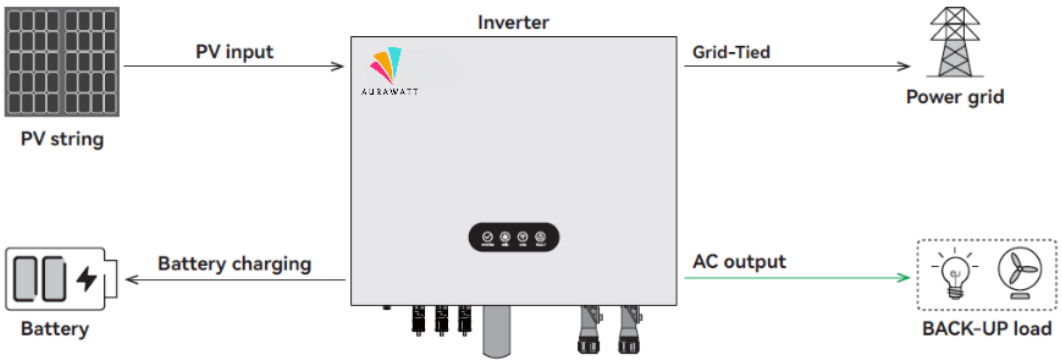
The inverter has three modes, which can be switched via the Mobile App:

1. Self-generation and Self-consumption Mode (Default)
2. Time-of-use Mode
3. Battery Priority Mode

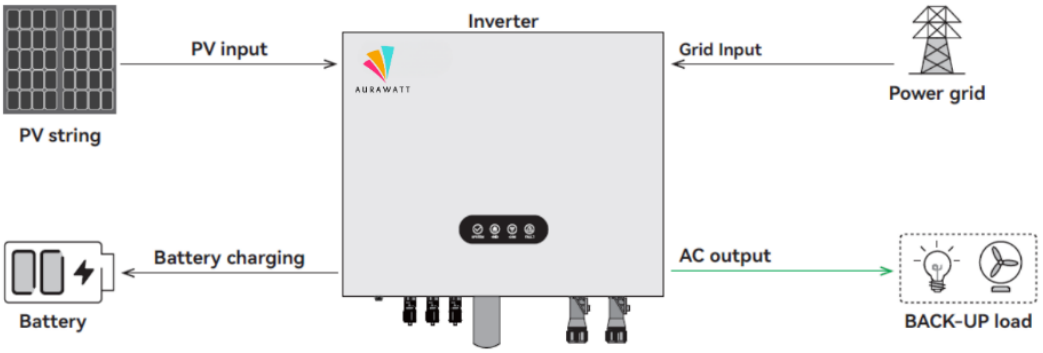
Self-generation and Self-consumption Mode: PV power generation is prioritized for backup loads and residential loads.

- **Daytime:** Sufficient PV powers loads, excess charges batteries, remaining sold to grid. Insufficient PV uses battery power; if battery low, load is powered by the grid.

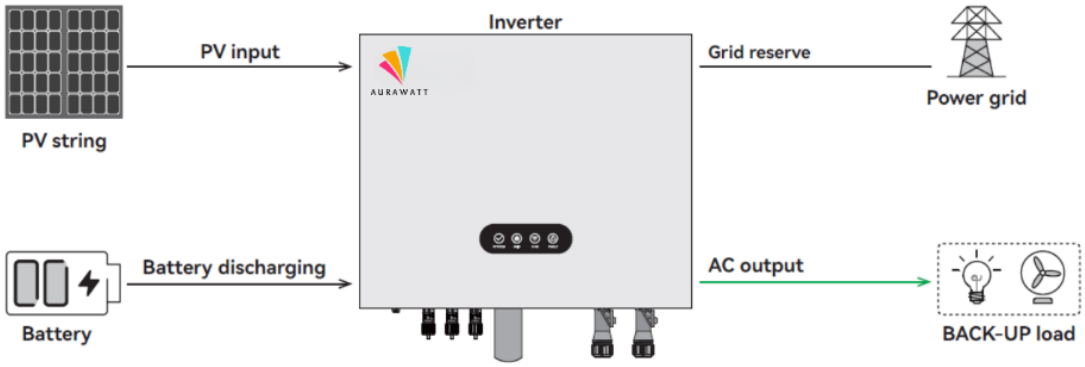
- **Night:** If battery is charged, it powers the load. If the battery is low, the grid powers the load.
- If P[load] < P[PV], surplus electricity can be charged to battery or sold to grid.



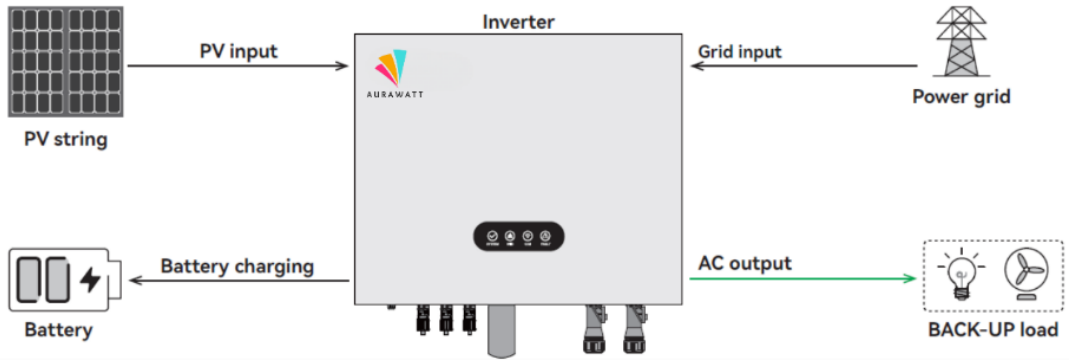
- If P[PV] < P[Load] < P[PV] + P[Battery] but Battery SOC < Backup setpoint, the load is powered by PV and grid together.



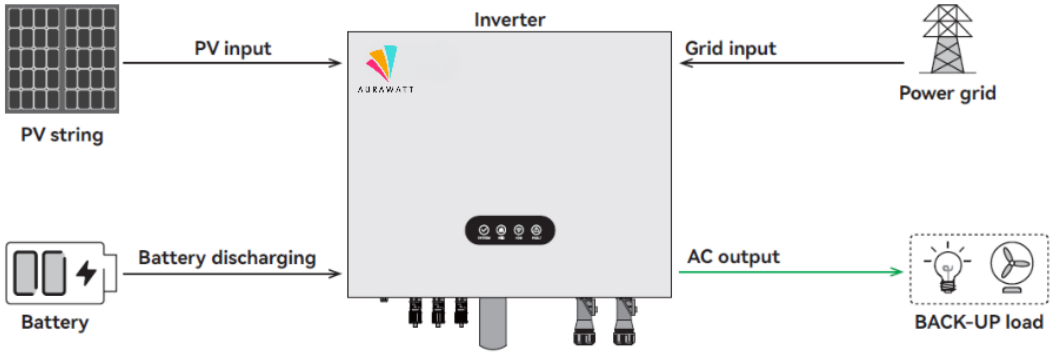
- If P[PV] < P[Load] < P[PV] + P[Battery] and Battery SOC > Backup setpoint, the load is powered by PV and battery together.



- If P[PV] + P[Battery] < P[Load] but Battery SOC < Backup setpoint, the load is powered by PV and grid together.

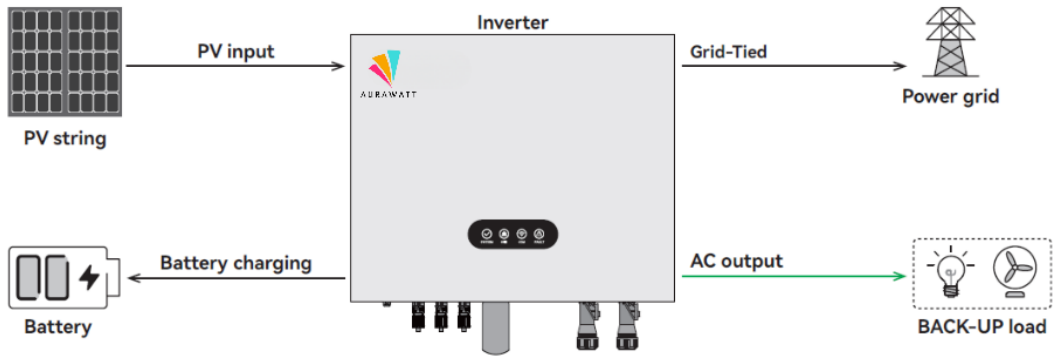


- If P[PV] + P[Battery] < P[Load], and Battery SOC > Backup setpoint, the load is powered by PV, battery, and grid.

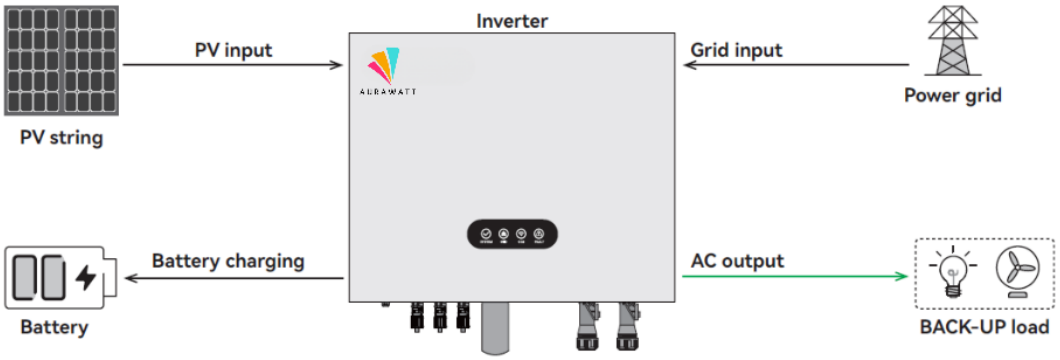


Battery Priority Mode: Grid and PV power prioritize fully charging lithium batteries under normal grid conditions to meet household loads. When the grid fails, PV and batteries power the load.

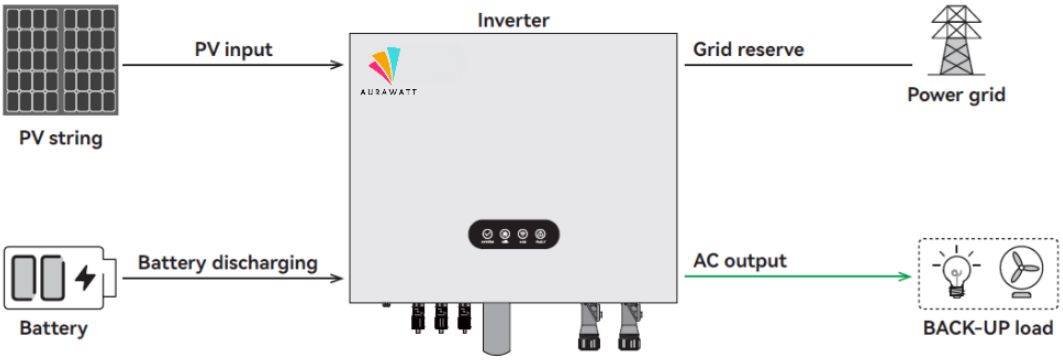
- If P[Battery] + P[Load] < P[PV], excess power charges the batteries, and the remaining power is sold online.



- If P[PV] < P[Battery], PV and the grid jointly support the load; the grid alone supplies the battery for charging.



- **Grid outage:** The inverter switches to battery output, the grid relay disconnects, and the battery powers critical loads.



3.3.2 Inverter Operation Mode

The inverter operates in the following modes:

1. **Waiting mode:** Entered after powering up or after a fault is cleared.
2. **Auto-test mode:** Initialization and testing before starting. If conditions met, enters On-grid mode. If grid is not detected, enters Off-grid mode (if function is available).
3. **On-grid mode:** Normal operation.
4. **Off-grid mode:** Entered when the grid goes down; the LOAD port supplies power.
5. **Fault mode:** Entered if a fault is detected. Returns to Waiting mode after the fault is cleared.

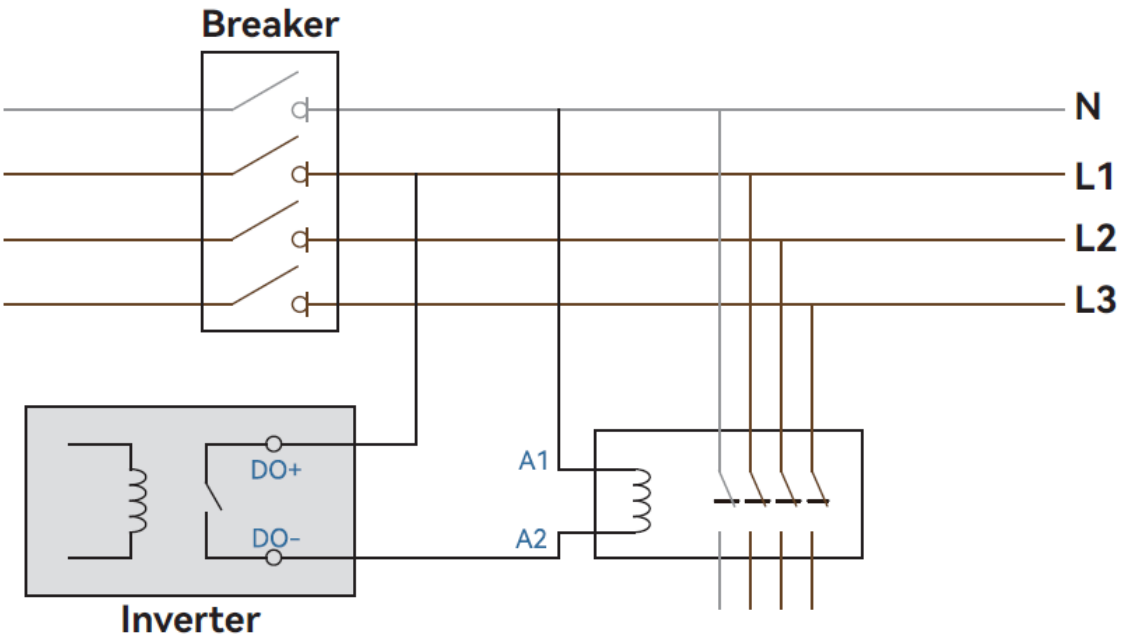
3.4 Functional Characteristics

The inverter automatically reduces output power (derating) when the operating environment is not ideal. Factors that may cause power derating include:

- Unfavourable environmental conditions (e.g., direct sunlight, high temperatures).
- The percentage of output power from the inverter is set.
- Grid over frequency derating.
- Higher grid input voltage/current value.
- PV input overvoltage use.

Load Control: The inverter has a reserved dry contact control port supporting the connection of additional contactors to control load on or off.

- **Time Control:** Load turns on/off automatically in a set time period.
- **Switch Control:** Load turns on/off based on the ON/OFF control mode setting.
- **BACK-UP Load Control:** Uses built-in COMM_NC, COMM, COMM_NO dry contact control port. In off-grid mode, the load connected to the DO port can be shut down if an overload is detected or if the battery SOC value falls below the battery off-grid protection setting.



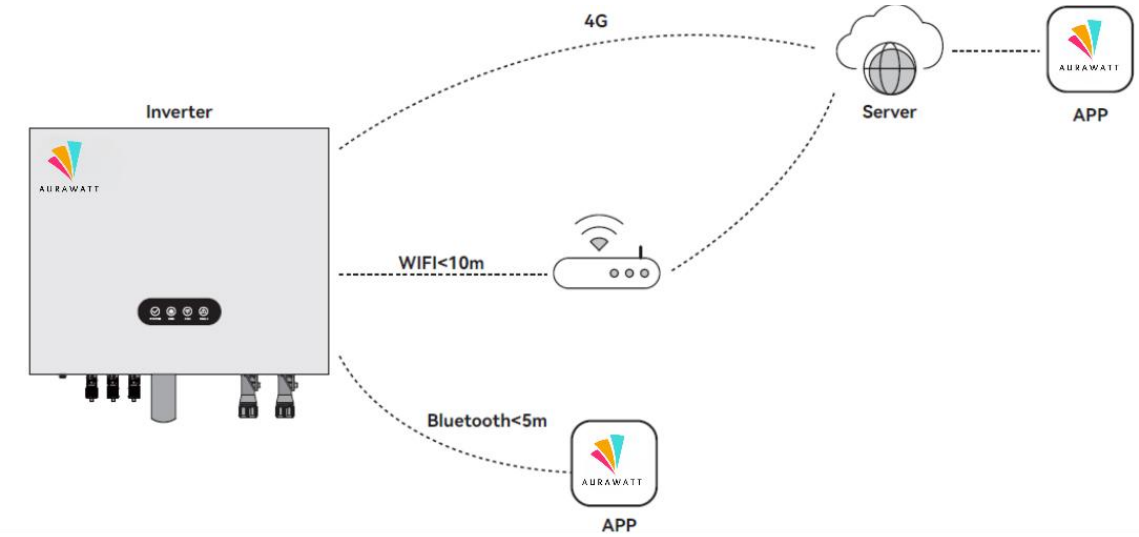
3.5 Communication

The inverter supports local setup via **WiFi or Bluetooth**. It can connect to the cloud via **WiFi or 4G module** to monitor operating status.

- WiFi connection supports the 2.4G band. If the WiFi signal strength is less than -60, move the router closer.

- BMS communication supports **CAN communication**.
- The inverter supports dry contact communication and **DRM signalling communication**.

Communication Diagram:



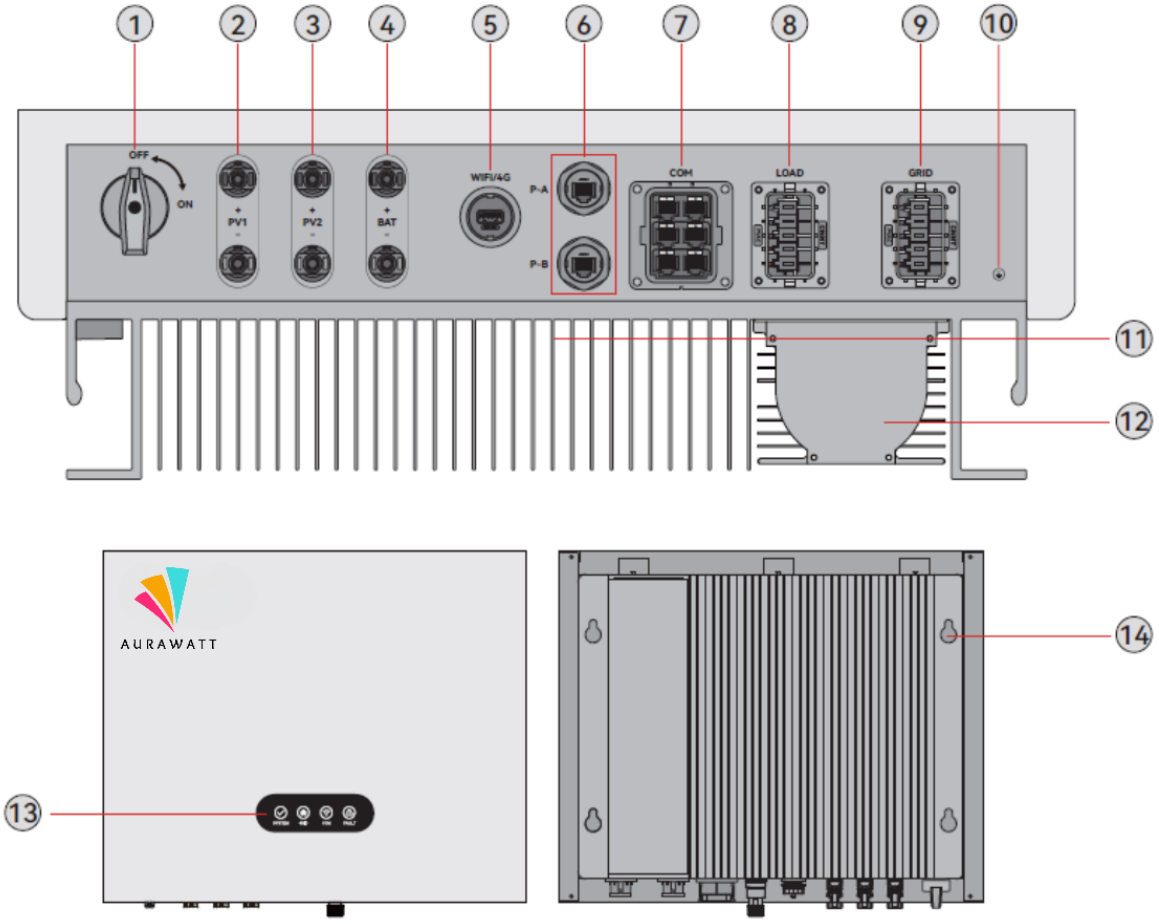
3.6 Appearance Description

3.6.1 Appearance Introduction

The inverter features multiple interfaces and components:

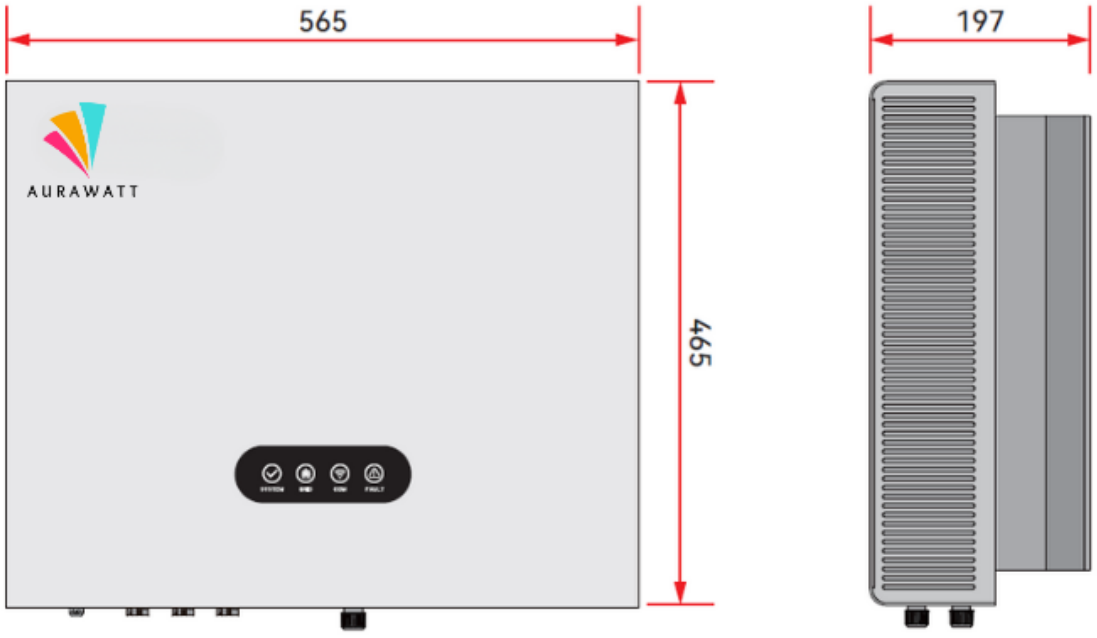
1. DC switch
2. PV1 connector (+/-)
3. PV2 connector (+/-)
4. Battery connector (+/-)
5. Wifi/4G interfaces
6. P-A & P-B Parallel port
7. Expand Communication interface
8. LOAD-connection interface
9. GRID-connection interface
10. Grounding screw
11. Thermal module
12. Inductor module
13. LED display interface
14. Hanging hole

Inverter Appearance Diagram:



3.6.2 Dimension

Product size (W*H*D): 565*465*197 (mm).



3.6.3 LED Display Description

Indicator light (GREEN)	Legend	State	Description
System running		Flicker for 1s	Starting
		Steady on	Completion of power-up and normal operation
		Go out	System not powered up
On-grid/off-grid		Flicker for 1s	Grid is abnormal, inverter is in off-grid mode
		Steady on	Grid is normal, inverter is in on-grid mode
		Go out	BACK-UP function off
Communication		Flicker for 1s	Communication fault or no connection to cloud servers
		Steady on	Inverter monitoring module is normal
Alarm fault (RED)		Steady red	Fault
		Go out	Normal
Special States		3 green lights flash in sequence	Program loading in progress
		2 center lights flash alternately	Program upgrade in progress

4. Equipment Inspection and Storage

4.1 Check Before Signing

Before accepting the product, check the following:

1. Check the outer packaging for damage (deformation, openings, cracks). If damage is present, do not open and contact your dealer.
2. Verify that the inverter model number is correct. If discrepant, do not open and contact your dealer.
3. Check delivery type, quantity, and appearance damage.

4.2 Deliverables

Use the wiring terminals shipped with the box. Damage caused by incompatible connectors is not covered by the warranty.

Deliverables List:

1. Hybrid Inverter (1pc)
2. PV Connector-Female (2pcs)
3. PV Connector-Male (2pcs)
4. BAT Connector-Female (1pc)
5. BAT Connector-Male (1pc)
6. PV Connector Tool (1pc)
7. WIFI Module (1pc)
8. PA/PB Connector (2pcs)
9. Communication connector (1pc)
10. AC Connector (2pcs)
11. User Manual (1pc)
12. Warranty Certificate (1pc)
13. Expansion Screw (4pcs)
14. Backing plate (1pc)
15. OT Terminal (1pc)
16. Communication plug-ins (120Ω) (1pc)

4.3 Equipment Storage

If the inverter is not immediately put into service, store it according to these requirements:

1. Do not remove the outer carton and ensure the desiccant remains inside.

2. Storage environment must be clean, have appropriate temperature and humidity, and be **free of condensation**.
3. Stack inverters at a height and orientation consistent with case labelling.
4. Ensure no risk of dumping after stacking.
5. After long-term storage, professional personnel must inspect and confirm the inverter before use.

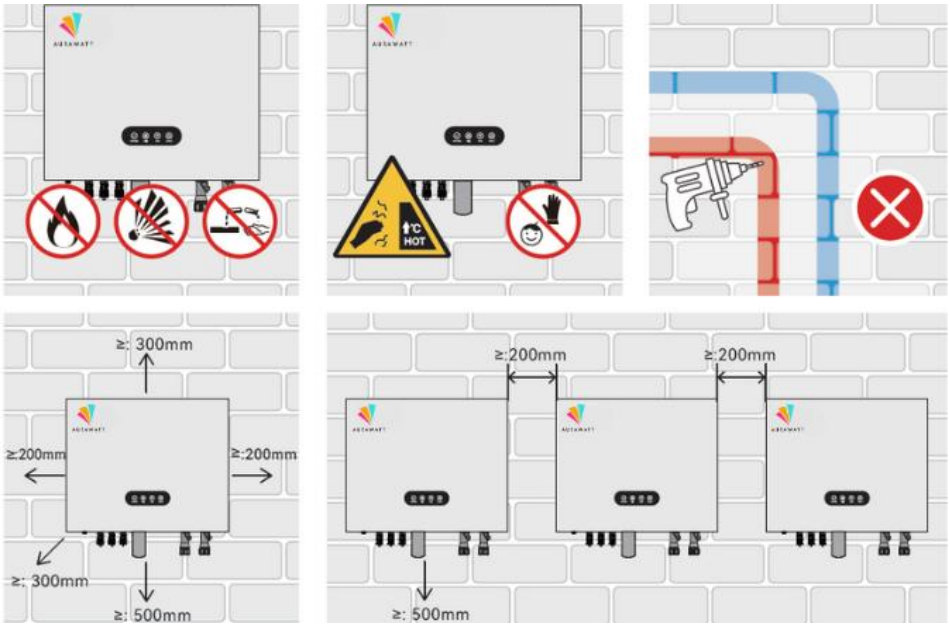
5. Installation

5.1 Installation Requirements

Installation Environmental Requirements

- **Prohibited environments:** Flammable, explosive, or corrosive environments.
- **Position:** Out of reach of children and avoid easy-to-touch locations (surface can be hot).
- **Drilling Safety:** Avoid water pipes and cables in the wall.
- **Protection:** Avoid installation environments with sunshine, rain, or snow. Installation in a sheltered location is recommended; build a sunshade if necessary.
- **Space:** Ensure sufficient space for ventilation, heat dissipation, and operation.
- **Visibility:** Install at a height that facilitates operation/maintenance, ensuring indicator lights and labels are visible, and terminals are easy to operate.
- **Altitude:** Maximum operation altitude is 3000 m.
- **Magnetic Fields:** Keep away from strong magnetic field environments to avoid electromagnetic interference.

Installation Clearance and Environmental Diagram:



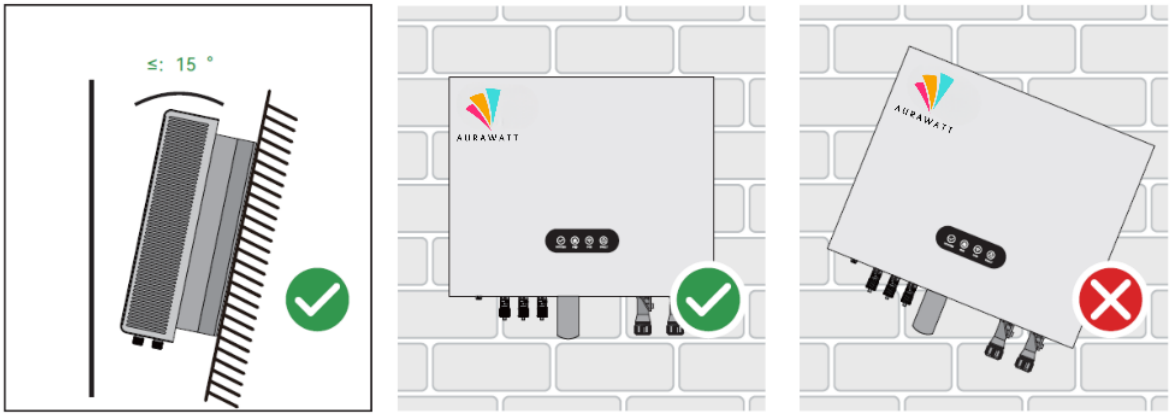
Installation Carrier Requirements

- Carrier must be non-flammable and **fire resistant**.
- Carrier must be sturdy and reliable to carry the weight of the inverter.
- Avoid installing on poorly insulated carriers, as the equipment vibrates during operation and may disturb residents.

Installation Angle Requirements

- Recommended installation angle: **vertical or tilted back ≤ 15°**.
- Do not install upside down, tilted forward, or horizontally.

Installation Angle Diagram:



5.2 Inverter Installation

5.2.1 Handling of Inverter

- Assign personnel according to the equipment weight to prevent injury.
- Wear safety gloves.
- Ensure the equipment is balanced during handling to avoid dropping.

5.2.2 Inverter Installation

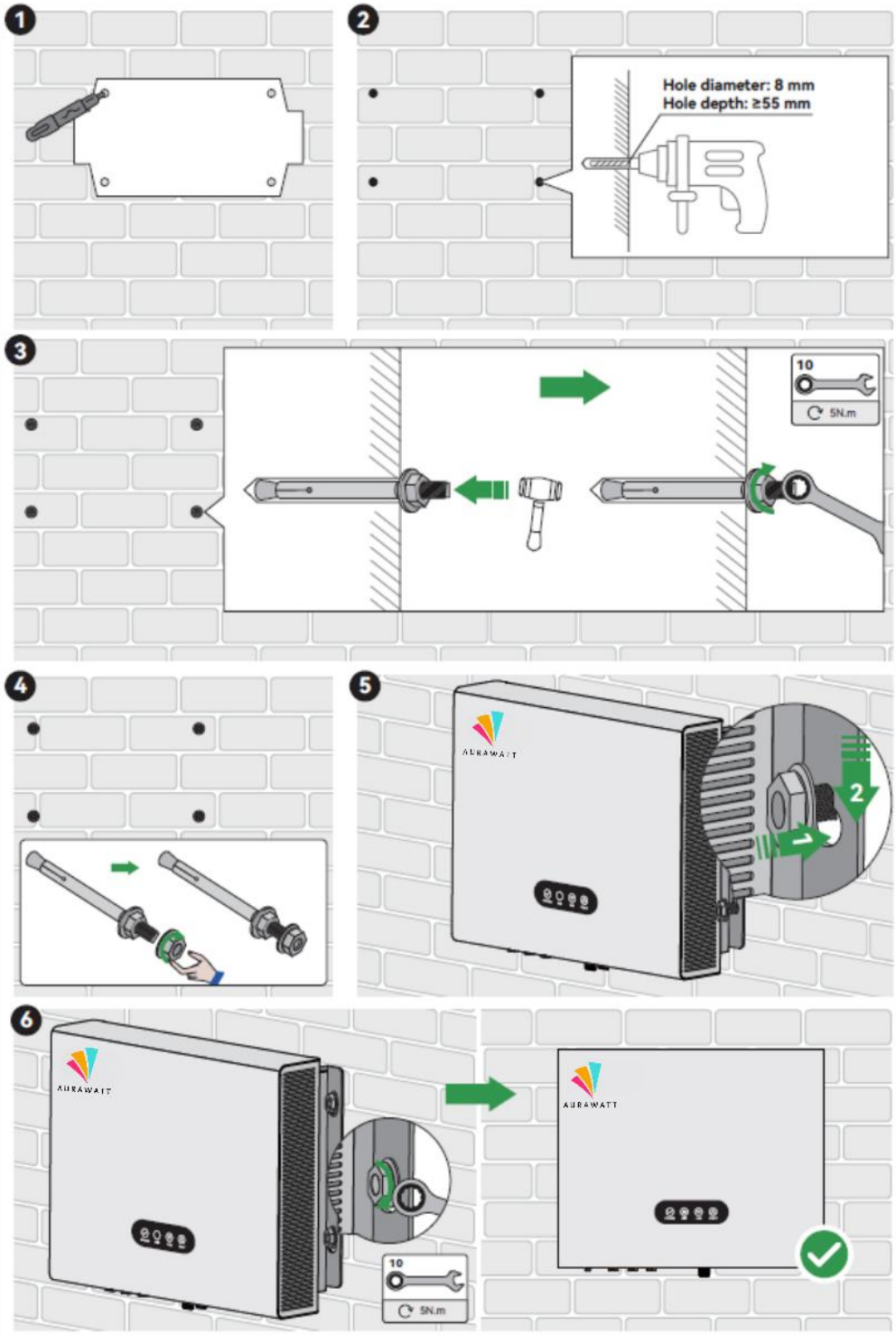
- Wear goggles and a dust mask when drilling.
- Ensure the inverter is securely mounted to prevent falling.

Installation Steps:

1. Punch mounting holes in the wall (use the cardboard template from the package accessory box for positioning).
2. Install expansion screws into the wall.
3. Install non-slip big-end flange nuts onto the expansion screws.

4. Pre-lock the flange nut (hand-tightening).
5. Install the machine (hang using the hoist holes on the expansion bolts, positioning the machine between the flange nut and the hex nut).
6. Tighten the flange nut to secure the machine (torque: **5 N.M**).

Inverter Installation Diagram:

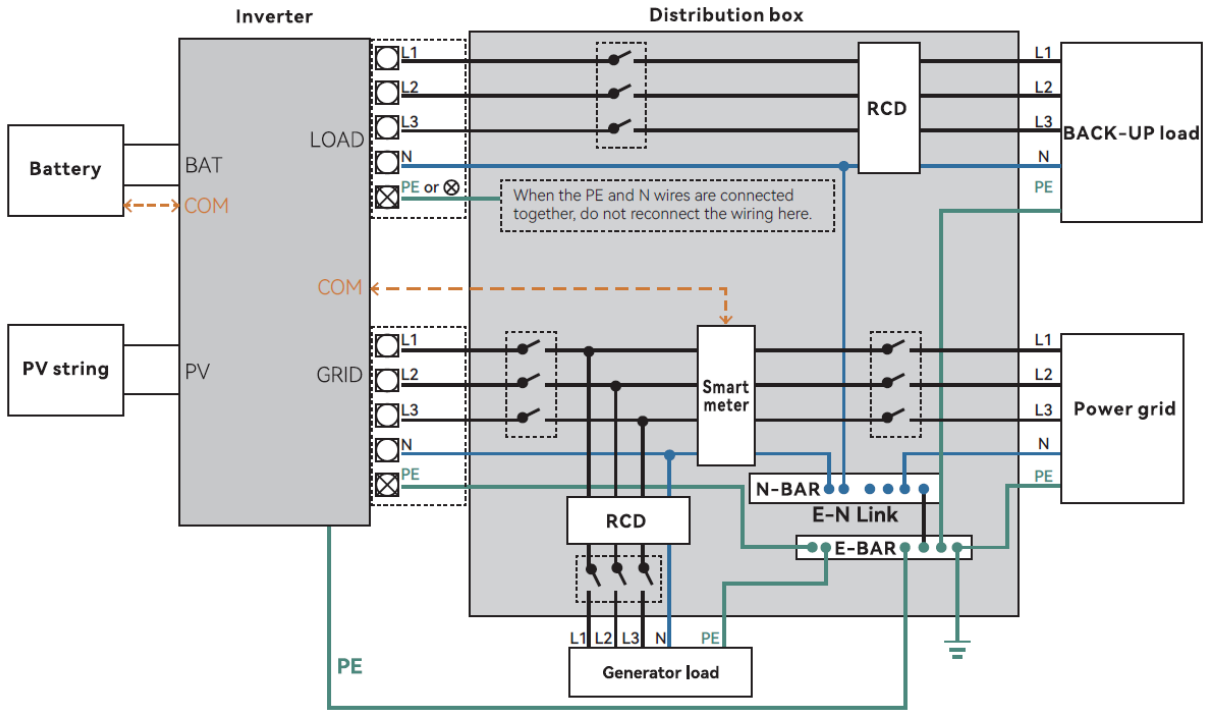


6. Electrical Connection

6.1 System Wiring Block Diagram

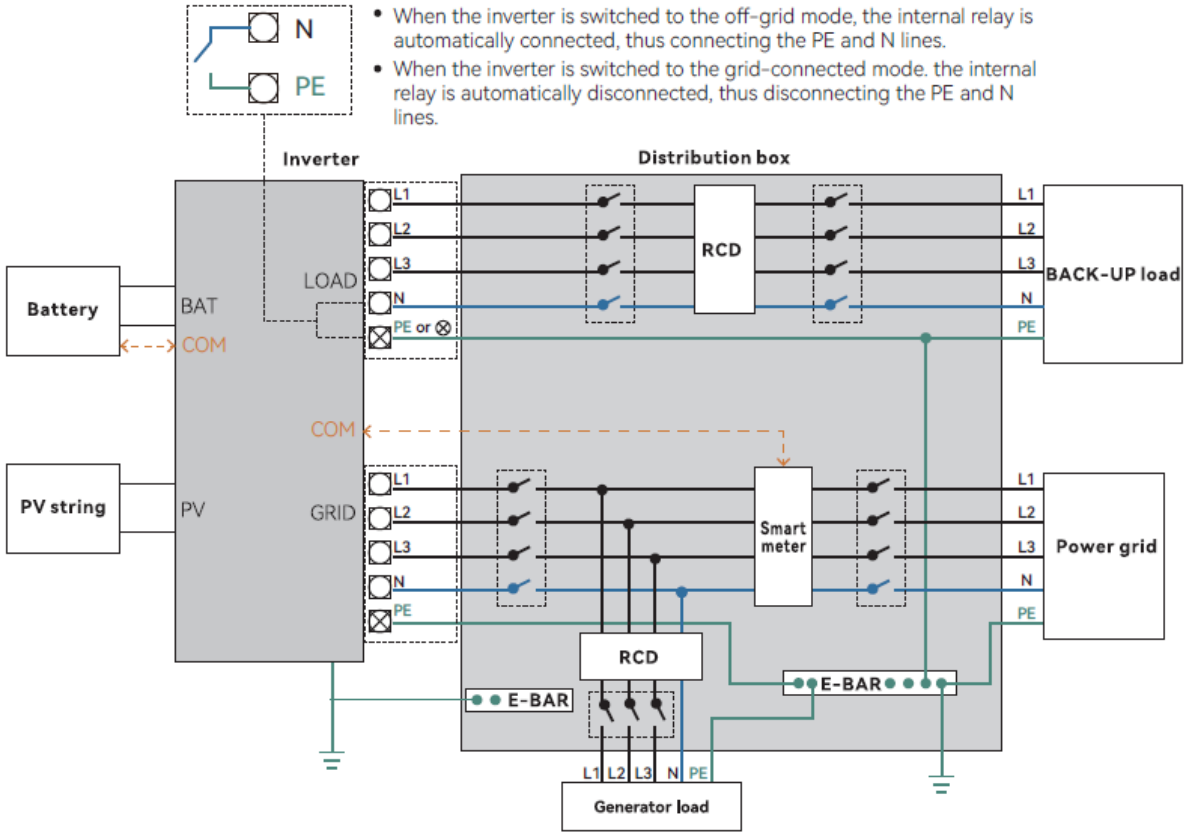
- Wiring (N and PE) must comply with local regulatory requirements.
- The GRID and LOAD AC ports have built-in relays.
    - Off-grid mode: ON-GRID relay is open.
    - Grid-connected mode: ON-GRID relay is closed.
- **Danger:** When the inverter is powered up, the LOAD AC port is energized. Power down the inverter before maintenance on BACK-UP loads to avoid electric shock.

Wiring Diagram: N and PE Wires Connected Together



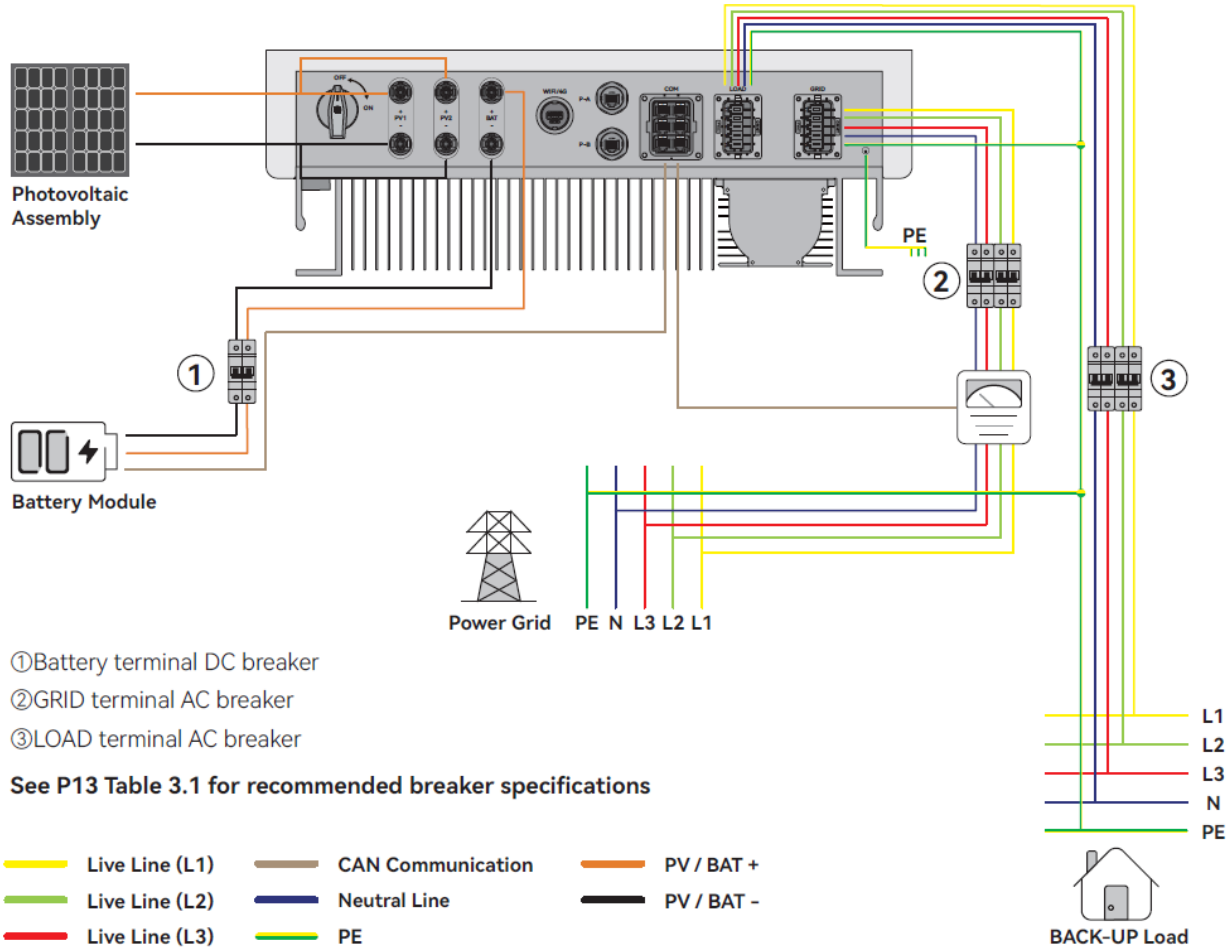
Note: "L" and "N" cannot be reversed.

Wiring Diagram: N and PE Wires Connected Separately

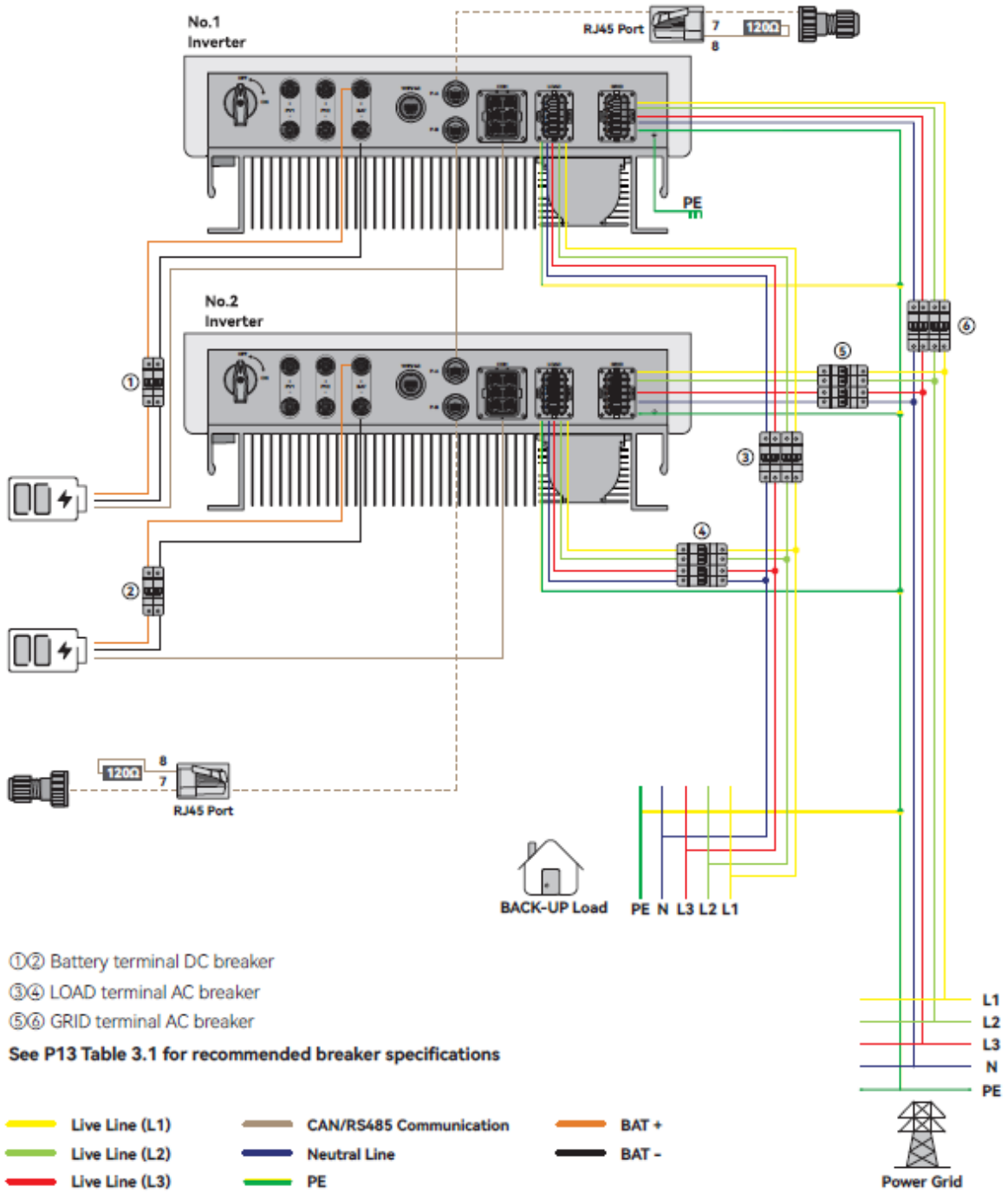


- Make sure the protective ground wire of LOAD is connected correctly and tightly.

Electrical Wiring Diagram for Stand-alone Applications:



Electrical Wiring Diagrams for Parallel Applications:



Attention: The communication cable length between parallel Hybrid Inverters must be controlled within **1.5m** to avoid unstable parallel communication.

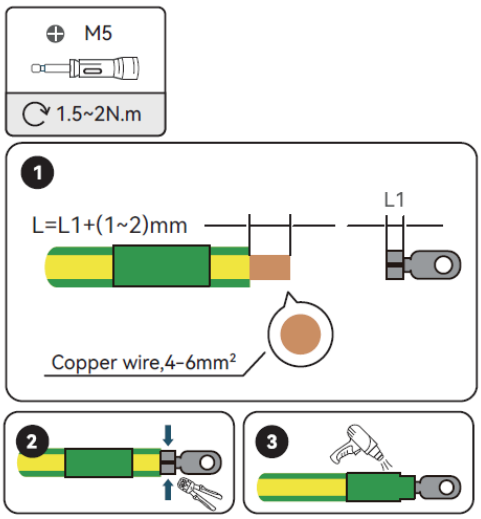
6.2 Safety Precautions

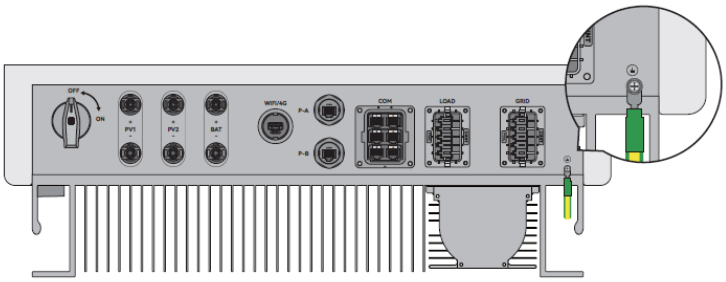
- All operations, cables, and components must comply with local laws and regulations.
- Before electrical connections, disconnect the DC switch and AC output switch to ensure the equipment is **powered off**. Operation with electricity is strictly prohibited.
- Similar types of cables should be tied together and arranged separately from different types of cables; entanglement is prohibited.
- Reserve adequate cable length before connecting to avoid too much tension.
- When crimping terminals, the conductor part of the cable must be in full contact with the terminals; do not crimp the insulating skin.
- Wear personal protective equipment (PPE) such as safety shoes and insulated gloves.

6.3 Connecting Protective Ground Wires

- The protective ground of the chassis enclosure must not replace the protective ground of the AC output port. Ensure both protective grounds are reliably connected.
- If using multiple inverters, ensure the protective ground points of all chassis enclosures are equipotential connected.
- *Recommended Protective Ground Specifications:* Type: outdoor multi-core copper cable; Conductor cross-sectional area: **4-6 mm^2**.
- After installation, it is recommended to apply silicone or paint to the outside of the ground terminal to improve corrosion resistance.

Protective Ground Wiring Diagram:





6.4 Connecting AC Cables

- It is prohibited to connect a load directly between the inverter and the AC switch.

- The inverter integrates a residual current detection function. You may choose to install RCD equipment based on local laws. The inverter can be connected to a **Type A RCD**.
- AC cables must exactly match the “L1”, “L2”, “L3”, “N” and “PE” ports of the AC terminal. Incorrect connection will lead to equipment damage.
- A 5-core cable is recommended. Size for connecting to the grid and critical loads should be **AWG12-10 / 4-6mm^2**.
- Ensure the cable core is fully inserted into the terminal lugs and is not exposed. Ensure cables are tightly secured with fastening screws to prevent overheating.

6.5 Connecting The DC Input Cable (PV)

- **Warning:** Do not connect the same PV string to more than one inverter.
- Before connection, ensure:
    1. Maximum short-circuit current and maximum input voltage of each MPPT are within the inverter's allowable range.
    2. Positive terminal (PV+) connects to PV+; Negative terminal (PV-) connects to PV-.
- Cable size for PV terminals should be **AWG12-10 / 4-6mm^2**.
- The PV string output does not support grounding.
- The minimum insulation resistance to ground of the PV string must be **50 KΩ**.

6.6 Connecting Battery Cables

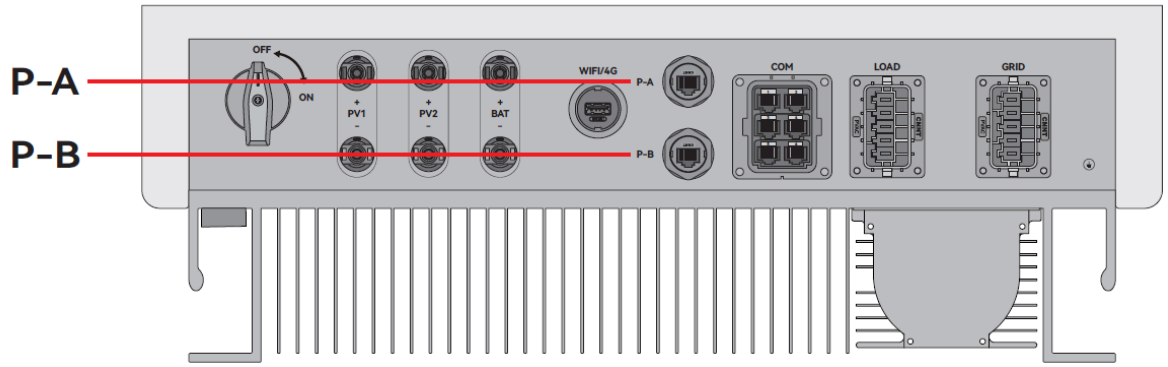
- **Caution:** Batteries must be approved by the manufacturer.
- A short-circuited battery may cause personal injury or fire due to instantaneous high current.
- Before connection, ensure the inverter and batteries are disconnected from the power supply.
- Connecting or disconnecting battery cables while the inverter is running is prohibited.
- **Do not connect the same battery pack to more than one inverter**.
- Use insulated tools.
- Ensure the battery open circuit voltage is within the allowable range.
- A **DC breaker is required** between the inverter and the battery.
- Battery cables must match the “BAT+”, “BAT-”, and ground ports exactly.
- Cable size for battery terminals should be **AWG 8 / 8mm^2**.

6.7 Communication Connection

Cable routing should avoid interference sources and power lines.

6.7.1 Communication Port (Parallel Terminal)

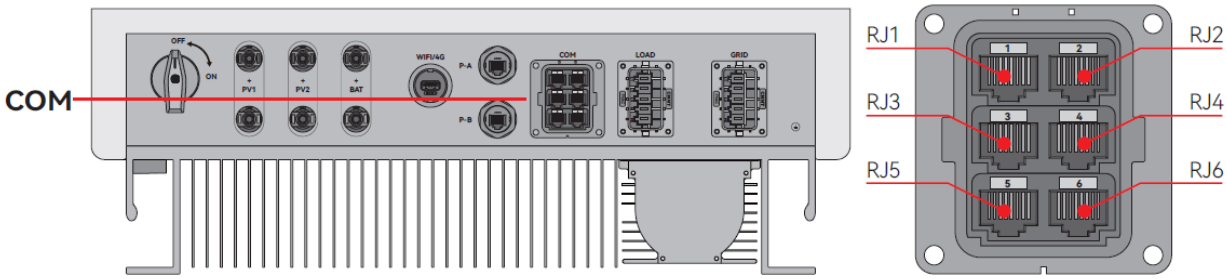
The P-A and P-B ports use RJ45 terminals. **Parallel Port Location:**



The terminal pins are used for synchronization signals and RS485/CAN communication between parallel machines.

6.7.2 COM Communication Terminal

The COM terminal includes ports for dry contacts, battery BMS_485, PC_485, CT, Smart meter_485, and DRM signal. **COM Terminal Location:**



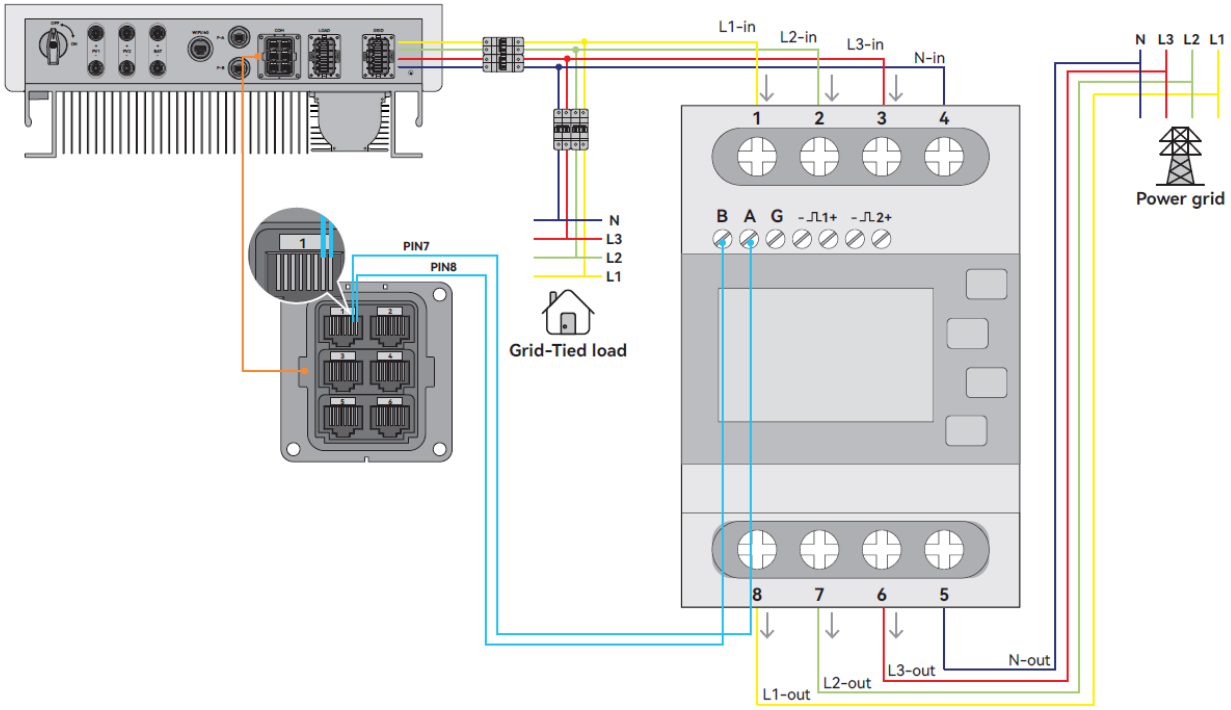
RJ1 (CT/Smart Meter): Used for External CT access (IctR+, IctR-, etc.) and Smart Meter connection (Meter_485_A, Meter_485_B).

- **RJ2 (BMS):** Lithium battery communication port, defaults to CAN communication. Pin 4 is BMS_485_B (CANL-); Pin 5 is BMS_485_A (CANL+).
- **RJ3 (PC_485):** Used to connect to the upper computer.
- **RJ4 (Dry Contacts):** Includes COMM_NC, COMM, COMM_ON (control dry contacts) and DI-, DI+ (input/output reserved signals).
- **RJ5 (DRM):** Australian safety regulation use.
- **RJ6:** Reserved Interface.

6.7.3 Smart Meter Circuit Connection:

The meter supports three-phase three-wire or four-wire. When using three-phase four-wire, the meter connects between the inverter and the grid.

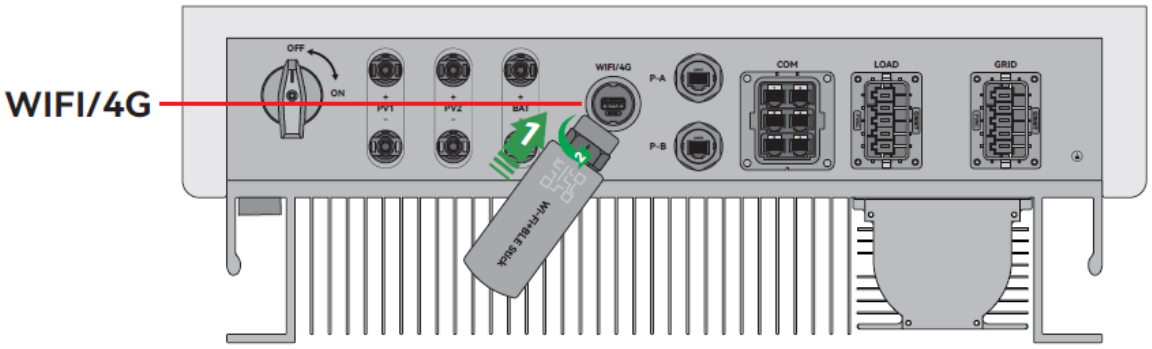
Smart Meter Wiring Diagram:



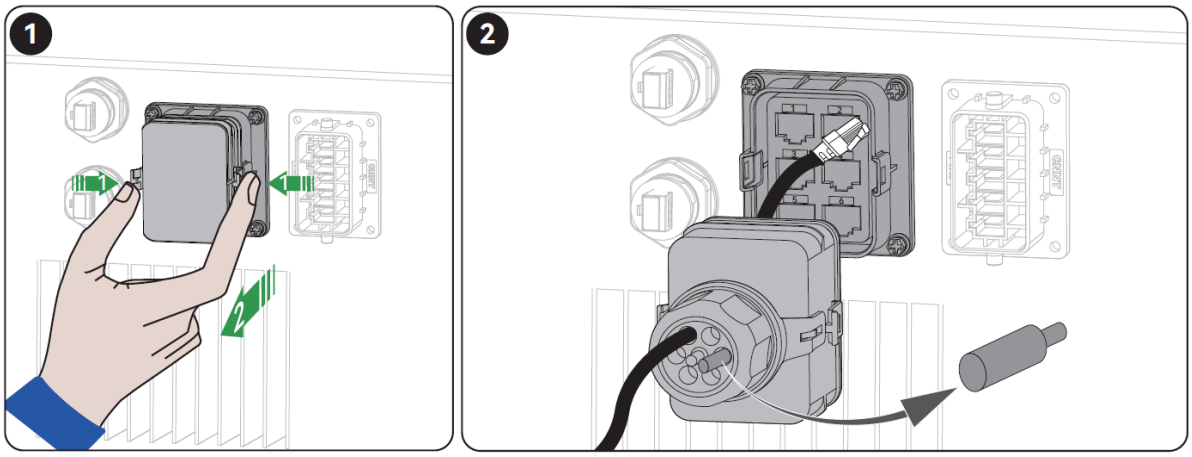
6.7.4 Installation of WIFI Communication Modules

Plug the supplied communication module into the WIFI/GPRS port of the inverter. This supports setting parameters via WiFi and connecting to the cloud via WiFi/4G for monitoring.

WIFI/4G Module Installation Diagram:



6.7.5 Installation of COM Communication Terminal Modules



7. Equipment Test Run

7.1 Check Before Power-up

Before starting, ensure:

1. The inverter is firmly installed, with sufficient space for ventilation/heat dissipation.
2. Protective ground, DC input, AC output, and communication lines are connected correctly and securely.
3. Cables meet alignment requirements and are not damaged.
4. A waterproof cover is installed for unused wire holes; used crossing holes are sealed.
5. The on-grid access point voltage and frequency meet requirements.
6. PV+/PV- wires are secure, polarized correctly, and voltage is in line with the accessible range.
7. BAT+/BAT- wires are secure, polarized correctly, and voltage is within the accessible range.

7.2 Equipment Power-up

1. Close the inverter **LOAD AC circuit breaker**.
2. Close the **DC breaker** between the inverter and the battery.
3. Close the **PV switch** of the inverter.
4. Close the inverter **GRID AC breaker**. *Note: If the inverter must be turned on without utility power, the GRID AC circuit breaker needs to be disconnected before turning on the inverter.*

8. App Download and System Setup

Please scan the QR code (not provided in sources) to enter the App download interface.

9. System Maintenance

9.1 Power Down of Inverter

Warning: Disconnect the inverter from the power supply during maintenance. Wait until the equipment is fully discharged according to the labelling time (5 minutes).
Power Down Steps:

1. Disconnect the inverter **GRID AC breaker**.
2. Disconnect the inverter **LOAD AC breaker**.
3. Disconnect the **DC breaker** between the inverter and the battery.
4. Disconnect the **PV switch** of the inverter.

9.2 Removal of Inverter

Ensure the AC and DC sides are not charged. Wait **5 minutes** after disconnecting the DC side. **Removal Steps**:

1. Disconnect all electrical connections (DC, AC, communication wires, module, ground).
2. Remove the inverter from the expansion screws.
3. Store the inverter properly, meeting storage conditions.

9.3 Scrapping of Inverter

If the inverter must be scrapped, dispose of it in accordance with the electrical waste disposal requirements of local regulations. **Do not dispose of it as household waste**.

9.4 Fault Removal

If troubleshooting methods fail, contact the after-sales service center. Collect information such as serial number, software version, installation time, fault time/frequency, installation environment, and grid state.

Common Fault	Fault Name	Solution Measures
1	Inverter short circuit	Check if total load power is within range or if AC side line has short circuits. Disconnect all power supplies, wait for discharge, and restart.

2	Inverter over-temperature	Check ventilation/ambient temperature. Improve ventilation/heat dissipation conditions if necessary.
4	Grid effective value over current	If temporary, the equipment resumes automatically. If frequent, check if grid voltage/frequency is within range; contact local power operator if needed.
7, 8	Grid over/under voltage	Check if grid parameters are within allowable range. If not, contact local power operator.
11	Zero earth voltage fault	Check if the protective ground wire is connected properly. If connected to a TN grid, check the N wire connection and voltage to ground.
12	Island fault	If frequent, check if there is phase abnormality in the grid; contact local power operator.
13-16	Leakage current exceeding standard	Check whether the insulation impedance of the PV string to ground is too low. Check if wiring is normal.
18	Output overload alarm	Check if the total load power is within the allowable range or if the AC side line has short circuits.
24	No-PV alarm	Check PV cable wiring for looseness, breakage, or short circuits.
25	Insulation impedance fault	Check PV array output to protective ground impedance. Check for low impedance due to humid environment.
27	PV over voltage	Check if PV module configuration meets allowable operating voltage range.
28	Battery not-connection fault	Check if PV cable wiring is normal and whether there is looseness.
34	Meter or CT reverse connection	Check and correct the meter or CT wiring sequence.

9.5 Regular Maintenance

Wait **5 minutes** after disconnecting the DC side to ensure the capacitor is discharged before maintenance. Wear PPE.

Maintenance Content	Maintenance Method	Maintenance Cycle
System cleaning	Check the heat sink, air inlet/outlet for foreign objects and dust.	1 time / half a year - 1 time / year

DC switch	Ensure proper function by turning it on and off 10 times in a row.	1 time / year
Electrical connections	Check for loose connections, cable damage, and copper leakage.	1 time / half a year - 1 time / year
Sealing performance	Check whether the sealing of the equipment inlet hole meets requirements.	1 time / year

10. Maintenance and Warranty Contact Information

(The manufacturer of the sourced manual is AVAV Business Consulting Pvt. Ltd.)

- **Company Name:** AVAV BUSINESS CONSULTING PVT. LTD.
- **Department:** Technical Support
- **Address:** A-109Y, Sector 80, Noida, Uttar Pradesh, 201305
- **Phone Number:** +91 9311920642, +91 9311920645
- **Email Address:** service@avavbusiness.com
- **Website:** www.aurawatt.in

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