

Solinteg C&I Solution

Hybrid Inverter M2HT 75-125K Series

 www.solinteg.com

V1.1
Date: 17.03.2026



CONTENTS

1

ADVANTAGES

2

SCENARIOS

3

INSTALLATION

4

COMMISSIONING

SOLINTEG

01

Advantages

SOLINTEG

M2HT 75-125K Unique Selling Points

MPPT + PCS + STS + EMS + Meter

5 in 1

Ultra-Wide Battery Voltage

300-950V

More than Full Backup Power

165kVA @ 10s

Battery Charge&Discharge

150A/300A

Scale up to MW Energy Storage

125K X 8

Reliable Even in Weak Grid

330A Contactor

125kW



M2HT 75/80/99/100/125K



3 × CTs
Built-in Meter



R2MD Dongle
WiFi/Lan/Bluetooth 3 in1



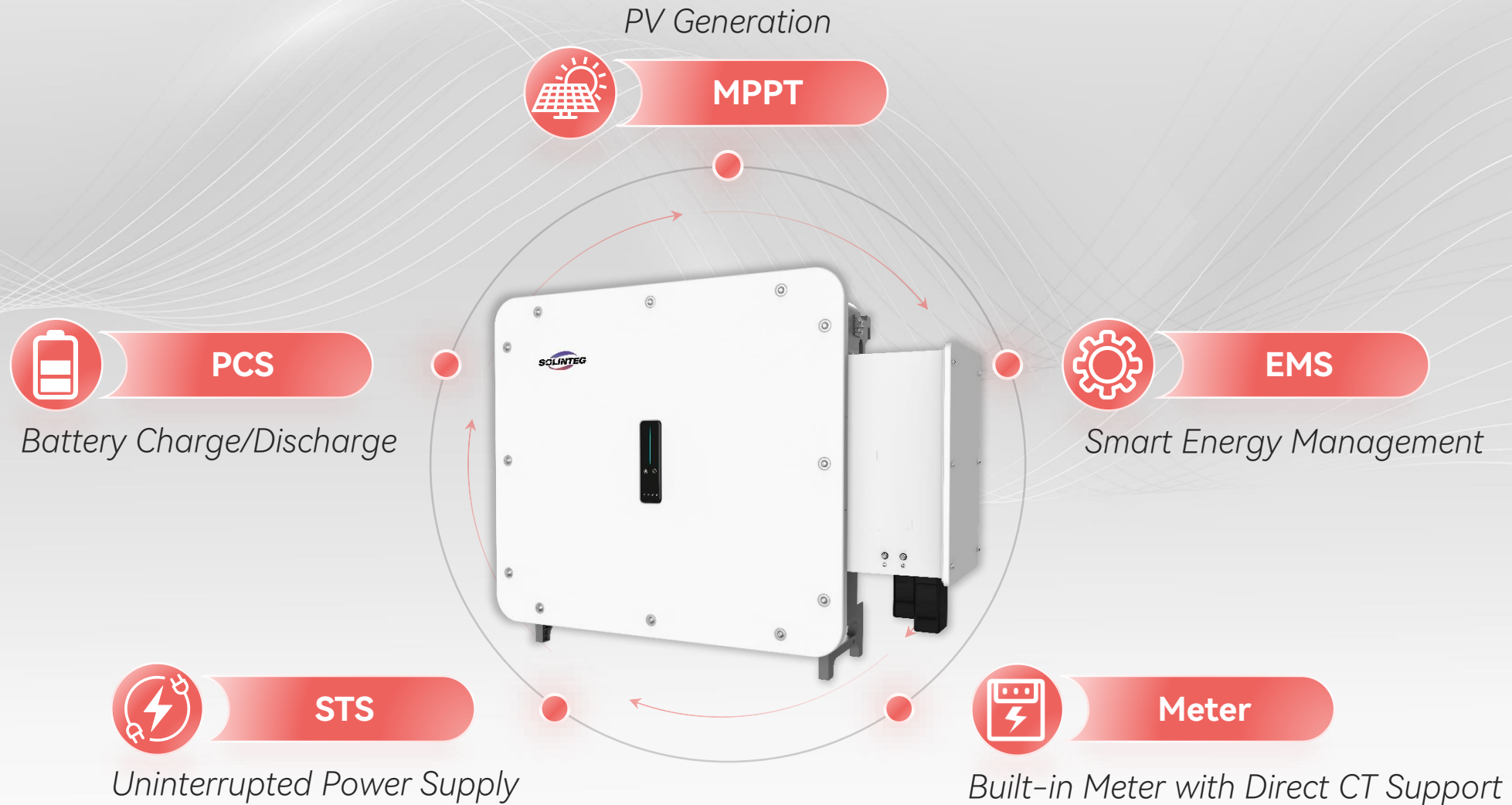
Integ OS
Solinteg Portal



Battery
Multiple Choices

SYSTEM COMPONENTS

5-in-1 Highly Integrated Energy Hub



Delivers 1 > 5 Performance

300A Ultra-High Charge & Discharge Current

30% Faster Charging

Shorten cycles, maximize arbitrage, and respond quicker to grid demands.

50% More Discharge Power

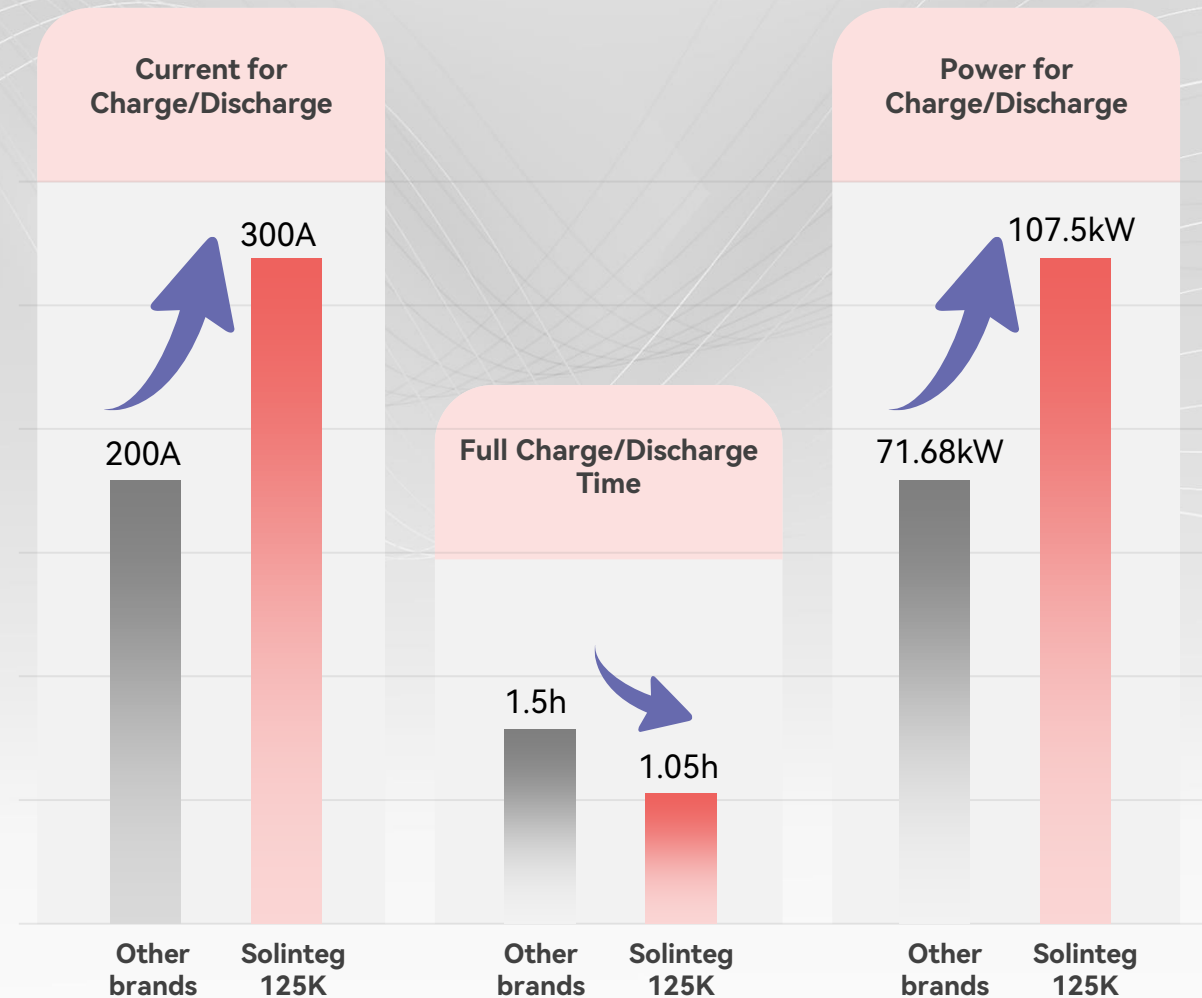
Easily power heavy-duty appliances and industrial loads during off-grid mode.

Universal Cell Ready

Optimized for 280Ah/314Ah today; fully prepared for the 625Ah+ future.

Take the battery below as an example,

- Battery cell: 314Ah
- Battery voltage: 358.4V
- Battery capacity: 112.5kWh



Ultimate 300-950V Battery Voltage Flexibility

Universal Compatibility

Industry-leading range ensures seamless integration with diverse battery architectures.

BAT Capacity	Cell	Voltage Range	Status
261 kWh	314 Ah	728-936 V	Support
232 kWh	280 Ah	754-936 V	Support
215 kWh	280 Ah	672-864 V	Support
112 kWh	314 Ah	291-409 V	Support

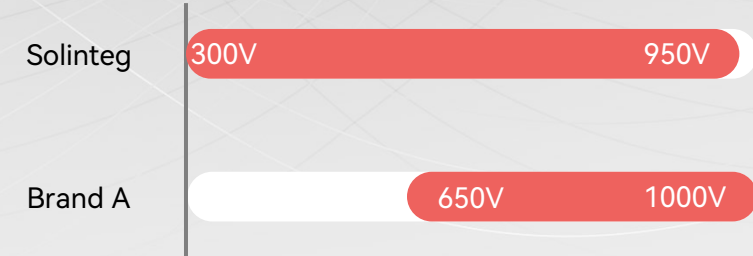


Modular Scalability:

Supports **7 - 16 packs** (51.2V / pack)

Ultra-wide Battery Voltage Range

Perfectly optimized for cost-effective Entry-Level setups and high-performance Max-Spec systems..

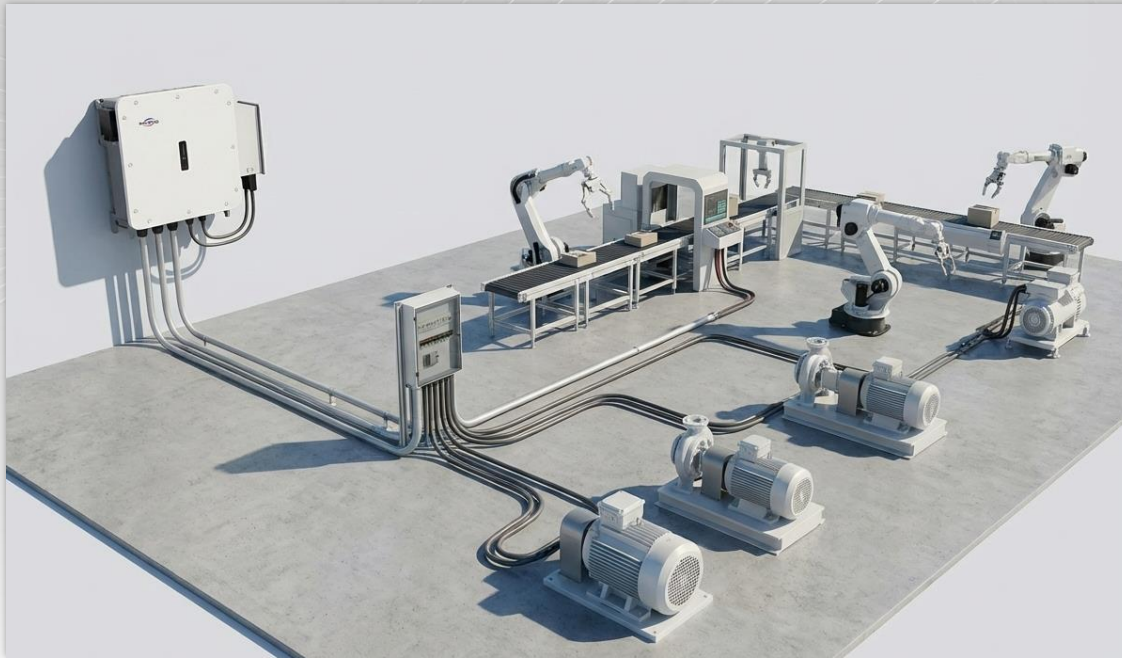


Why 950 V is the “Optimal Balance” ?

With mainstream peak voltages below 950V, 1000V claims remain purely theoretical, adding cost and complexity without practical gain.

165kVA @10s, Stable Heavy-Load Startup

Supports a 165kVA peak overload for 10 seconds, ensuring a stable off-grid startup for heavy inductive loads.



- ✓ *High-Power Induction Motors*
- ✓ *Automated Assembly Lines*
- ✓ *Compressors and Chillers*
- ✓ *Industrial Robotic Arms*

	M2HT-75K-300	M2HT-80K-300	M2HT-99K-300	M2HT-100K-300	M2HT-125K-300
Off-grid Peak Power [kVA]	165 @10S	165 @10S	165 @10S	165 @10S	165 @10S
Off-grid Peak Power [%]	220% @10S	206% @10s	167% @10S	165% @10s	132% @10S

Beyond Relays: 330A Active-Arc Contactor



270 A Relay

For other mainstream brands



Natural Arc Extinction

Slow arc quenching leads to severe contact erosion and sticking, leading to increased O&M costs.



Standard Load Capacity

Standard 270A pass through capacity for normal loads.



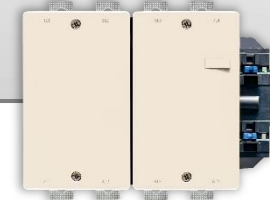
Lifetime: ~30,000 Operations

Standard reliability. Failure rate climbs sharply over time with additional O&M costs.



330 A Contactor

For Solinteg M2HT75-125K



Forced Arc Extinction

Magnetic blow-out and splitter plates quench arcs in milliseconds, preserving contacts, no O&M cost.



Heavy-duty Load Capacity

800%@10s(2650A) inrush current capacity especially for C&I loads such as motors and pumps.



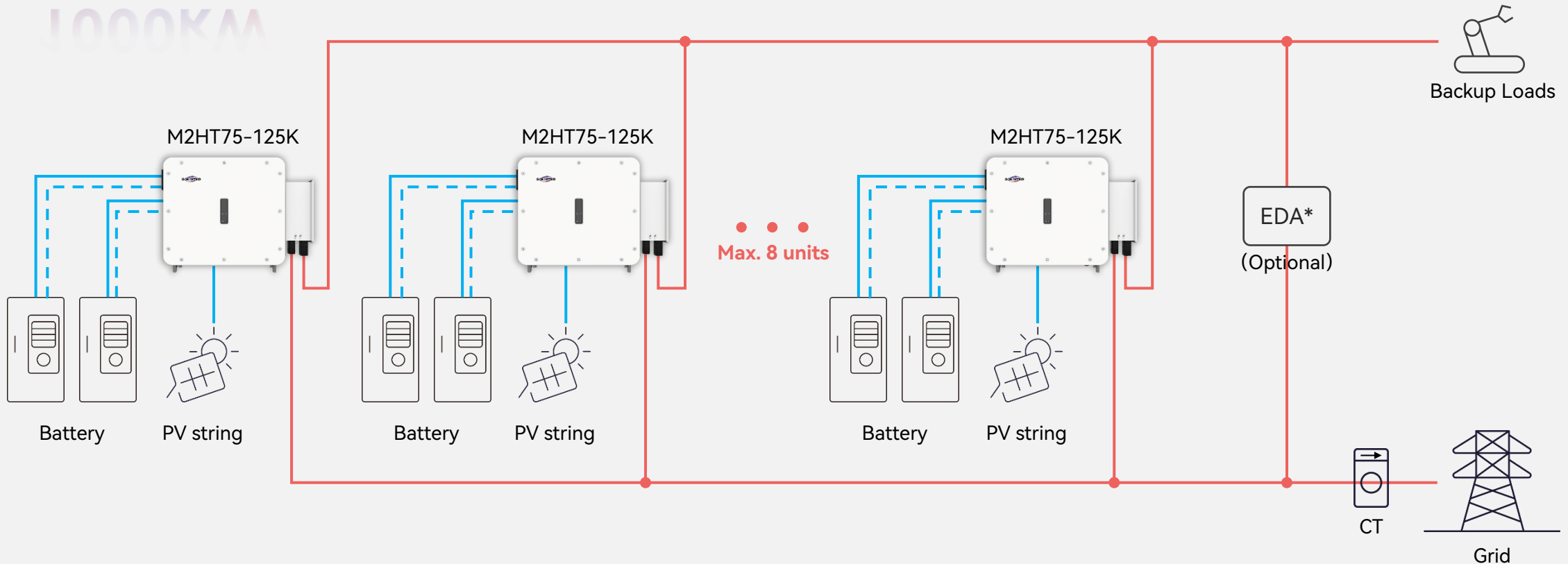
Lifetime: ~500,000 Operations

16x the lifecycle. Extremely high reliability. Zero-maintenance operational design.



MW-Level Seamless On/Off Grid Parallel

1000kW Tailored for Commercial & Industrial Projects



Max. 8 Units in Parallel

- Perfect for C&I MW-level project
- Enhanced backup power for larger industrial loads
- Suitable for on-grid/off-grid/unstable grid scenarios
- System-level energy dispatch & battery balancing

*No EDA is required for 6 units or fewer on/off-grid parallel; an additional EDA device is mandatory for 7 to 8 units on/off-grid parallel.

Other Leading Advantages

Powerful

- 200% PV oversizing for max solar use
- 6 MPPTs, PV input current up to 24A
- 100% unbalanced load support
- Two independent battery ports
- Half-wave loads adaptability
- On/off-grid switching over under 20ms

Flexible

- Compatible with 314/625Ah battery cells
- Third-party EMS & BMS Compatibility
- Supports DC and AC coupling for PV, allowing flexible system expansion and retrofiting
- OLED screen for user-friendly local operation
- Remote upgrade ensures fast updates

M2HT 75-125K



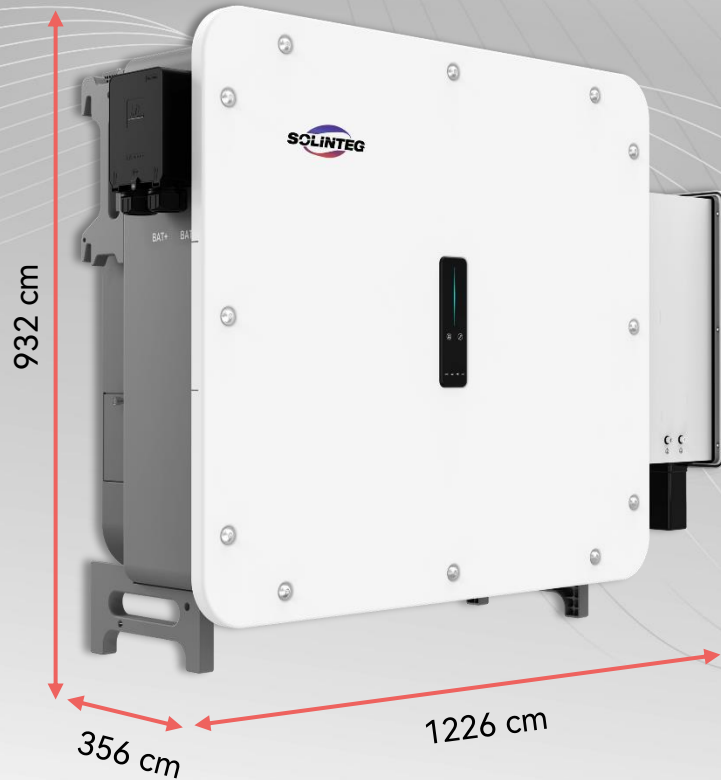
Smart

- Smart load management
- ToU with 96-periods for arbitrage
- Built-in EMS with five preset modes
- AI-Powered PV generation prediction
- Intelligent strategy for dynamic pricing
- CT phase-sequence and direction detection

Reliable

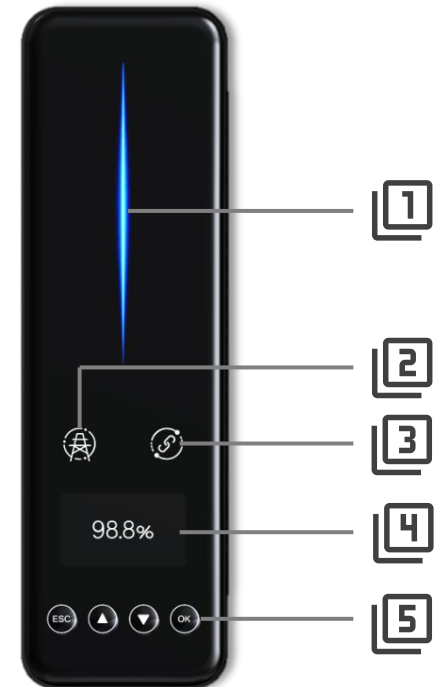
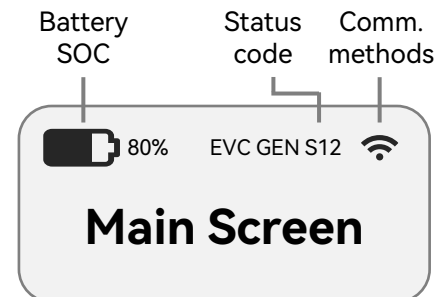
- 165kVA peak backup power @10s
- Fan auto-reverse: blows out dust
- IP66 & C4, robust for outdoor application
- 330A AC contactor for long-term reliability
- DC type I+II and AC type II surge protection
- AFCI (optional): extinguishes arcs at first spark

Intuitive Interface for Effortless Operation



Weight: 168 KG

- 1** Power & alarm indicator
- 2** Grid indicator
- 3** Communication indicator
- 4** Main screen
- 5** Buttons



6 MPPTs for Various Applications

Good Flexibility

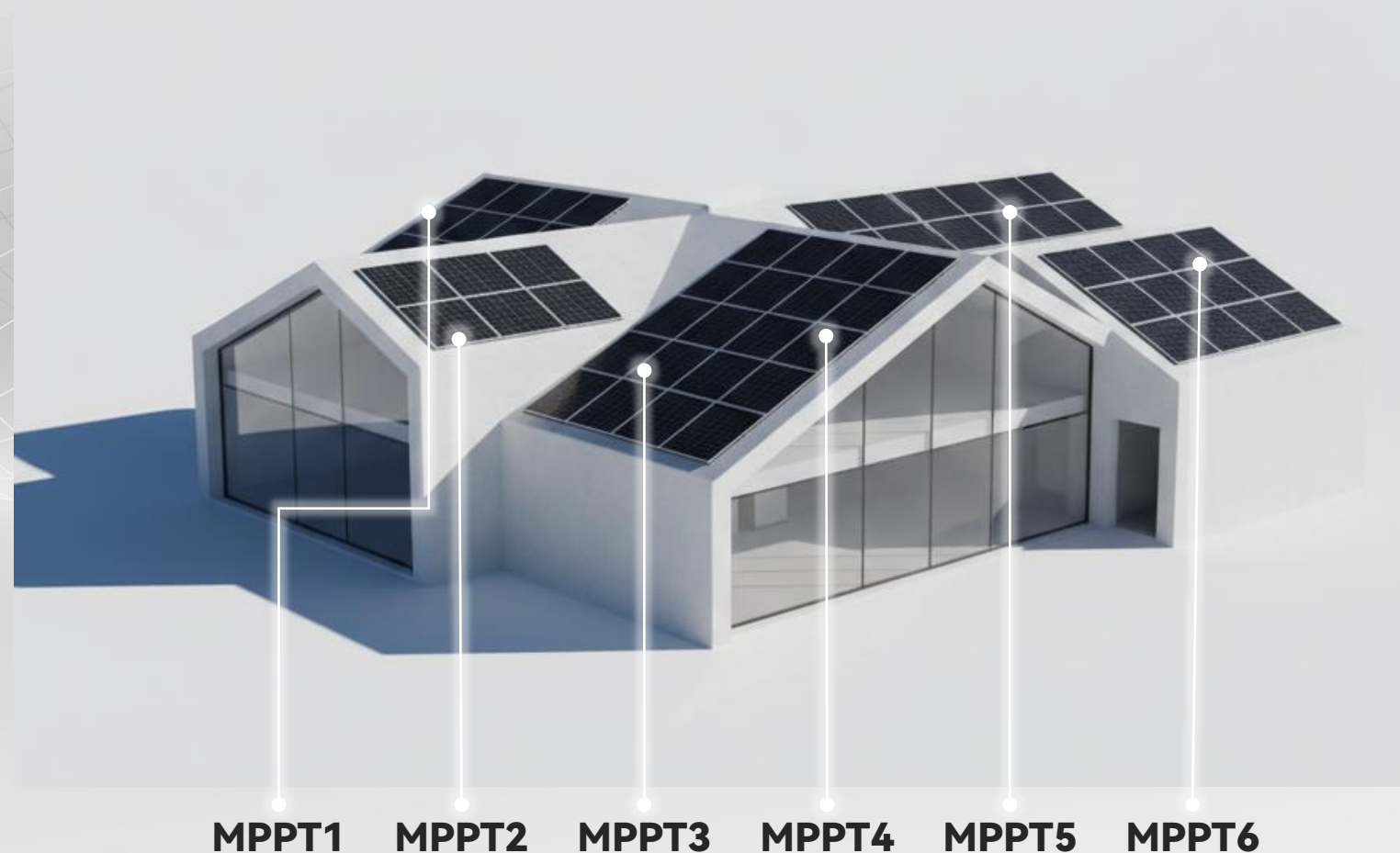
For PV modules facing different directions, it is possible to connect modules facing the same direction to the same MPPT. The use of multiple MPPTs enhances the flexibility of system design.

Excellent Applicability

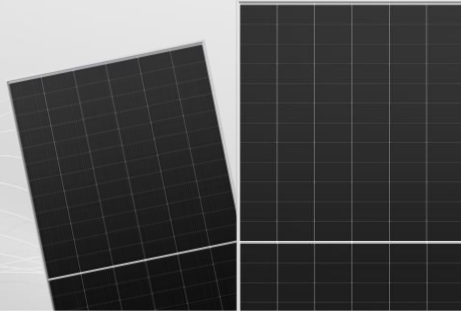
The max power point can be tracked within a wide MPPT voltage range of up to 950V. It enables the inverter to be flexibly connected to PV strings.

Efficiency Improvement

Shaded PV modules can be connected to a separate MPPT, and paired with the shadow scan function, it can enhance the overall power generation efficiency of the system.



Excellent Compatibility for PV Panels



HJT

TOPCON

IBC

HPBC

TNC

210mm

182mm

Mono

Poly

Double-glazed

Max connect PV current varies depending on the number of connected PV strings per MPPT.

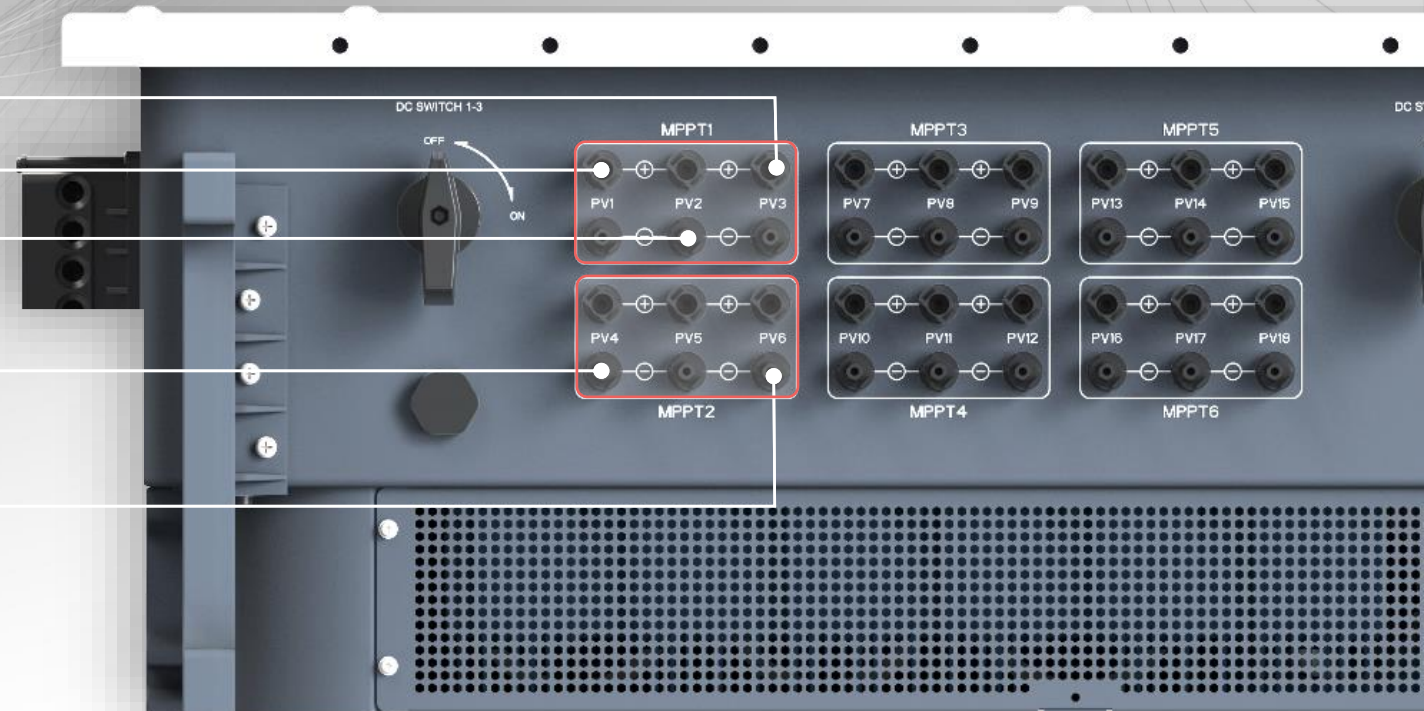
Max. 16A

Max. 16A

Max. 16A

Max. 24A

Max. 24A



Universal Battery Flexibility

300-950V Ultra-wide Voltage

Work with any integrated battery in this voltage range

Two Individual 150A Battery Ports

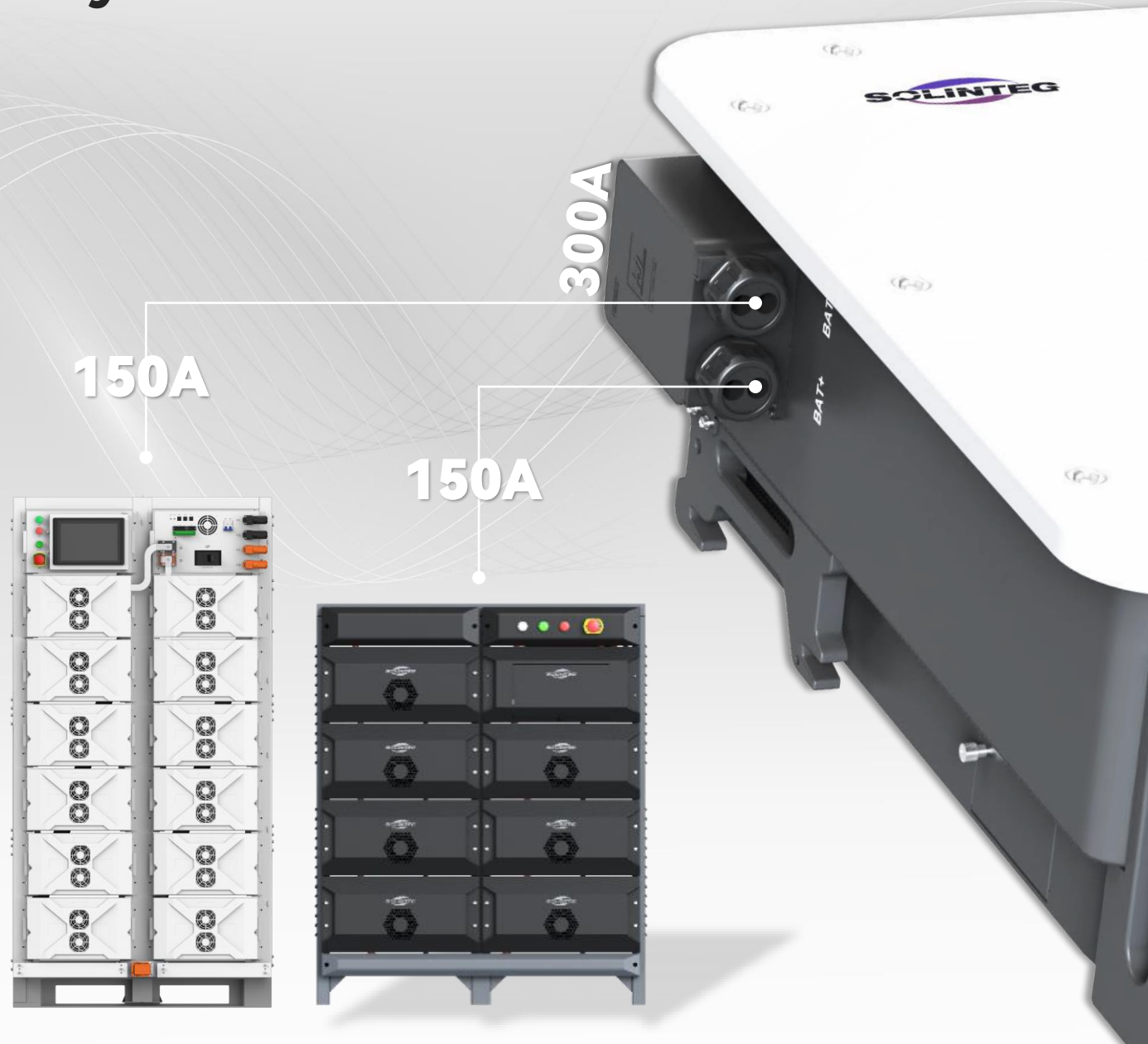
Allow different battery mixed use for cost saving or system expansion

Dual Batteries, Dual Security

One battery fails, another runs properly for energy continuity.

Battery Current Scale Up to 300A

Future-ready design, scalable to support around 600Ah battery via internal parallel connection.

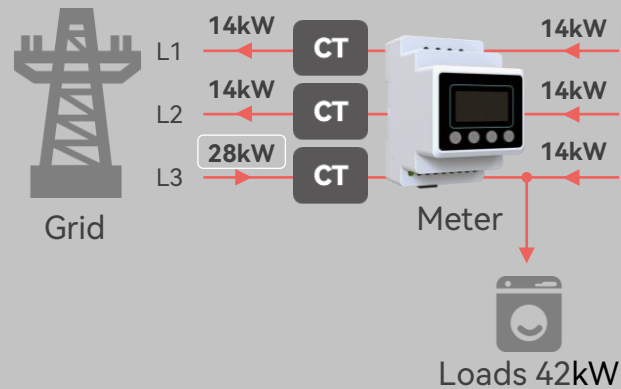


100% Unbalance Output

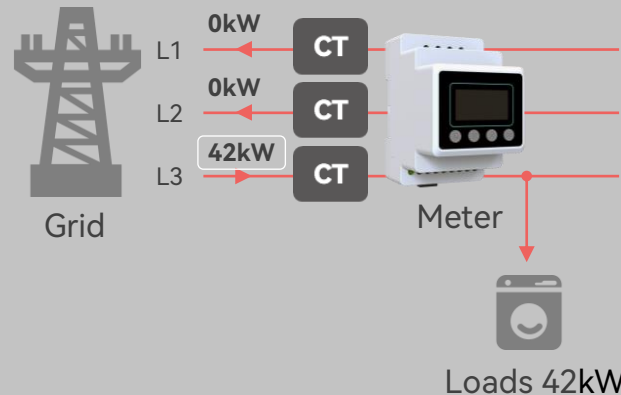
Other 125K

Phase Balanced output supported

No power export
limits condition

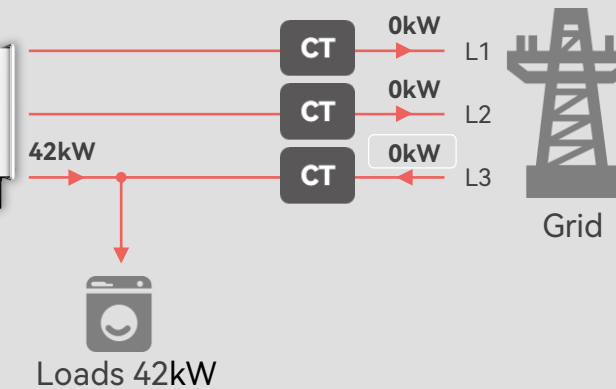


Zero feed-in
condition



M2HT 125K

Phase Unbalanced output supported



Bill Savings

Load-based power adjustment optimizes ROI.



Zero PV Waste

Minimizes PV waste under export limitations.



Smart Breaker Scaling

Accommodates high loads without upgrading breakers or increasing fixed monthly fees.

CT & Meter Direction & Phase Adaptive

Absolute Precision

100% accurate CT & Meter detection

Intelligent Adaptive*

Automatic phase & direction calibration

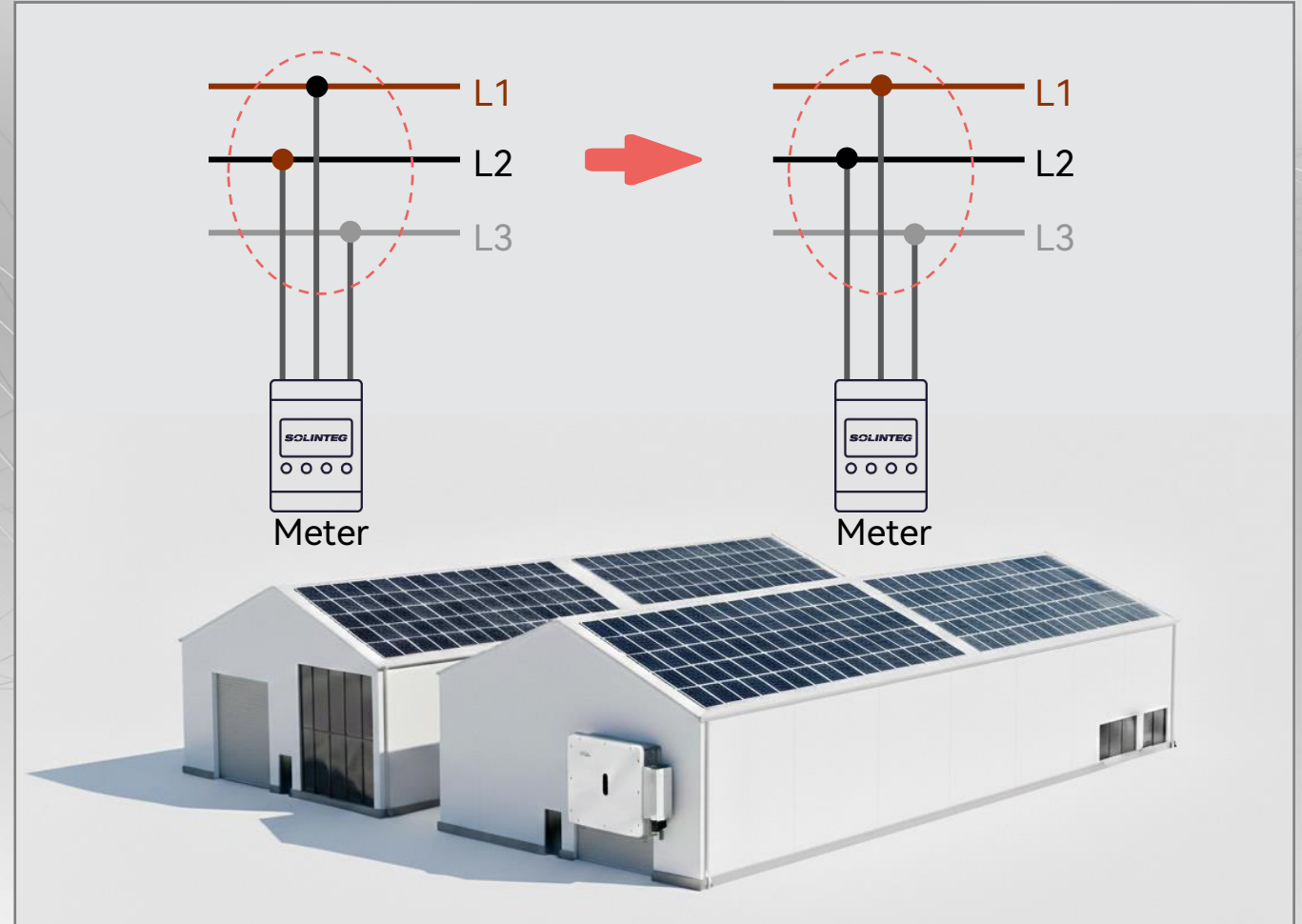
Significant Efficiency

20%-30% lower installation costs

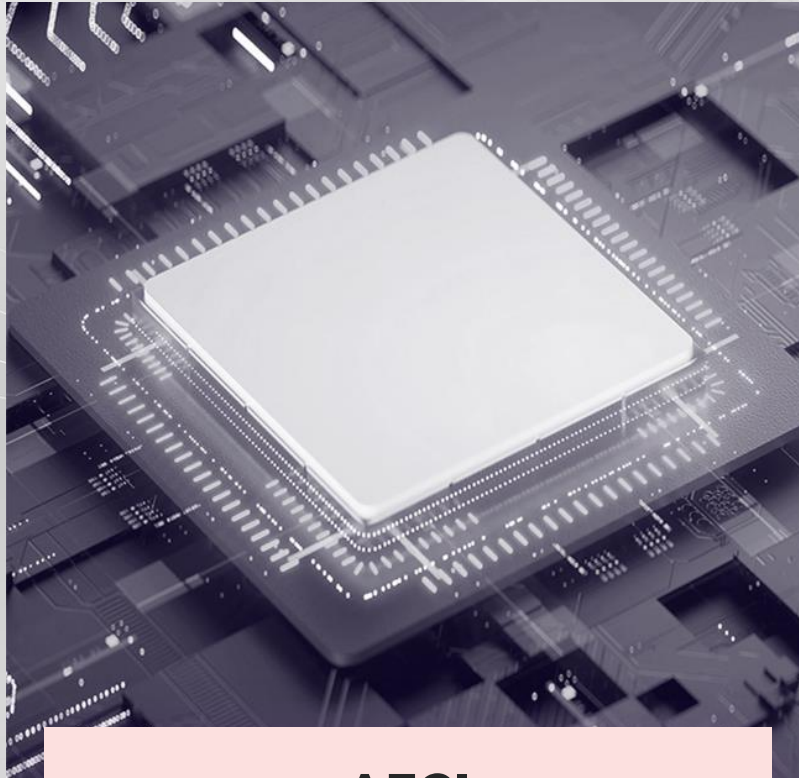
Streamlined Maintenance-free

No field troubleshooting needed

*CT & meter direction & phase adaptive function is currently in development and is scheduled for official release in early Q3 2026.



Superior manufacturing and design lead to high safety, reliable power, and exceptional durability.



AFCI

DC Arc fault protection



IP66 & C4

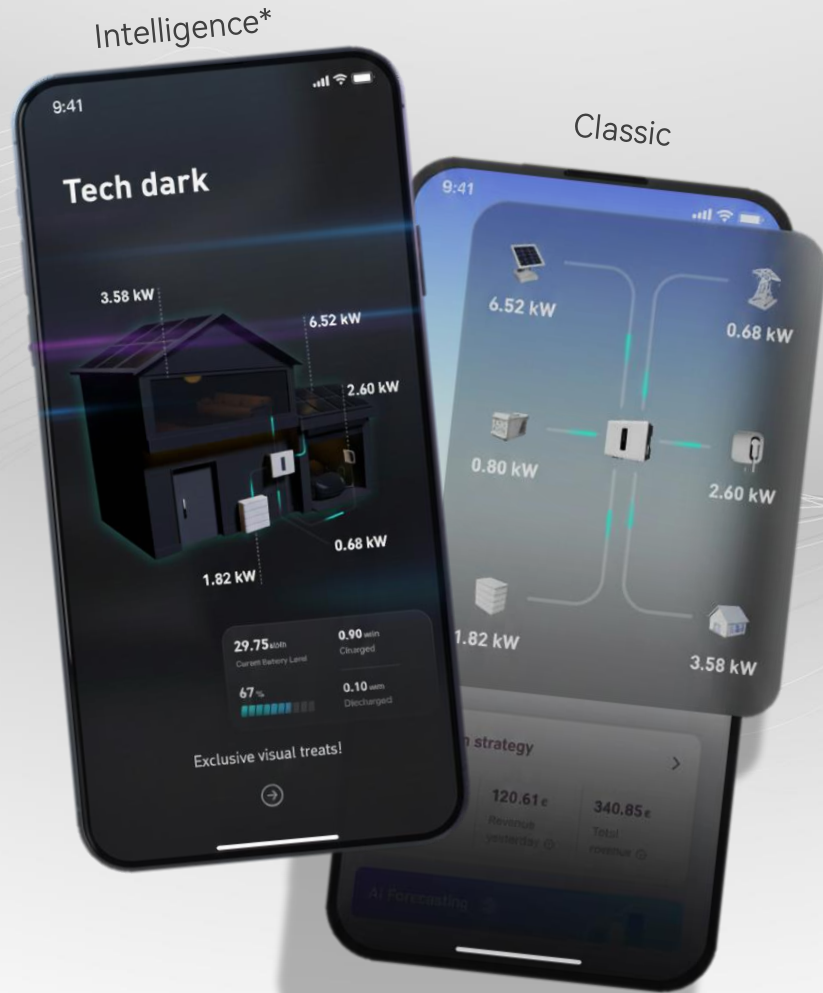
Fearless of outdoor installation



SPD PV(I+II) & AC(II)

Worry-free about bad weather

Monitoring Platform & Built-in EMS



IntegHub – Dual APP experience

5 Pre-set Modes

General Mode



Maximize self-sufficiency

Feed-in Mode



Grid feed-in priority

ToU Mode



Peak-valley arbitrage, 96 time periods

Back-up Mode



Continuous power supply when off-grid

Off-grid Mode



Self-built microgrid system

Master energy with 5 modes tailored to specific needs & grid

* The Intelligence version is currently available for end-user accounts; support for organizational accounts is under development.

All-scenario Peak Shaving

- Bill optimization by reducing the peak shaving value
- All-mode integration seamlessly
- Customizable intervals with independent peak power

Peak shaving power:

15kW -> 5kW

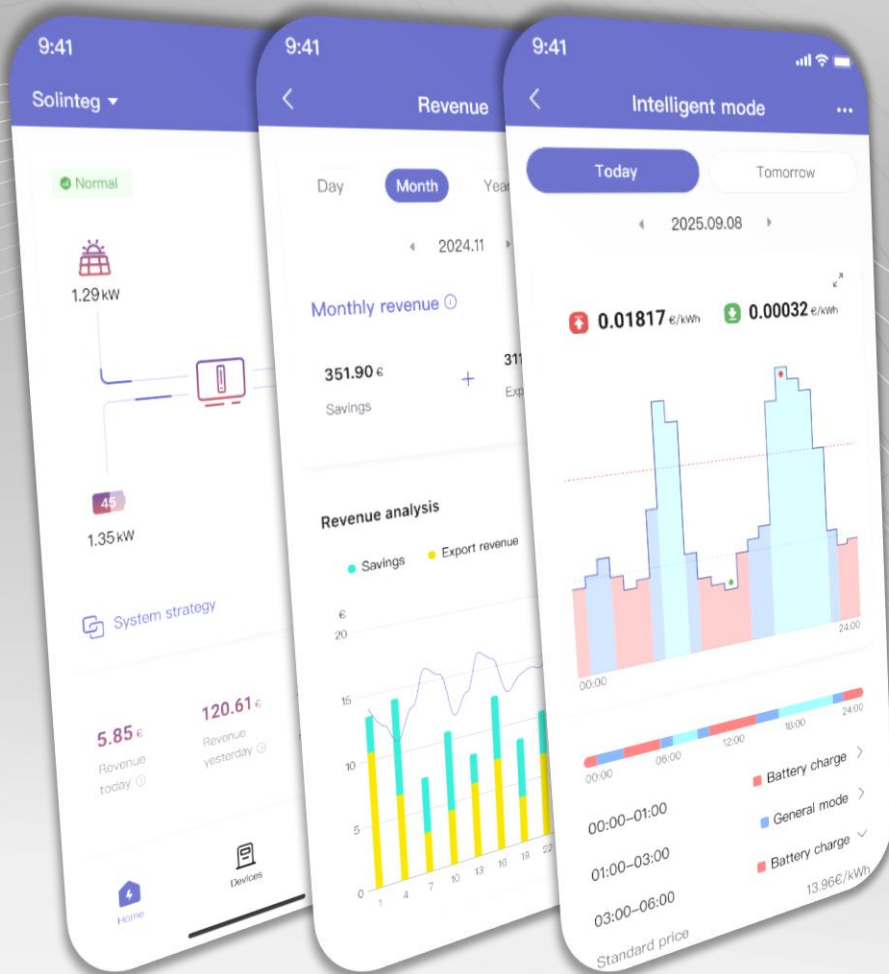
Saves:  Per month
104.72€

Sample Charge Summary for Europe

Charge Description	Amount	Rate	Cost Before	Cost Now
Usage	1000kWh	0.3€/kWh	300€	300€
Monthly Fee	1month	20€/month	20€	20€
Peak Capacity Charges	15kW	8€/kW	120€	40€
Environmental Levy		10%	44€	36€
VAT		19%	91.96€	75.24€
Total			575.96€	471.24€



Intelligent Dynamic Pricing for Arbitrage



23 Countries Covered



3 Platforms Integrated



Intelligent Dynamic Pricing for Arbitrage

Master the Volatility, Maximize the Arbitrage



3 Built-in Smart Strategies

Duration Control

Percentage Control

Fixed Price Control

2 Intervals

*15min** *60min*

Zero-Touch

100% automated energy optimization

Local Focus

Local currency & easy operation

Cost Cut

Significantly lower electricity bills

Generate returns from energy storage arbitrage

Advanced Technology

15/60min dynamic precision available

AI Power Generation Forecasting

Up to 14-day Prediction

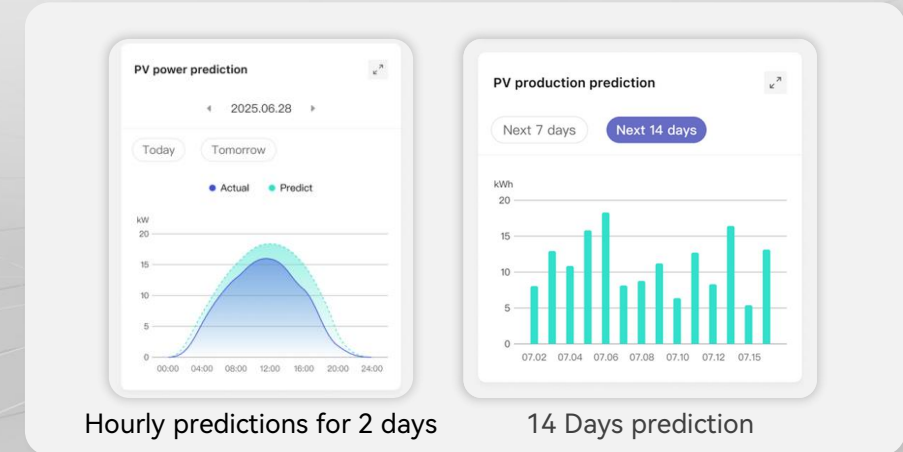
It can predict hourly generation data for today and tomorrow, as well as daily generation data for the next 14 days.

Advanced Technology Based on AI

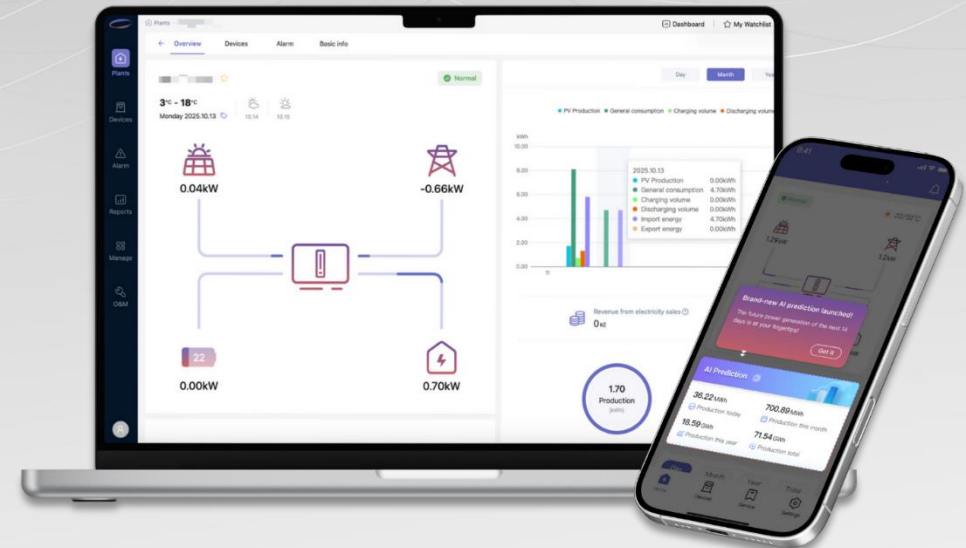
AI-powered technology, combined with weather data and the power plant's historical data, makes future power generation at your fingertips.

Empowering the Future

With power generation prediction, future energy management will be more intelligent and cost-effective.



Generation Forecasting



02

Scenarios

SOLINTEG

Application Scenarios for M2HT75-125K

1. Maximize self-sufficiency
2. Grid feed-in priority
3. Peak shaving
4. ToU price arbitrage
5. Dynamic pricing
6. VPP integration
7. External EMS dispatching
8. Smart load management
9. Unstable grid operation
10. Microgrid operation

Energy management scenarios

11. AC-coupled retrofit
12. DG* backup power integration
13. On/Off-grid parallel
14. On/Off-grid parallel + DG* solution
15. On-grid parallel

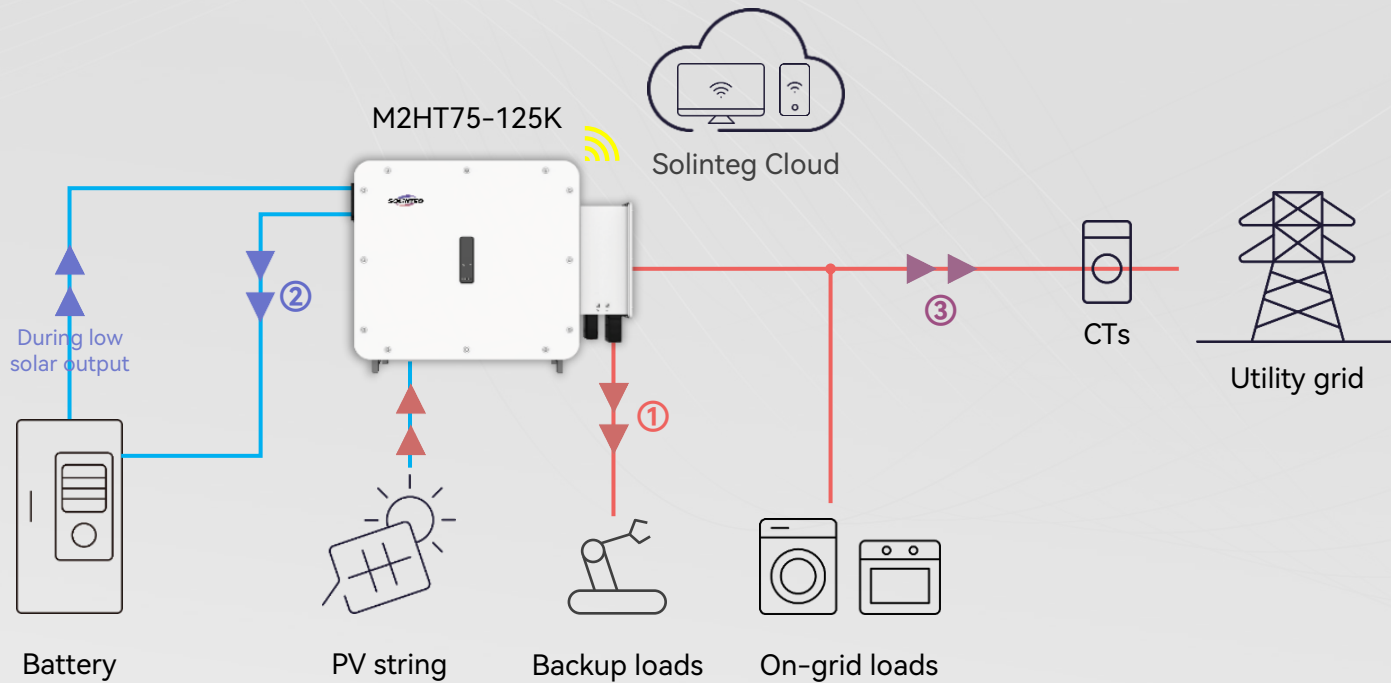
System capacity expansion



*The DG solution is currently in development and is scheduled for official release in early Q3 2026.

Energy Management Scenarios

Scenario 1: Maximize self-sufficiency



Work mode selected:

- General mode

Benefits:

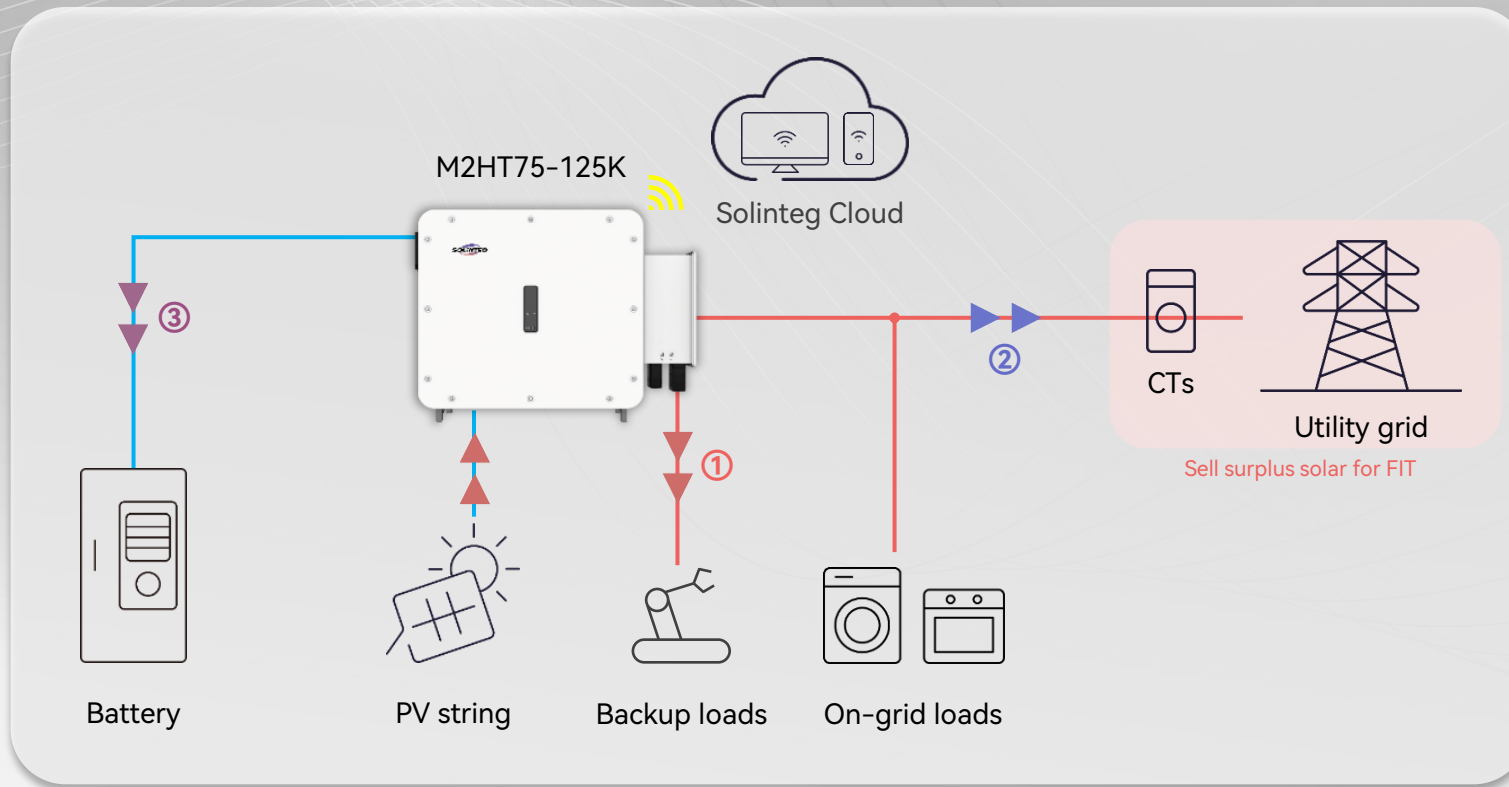
- Maximize PV usage and reduce grid reliance.
- Cut electricity bills by storing excess solar power for when you need it.

Power dispatch:

- When PV is sufficient,
Priority: loads > battery > grid(if permitted)
- When PV is not sufficient
Priority: battery discharge > grid supply

Energy Management Scenarios

Scenario 2: Grid feed-in priority



Work mode selected:

- Feed-in mode

Benefits:

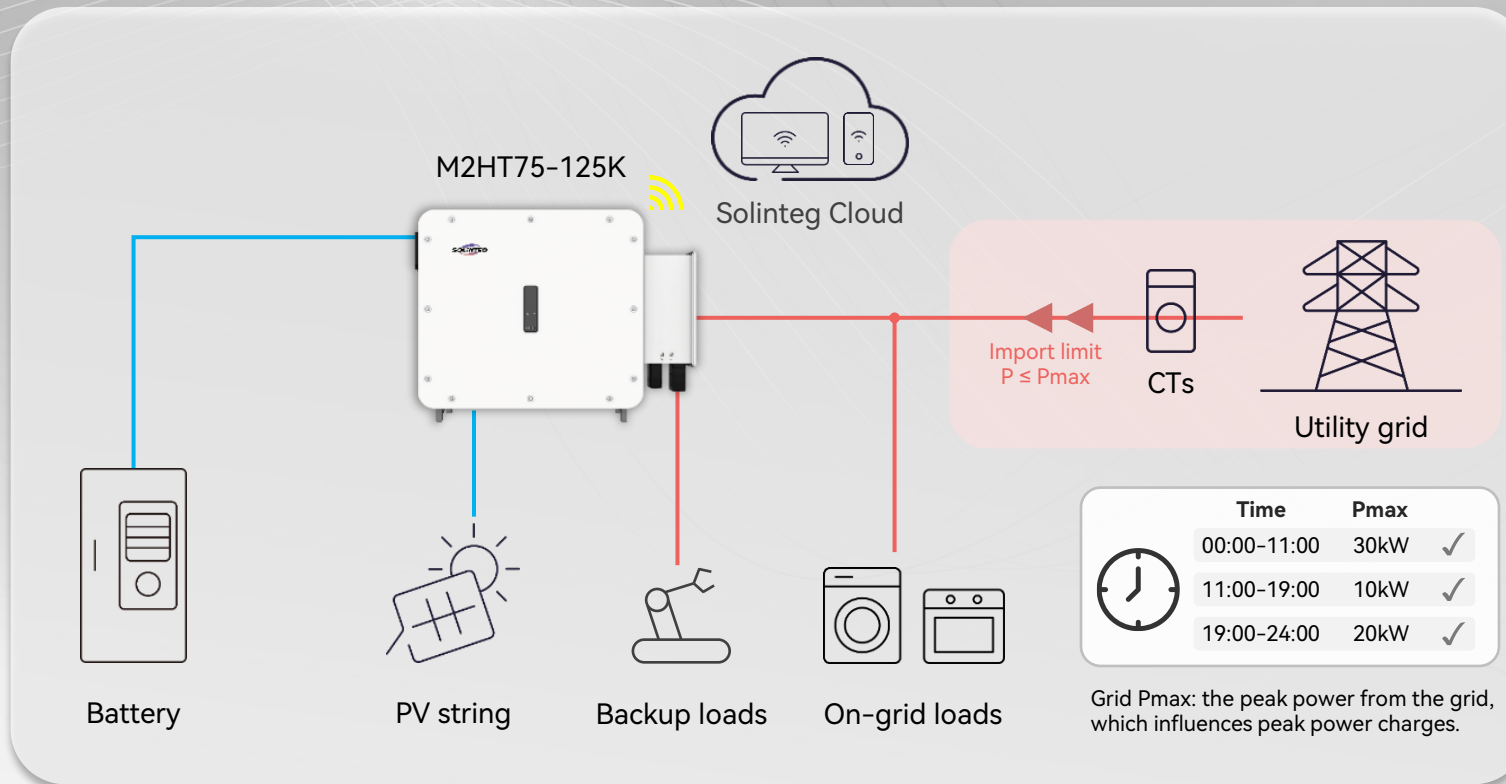
- Prioritize grid exports to capitalize on high feed-in tariffs (FIT) and accelerate ROI.
- Minimize solar energy waste by shifting charging to peak hours with %Pn export limits.

Power dispatch:

- When PV is sufficient,
Priority: loads > grid > battery
- When PV is not sufficient
Priority: battery discharge > grid supply

Energy Management Scenarios

Scenario 3: Peak shaving



Function settings:

- Turn on the “Peak shaving control” function

Benefits:

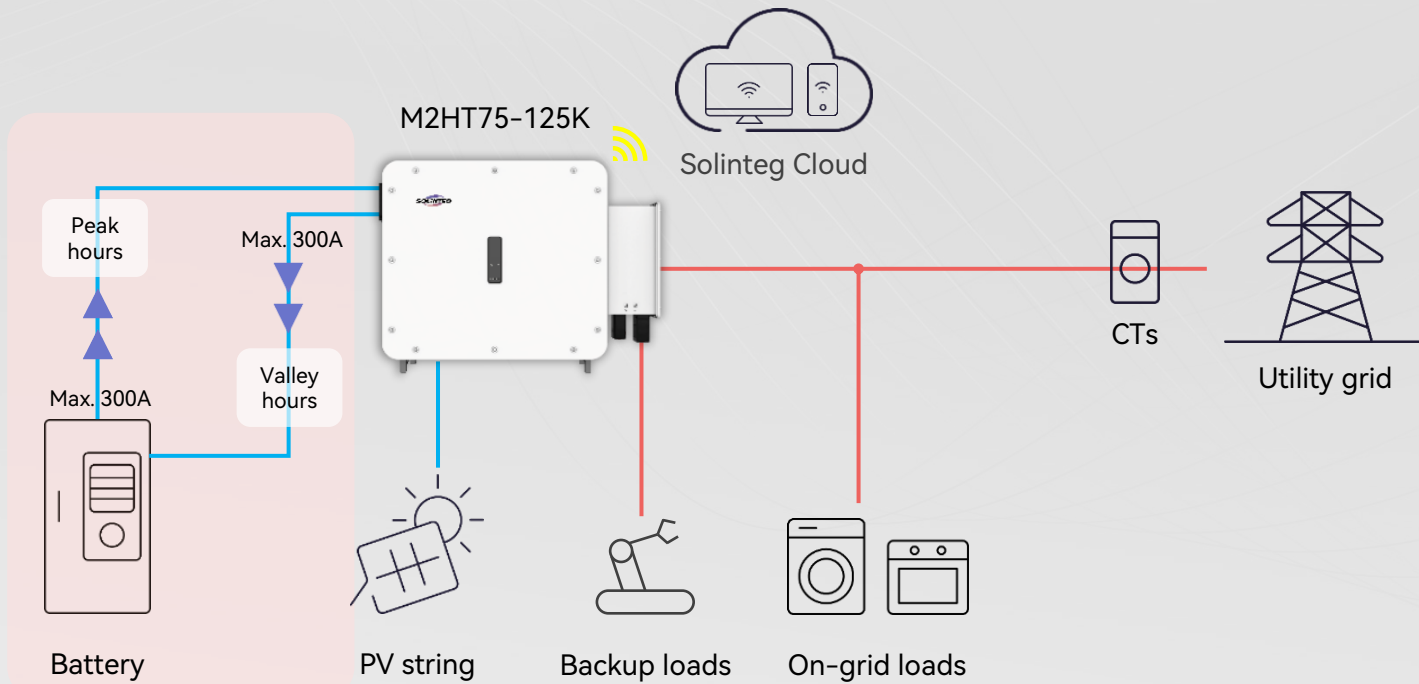
- Reduce peak power charges through smart usage control.
- Support setting custom peak power limits for different time slots.
- Available across all work modes.

Power dispatch:

- When Load < PV + Grid Pmax
Power dispatch: PV + grid -> loads + battery
- When Load > PV + Grid Pmax
Priority: PV + grid + battery -> loads

Energy Management Scenarios

Scenario 4: ToU price arbitrage



Work mode selected:

- ToU mode

Benefits:

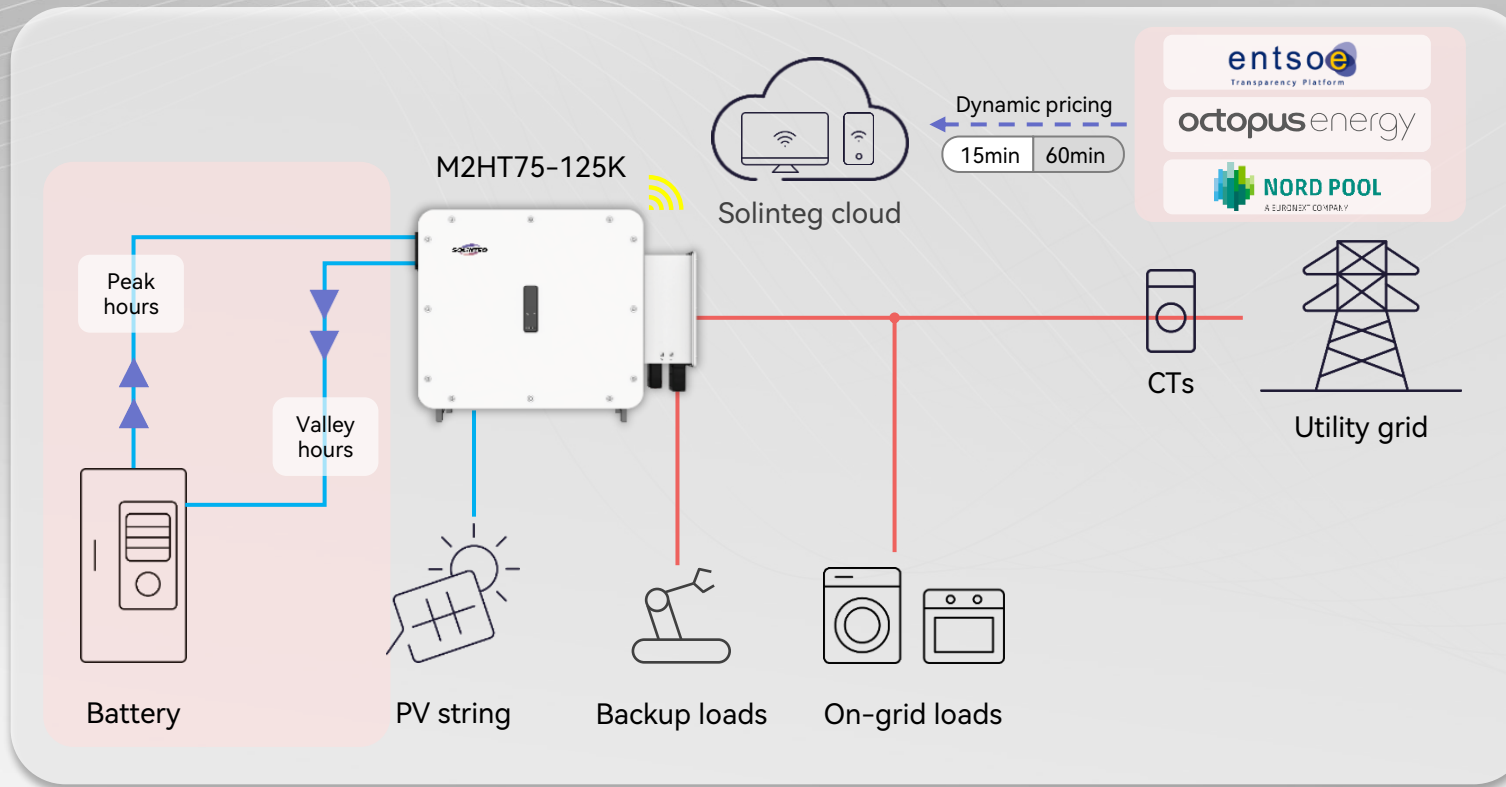
- Capture arbitrage from peak/off-peak pricing
- Up to 96 time slots enable multiple daily arbitrage cycles.

6 sub-modes for flexible use:

- General mode
- Feed-in mode
- Peak shifting
- Battery charge mode
- PV charging
- Battery discharge mode

Energy Management Scenarios

Scenario 5: Dynamic pricing



System strategy:

- Intelligent mode

Benefits:

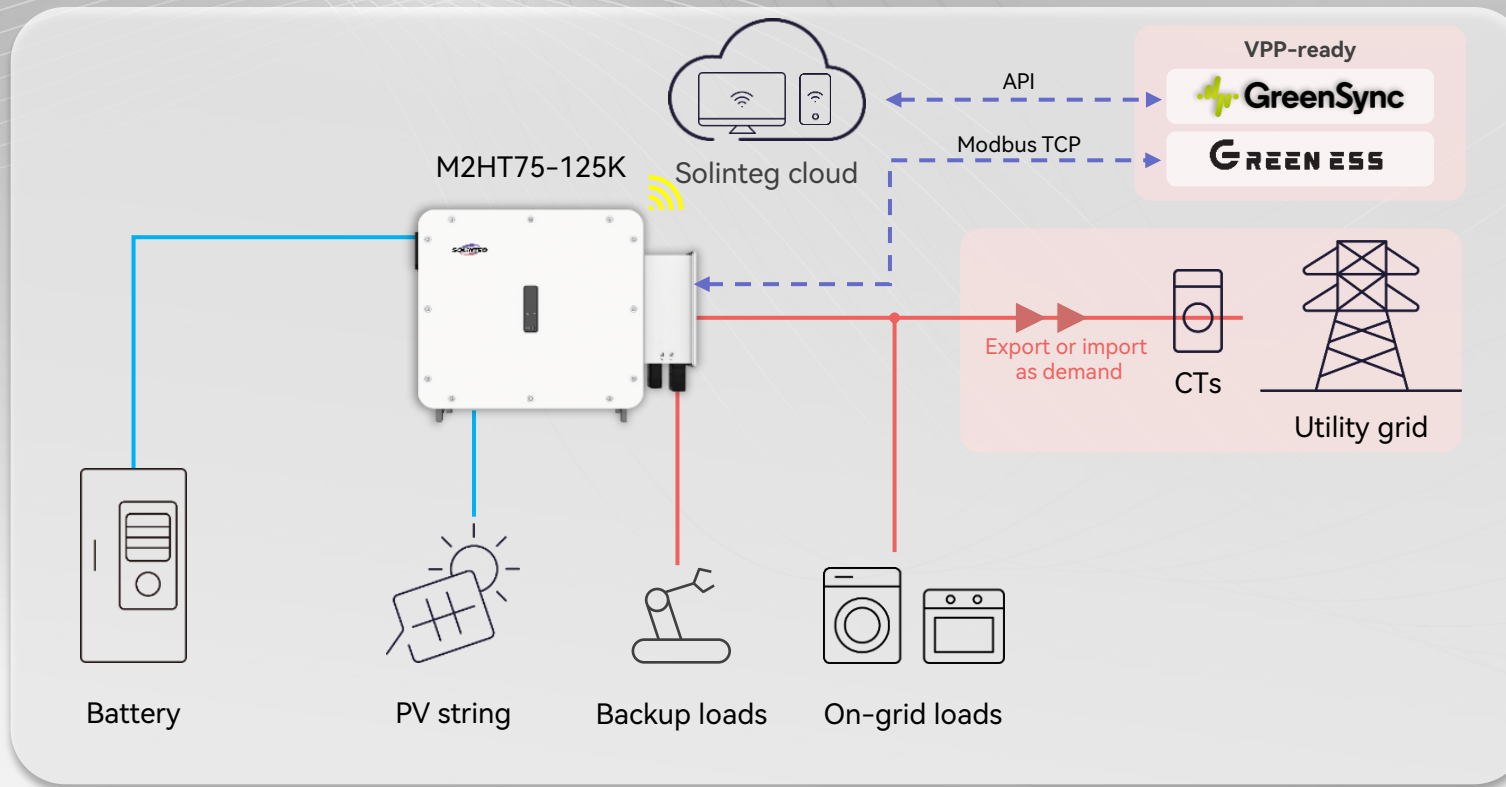
- Effortless energy management by automatic updating.
- Reduce energy costs by smart charging and discharging according to your habits.
- Support local currency settlement

6 sub-modes for automatic use:

- General mode
- Feed-in mode
- Peak shifting
- Battery charge mode
- PV charging
- Battery discharge mode

Energy Management Scenarios

Scenario 6: VPP integration



Benefits:

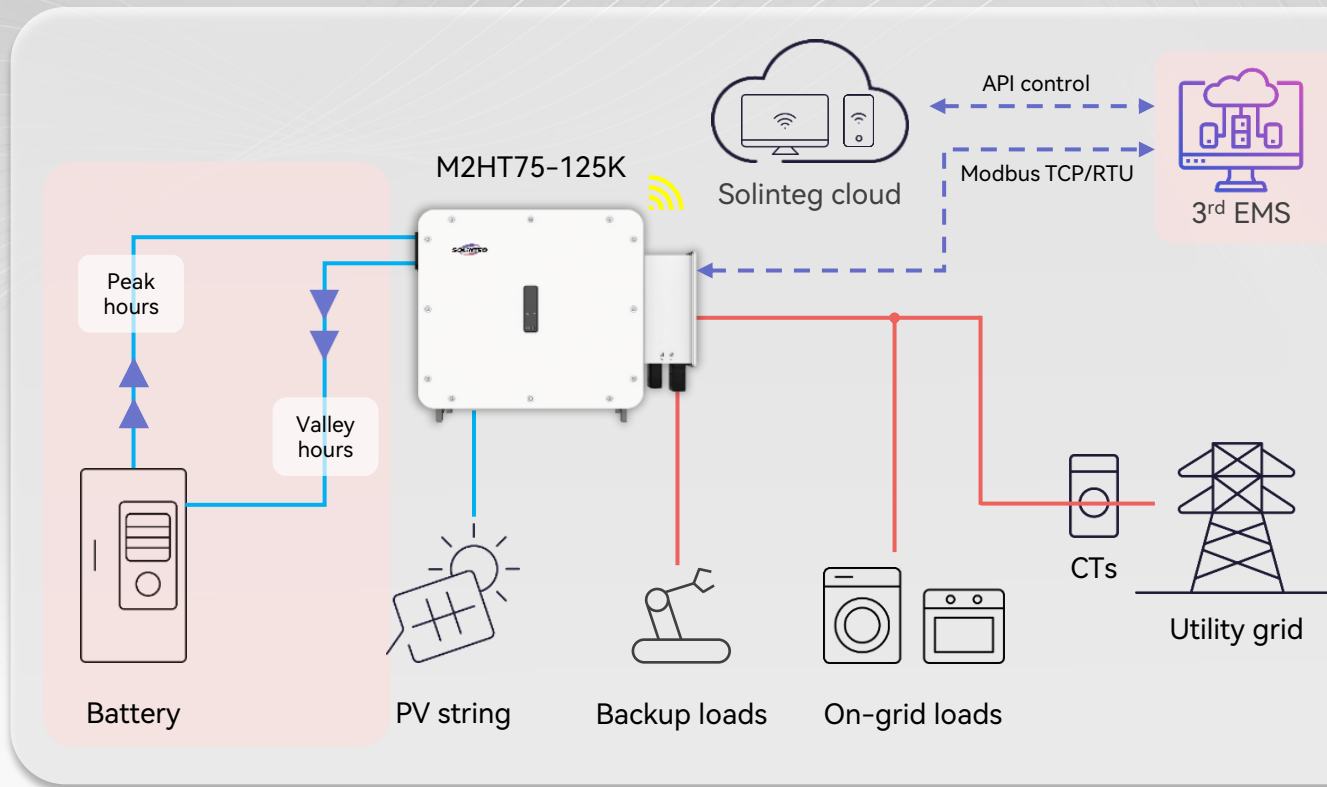
- High VPP income
Earn income from battery discharge during peak events or frequency control (FCAS).
- Upfront hardware discounts
Receive subsidies on storage installation costs from VPP providers.
- Smart arbitrage
Automatically export energy during high-price spikes for profit.

Energy Management Scenarios

Scenario 7: External EMS dispatching

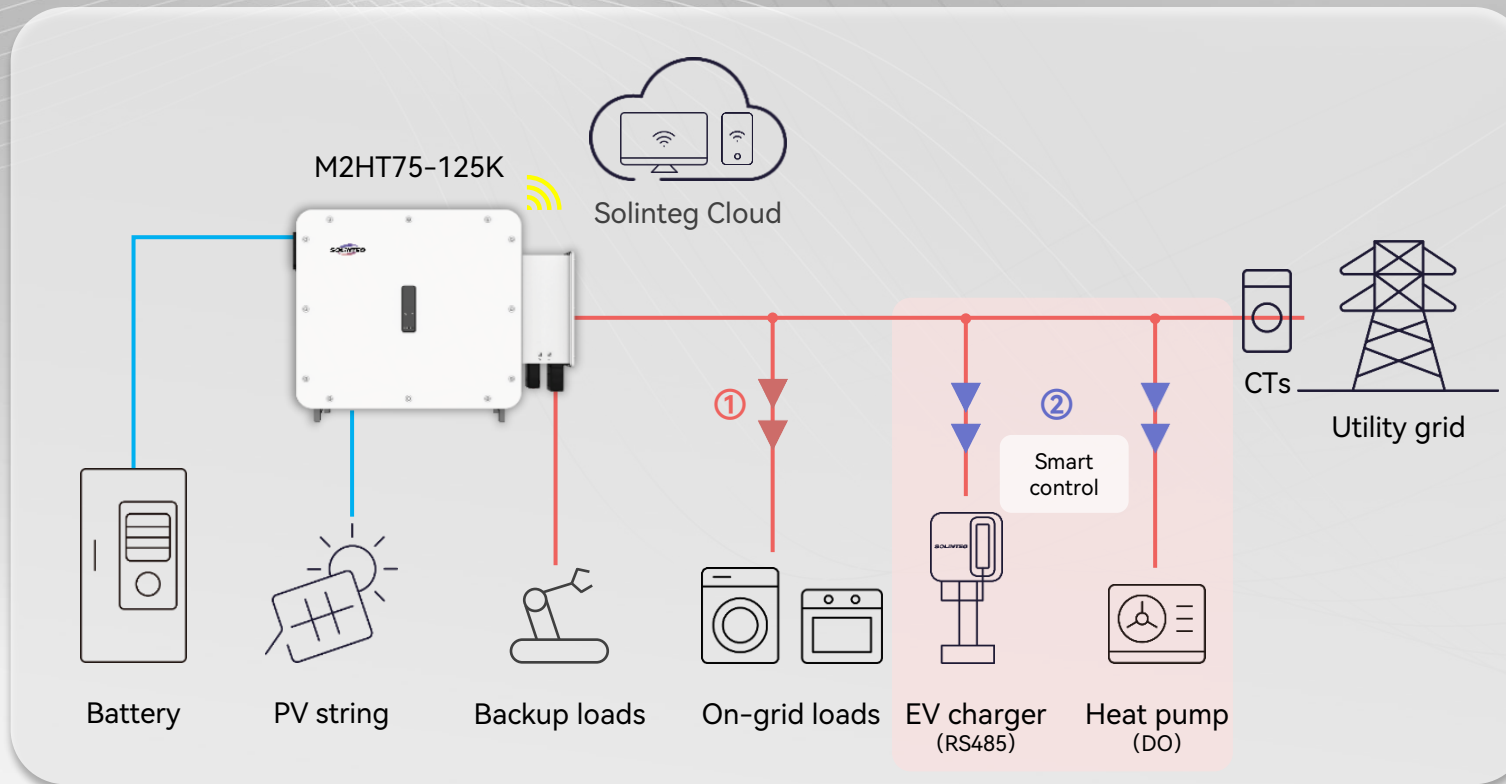
Benefits:

- 3rd EMS integration maximizes inverter value through AI optimization, seamless multi-device orchestration, and VPP readiness, boosting both efficiency and ROI



Energy Management Scenarios

Scenario 8: Smart load management



SG ready heat pump control:

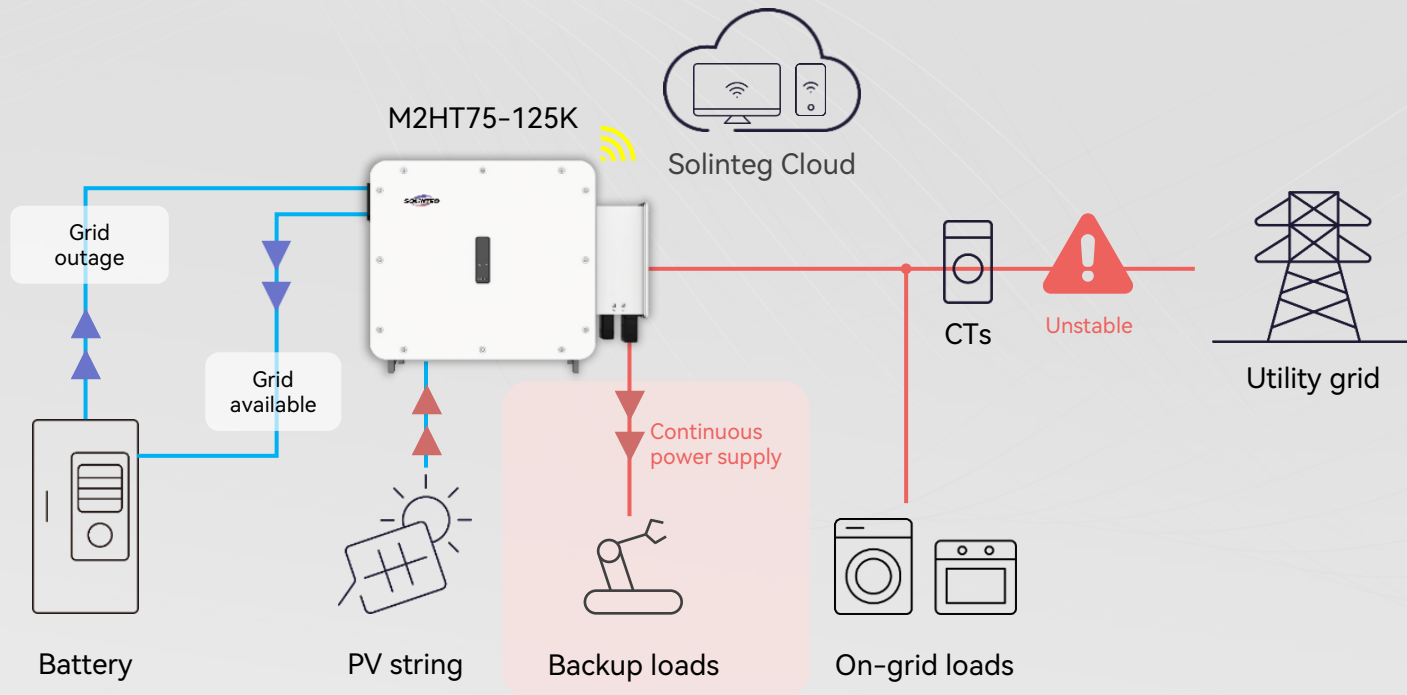
- Flexible control modes to suit any situation.
- Surplus PV utilization, dramatically reducing the consumption of high-cost grid electricity.
- Habit-adaptive timing, ensuring comfort without the need for constant adjustments.

Solinteg EV charger control:

- Green mode: maximum PV usage to achieve zero running cost.
- Commute mode: balance of cost and readiness by optimizing daily charging.

Energy Management Scenarios

Scenario 9: Unstable grid operation



Work mode selected:

- Backup mode

Benefits:

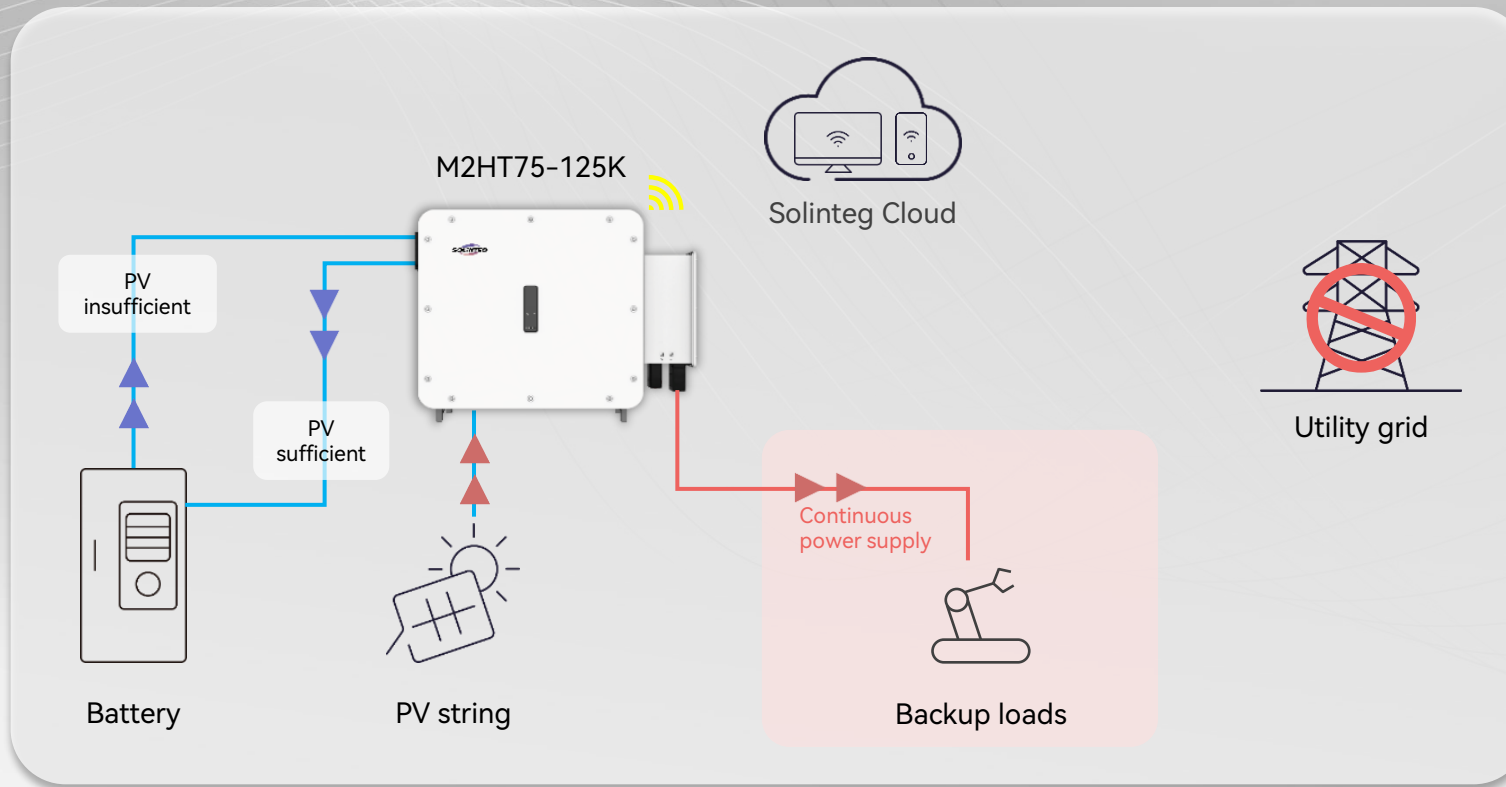
- Continuous power supply during grid outages.
- Prevents financial losses for businesses that rely on continuous power.

Power dispatch:

- When the grid is available, Battery charges until full (No discharge).
- When the grid fails, Battery discharges jointly with PV to supply backup loads continuously.

Energy Management Scenarios

Scenario 10: Microgrid operation



Work mode selected:

- Off-grid mode

Benefits:

- Complete energy independence. 100% self-sufficiency, no reliance on grids.

Power dispatch:

- When PV is sufficient, Battery charges until full (No discharge).
- When PV is insufficient, Battery discharges jointly with PV to supply backup loads continuously.

Application Scenarios for M2HT75-125K

1. Maximize self-sufficiency
2. Grid feed-in priority
3. Peak shaving
4. ToU price arbitrage
5. Dynamic pricing
6. VPP integration
7. External EMS dispatching
8. Smart load management
9. Unstable grid operation
10. Microgrid operation

Energy management scenarios

11. AC-coupled retrofit
12. DG* backup power integration
13. On/Off-grid parallel
14. On/Off-grid parallel + DG* solution
15. On-grid parallel

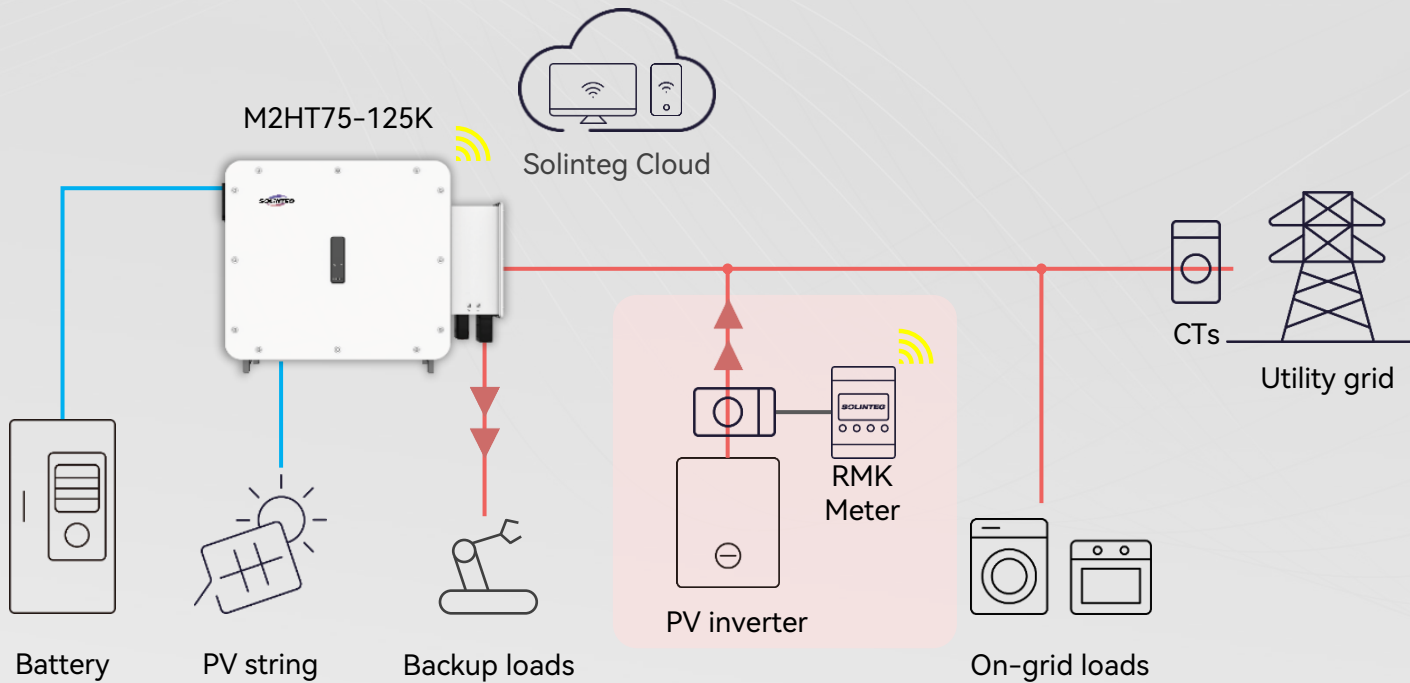
System capacity expansion



*The DG solution is currently in development and is scheduled for official release in early Q3 2026.

System Capacity Expansion

Scenario 11: AC-coupled retrofit



Implementation:

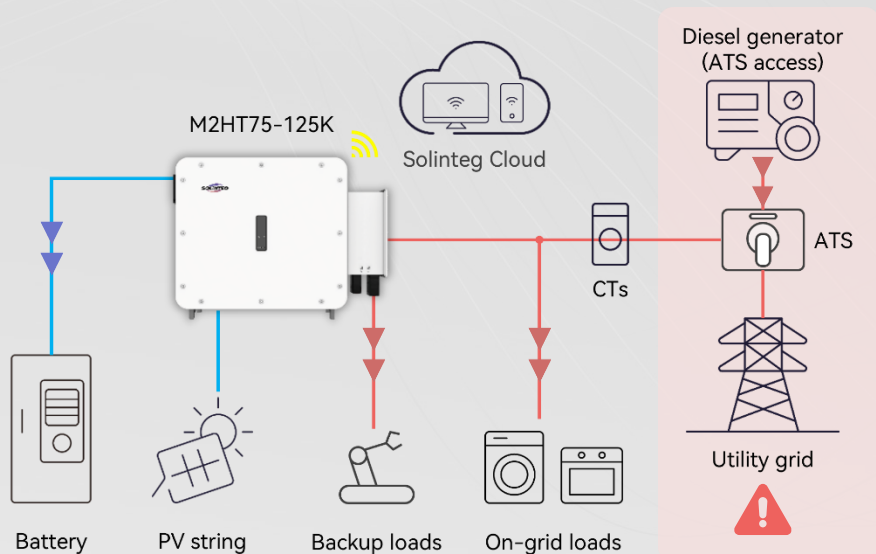
- Achieved by adding a single RMK meter.

Benefits:

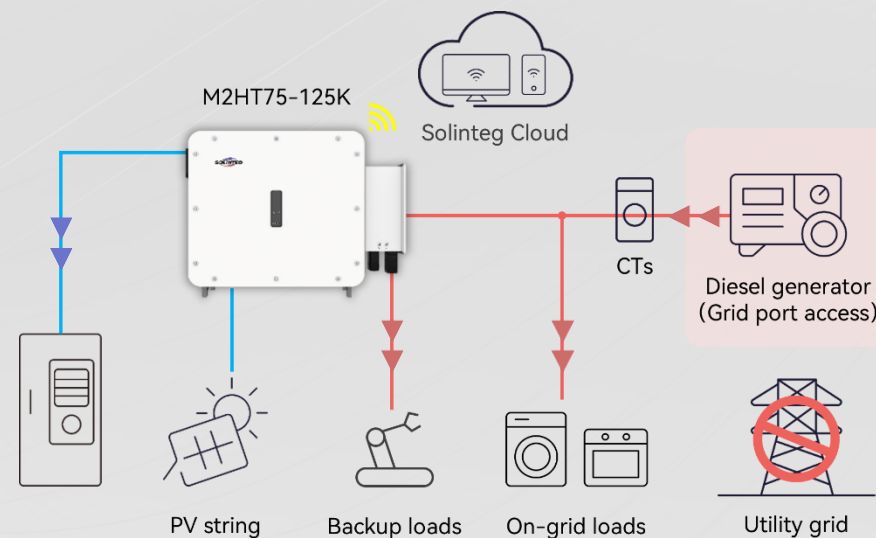
- Extremely simple. Retrofit existing grid-tied PV systems with storage without rewiring.
- Achieve 24/7 monitoring for the entire system.
- Support dynamic pricing.

System Capacity Expansion

Scenario 12: DG backup power integration*



① DG solution for unstable grid scenarios



② DG solution for off-grid scenarios

Benefits

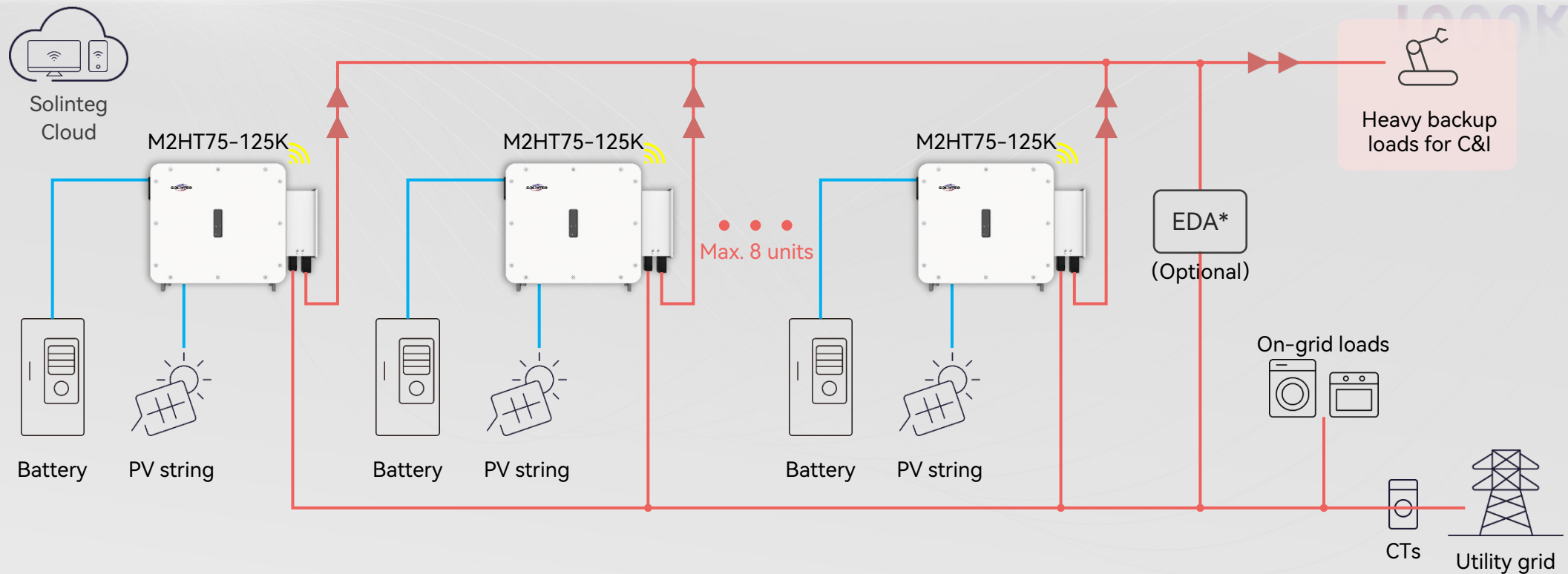
- **Secure a continuous load supply** by providing another backup power when grid loss or SOC reaches target value.
- Allows for the efficient **integration of existing DG** into the hybrid system.

*The DG solution is currently in development and is scheduled for official release in early Q3 2026.

System Capacity Expansion

Scenario 13: On/Off-grid parallel

1000kW



Benefits

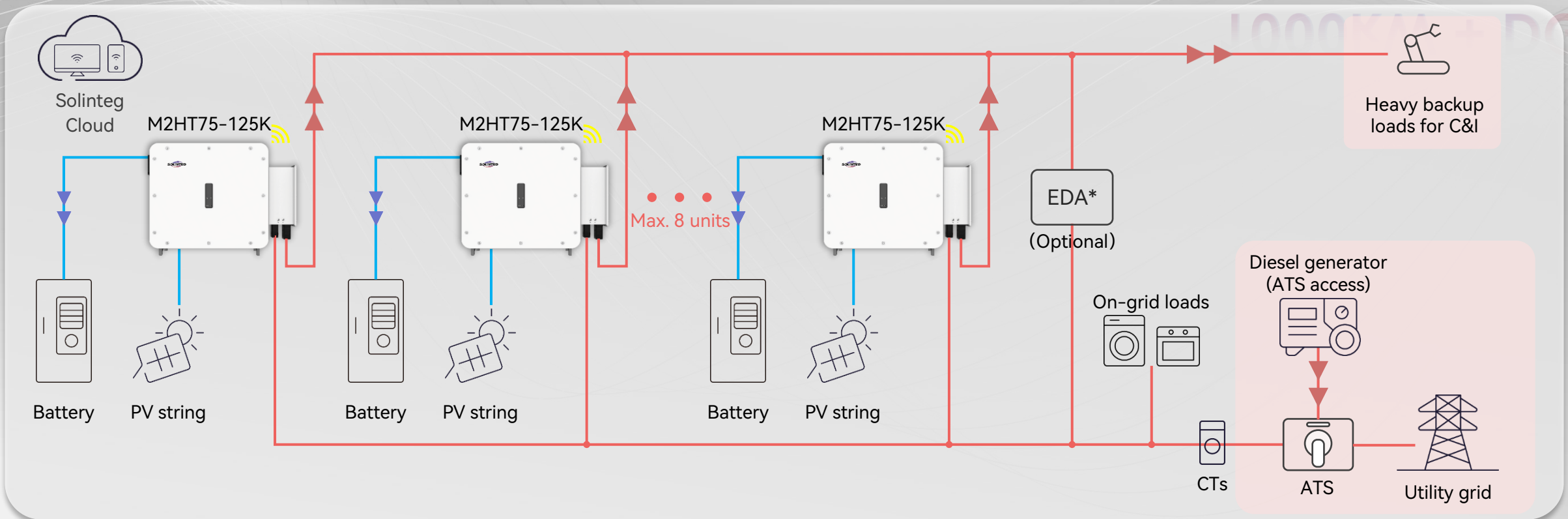
- Perfect for **C&I MW-level project**
- Enhanced backup power for **larger industrial loads**
- Suitable for **on-grid/off-grid/unstable grid scenarios**
- System-level **energy dispatch & battery balancing**

*No EDA is required for 6 units or fewer on/off-grid parallel; an additional EDA device is mandatory for 7 to 8 units on/off-grid parallel.

System Capacity Expansion

Scenario 14: On/Off-grid parallel + DG* solution

1000kW + DG



Benefits

- **Secure a huge continuous load supply** when grid loss or SOC reaches target value.
- Allows for the efficient **integration of existing DG** into the hybrid system.

*No EDA is required for 6 units or fewer on/off-grid parallel; an additional EDA device is mandatory for 7 to 8 units on/off-grid parallel. The DG solution is currently in development and is scheduled for official release in early Q3 2026.

1250kW



- Perfect for **C&I MW-level business project**
- Suitable for **stable grid scenarios**

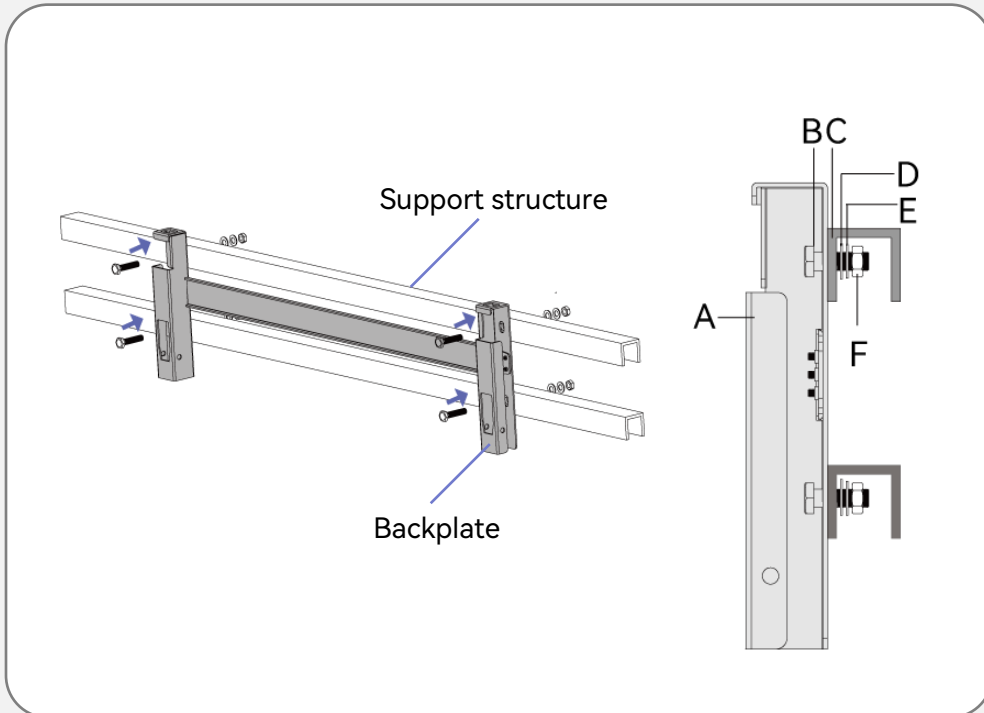
03

Installation

SOLINTEG

Mounting Backplate

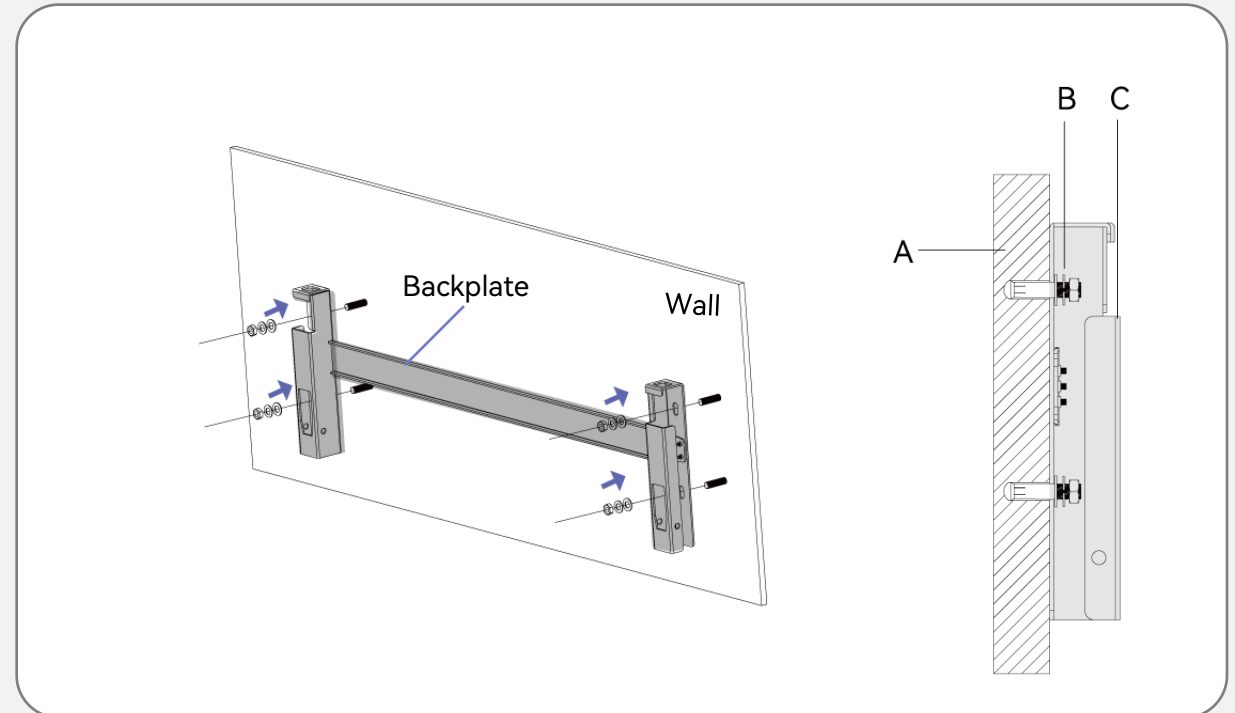
Method 1: Mounting on the support structure



Step 1: Use a spirit level to **align the bracket** and mark the hole positions. Drill the holes using an impact drill.

Step 2: **Anchor the bracket** to the support structure using the provided bolts.

Method 2: Wall Mounting



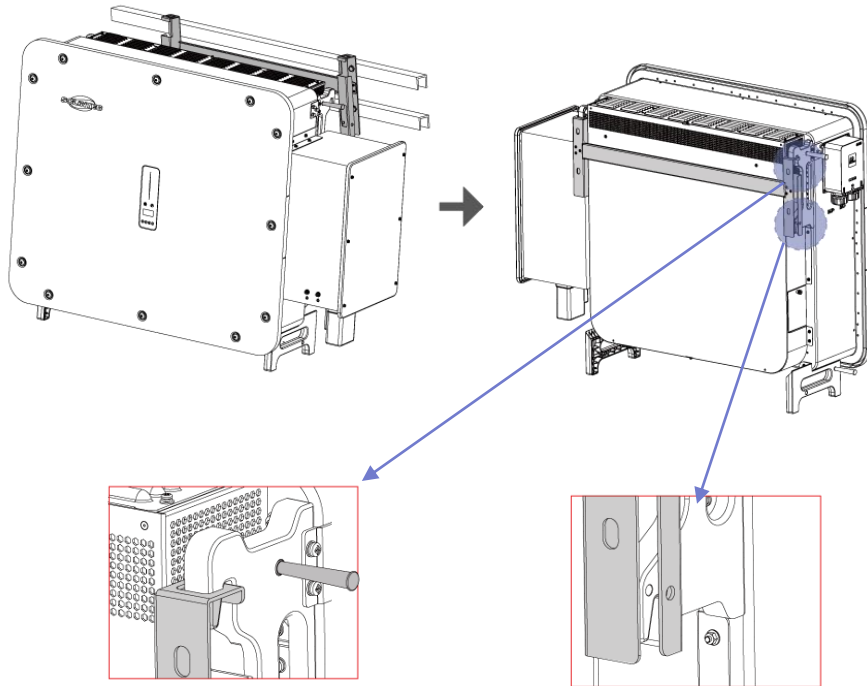
Step 1: Level the bracket and mark drilling holes on the wall.

Step 2: Drill holes and clear debris. Hammer in the expansion bolts (M10×95 stainless steel recommended). Tighten the bolts, then remove and set aside the nuts and washers.

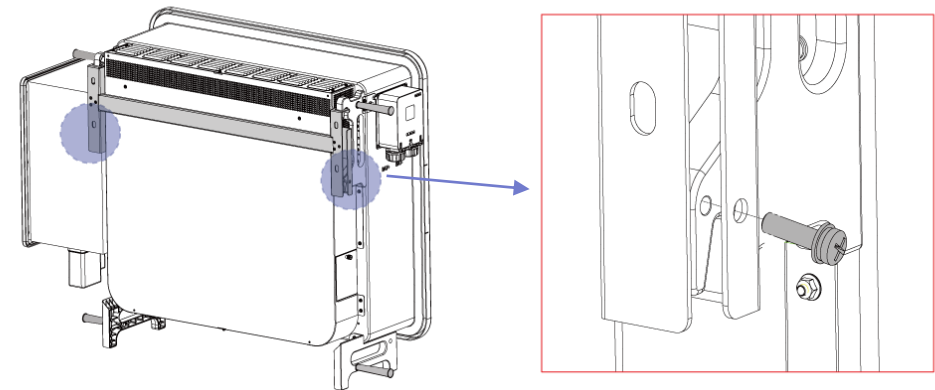
Step 3: Hang the bracket onto the bolts and secure it with the nuts and washers.

Installing the Inverter

- ① Lift the inverter and carefully align the track slot on its rear with the bracket.

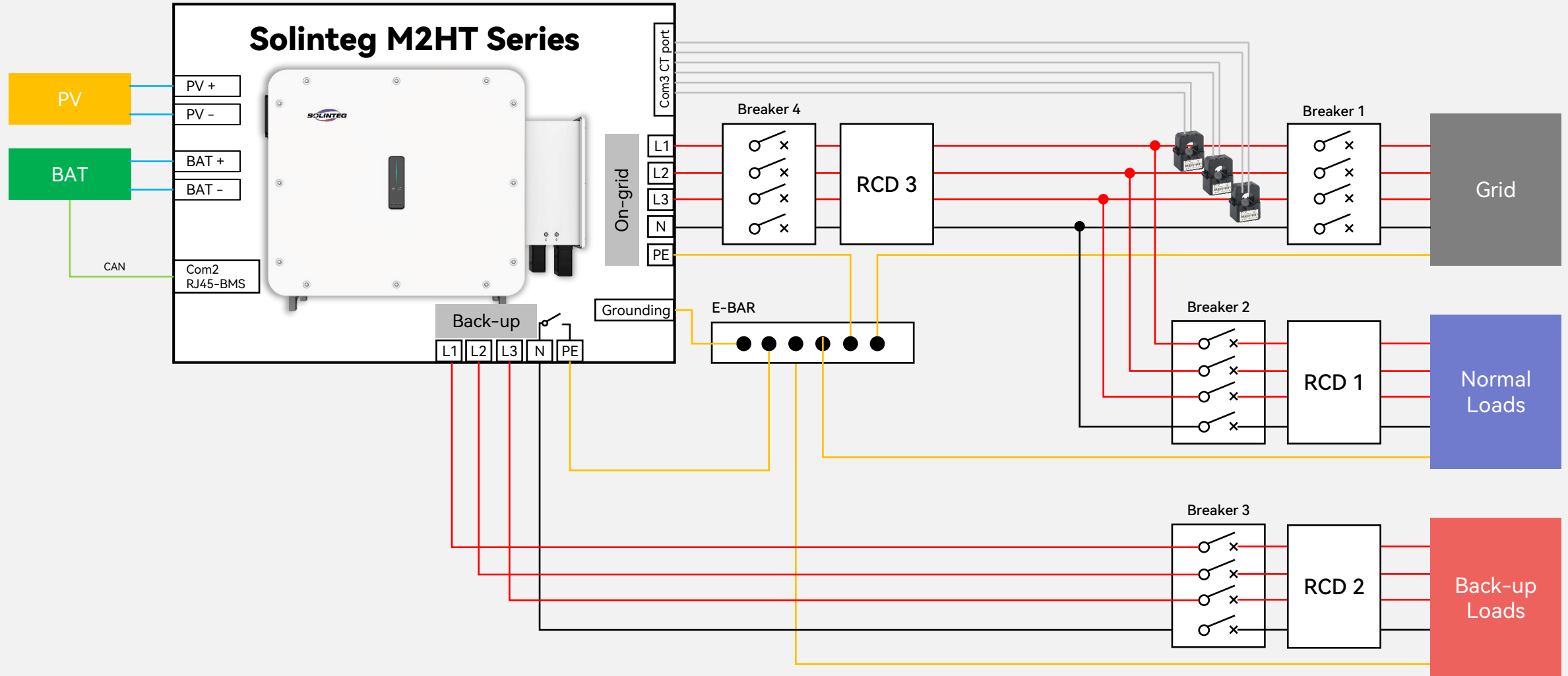


- ② Secure the inverter using screws.



Wiring Diagram

*This diagram is an example without special requirements on electrical wiring connections.
The neutral line of AC supply can be isolated or switched. Applicable to most countries.



Breaker & RCD Standard

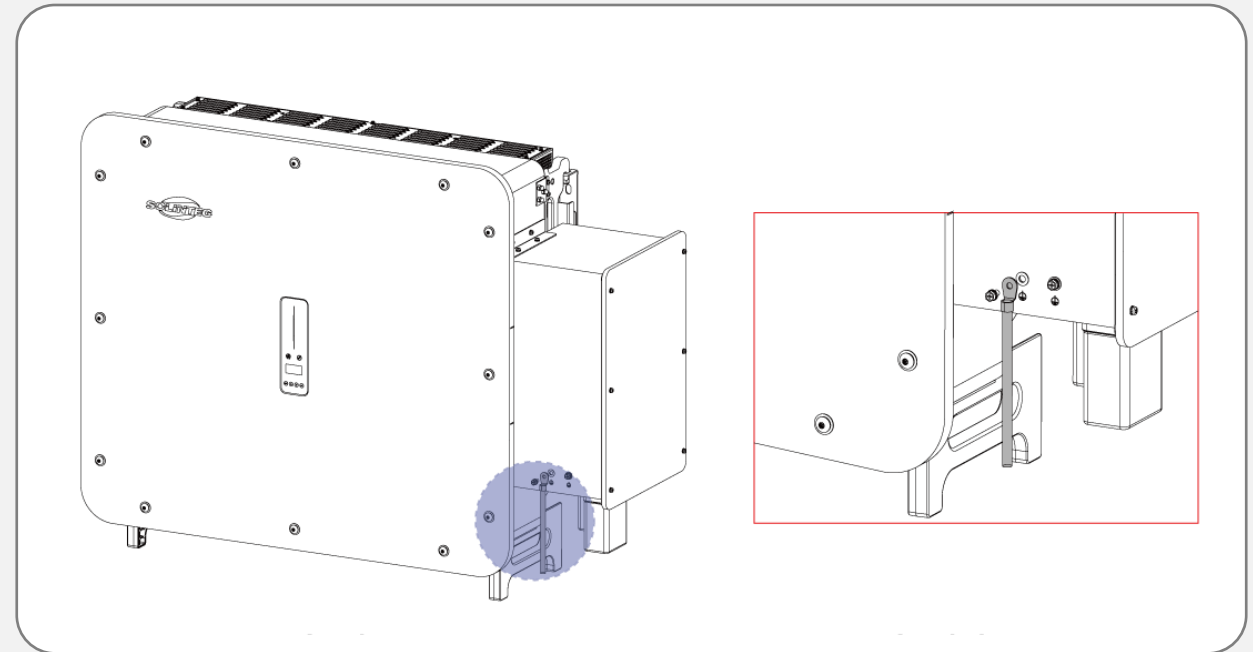
Please select and configure the breaker and RCD according to the standards shown in the table.

	M2HT-75K	M2HT-80K	M2HT-99K	M2HT-100K	M2HT-110K	M2HT-125K
Breaker 1	Depends on loads and inverter capacity					
Breaker 2	Depends on normal loads					
Breaker 3	160A	200A			250A	
Breaker 4	400A					
RCD 1	30mA type A (Comply with local regulation)					
RCD 2	30mA type A (Comply with local regulation)					
RCD 3	The inverter is equipped with a residual current monitoring unit (RCMU), which will immediately disconnect from the grid upon detecting a fault current exceeding the threshold. If an additional standalone residual current device (RCD) is installed, a Type A RCD is recommended, with a tripping current of 1000 mA.					

Electrical Connection – Grounding

Ground terminal connection steps:

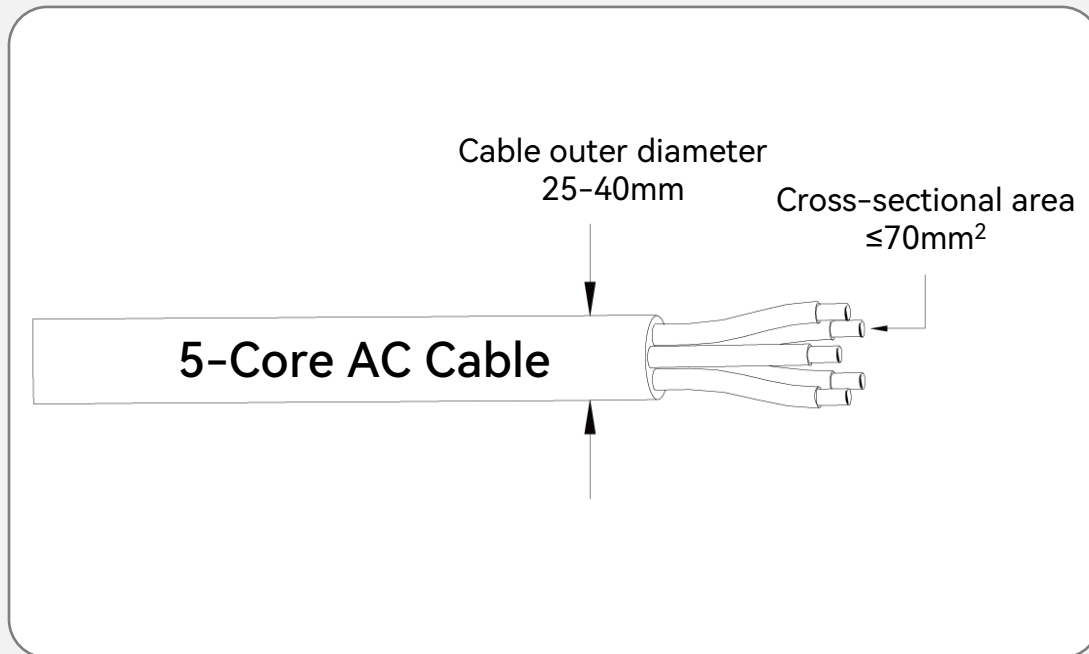
1. The external grounding terminal is located at the lower right side of the inverter.
2. Use a crimping plier to crimp the PE conductor into the OT terminal. Then, use a screwdriver to secure the OT terminal onto the inverter's external grounding bolt. (recommended torque: $1.5 \pm 0.15\text{N}\cdot\text{m}$).
3. Connect the other end of the PE conductor to the grounding copper bus bar.



Electrical Connection – AC Side

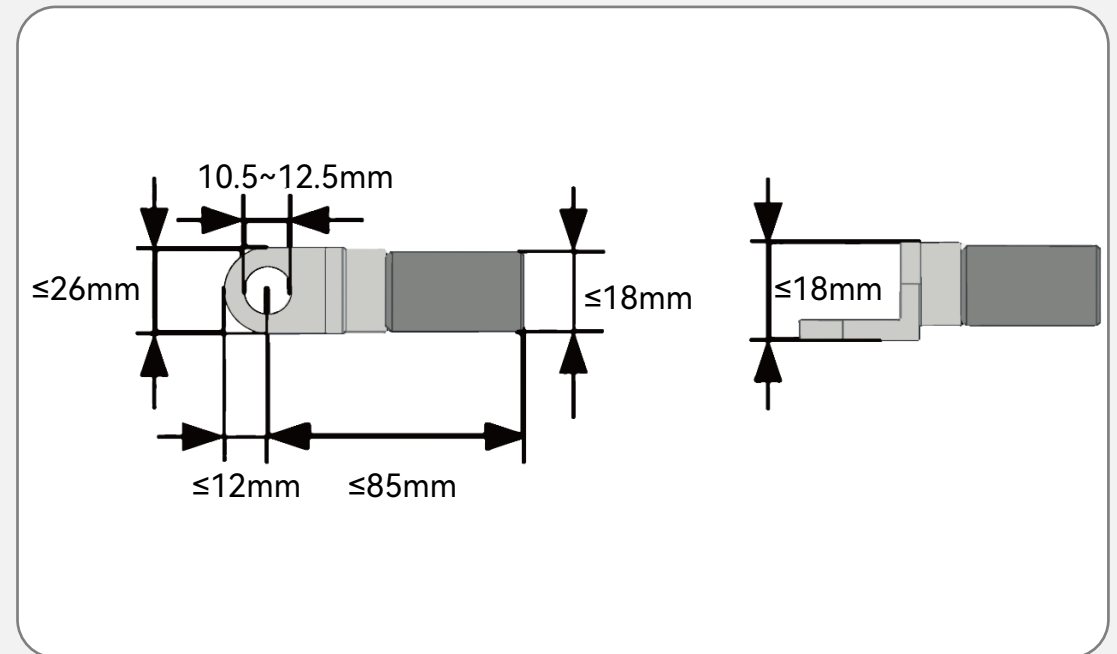
I. Cable preparation for on-grid & back-up side

Please select the appropriate cable specifications based on actual conditions. The recommended specifications are as follows:



II. OT/DT terminals preparation

Fixing the AC cable to the terminal block requires the use of OT/DT terminals (not included in the delivery range). Please purchase in accordance with the following requirements.

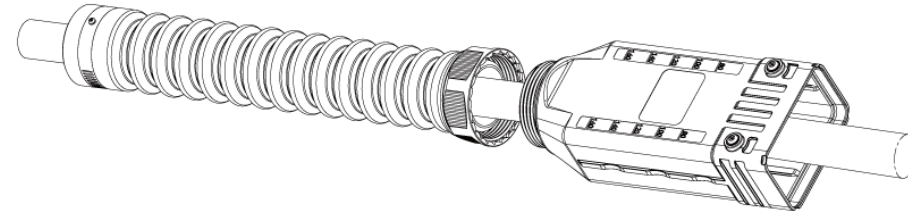


Electrical Connection – AC Side

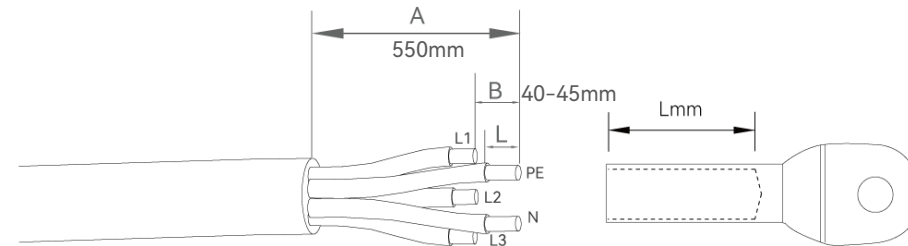
III. AC cable connection for On-grid and Back-up ports



- ① Detach the conduit.
Thread the AC cables through the conduit and structure.



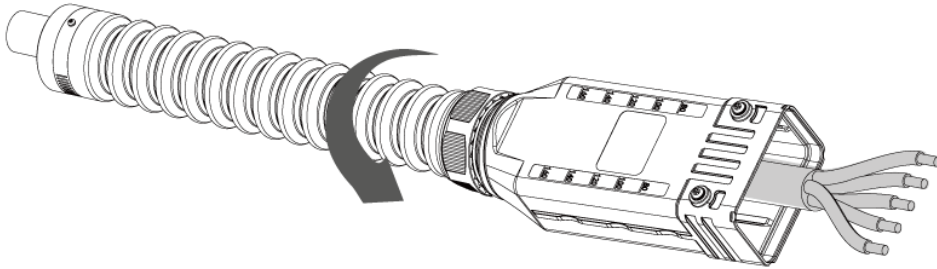
- ② Strip 550mm (A) of the AC cable jacket. Arrange the wires so that L1/L2/L3 are 40–45mm (B) longer than PE/N. Then, strip L mm of insulation from each wire to fit the OT terminal.



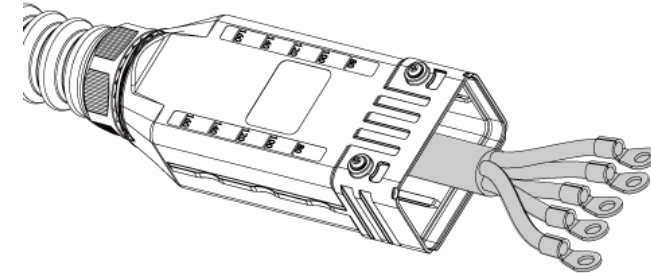
Electrical Connection – AC Side

III. AC cable connection for On-grid and Back-up ports

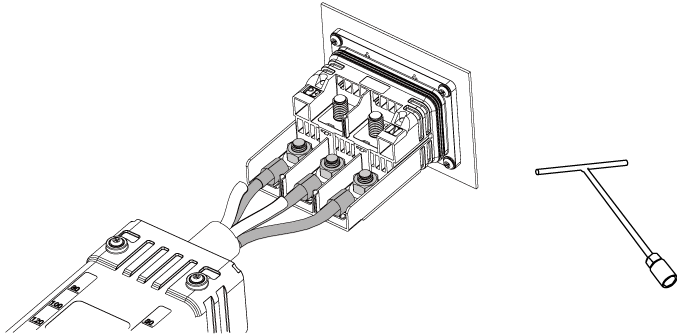
- ③ Tighten the locking nut using an open-end wrench.



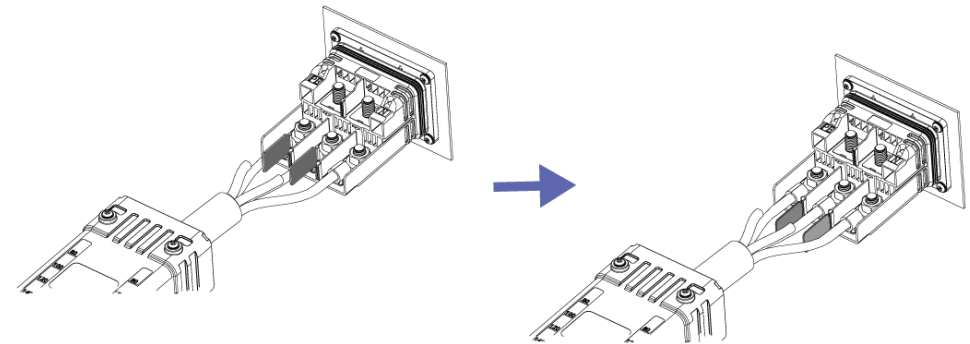
- ④ Crimp the cables to the OT terminals using a hydraulic crimping tool.



- ⑤ After removing the nut, install the OT terminals in the L1/L2/L3 phase sequence and use a hex wrench to tighten the nut.



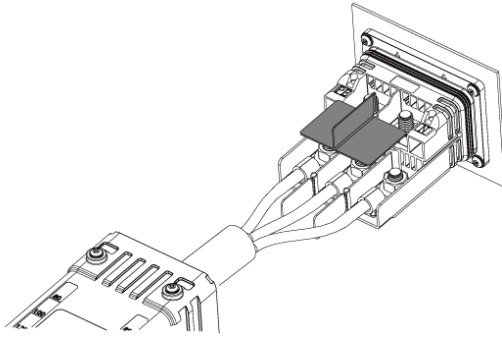
- ⑥ Install the insulation barrier plate in the designated mounting holes.



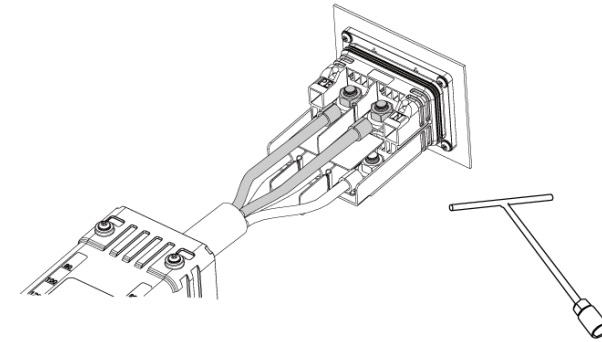
Electrical Connection – AC Side

III. AC cable connection for On-grid and Back-up ports

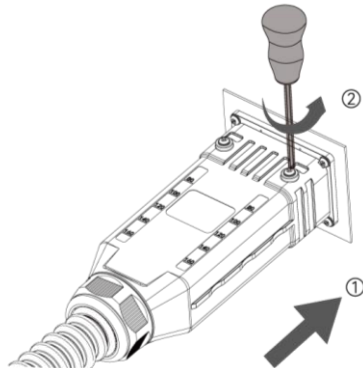
- ⑦ Install the N/PE insulation barrier plate to the designated mounting holes.



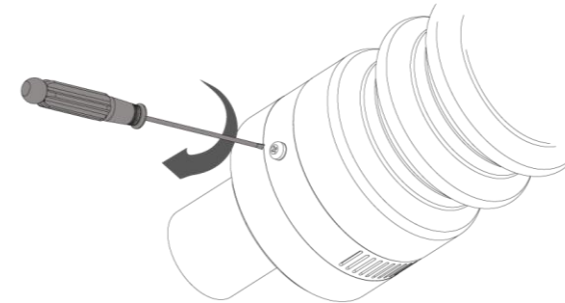
- ⑧ Install the N/PE insulation barrier plate to the designated mounting holes.



- ⑨ Insert the component main body into the panel rubber seal core and secure it with cross-slot screws to complete the installation.



- ⑩ Use a screwdriver to tighten the end of the corrugated tube.



Electrical Connection – DC Side

I. PV Connection

PV terminal configuration

➤ Terminal Overview

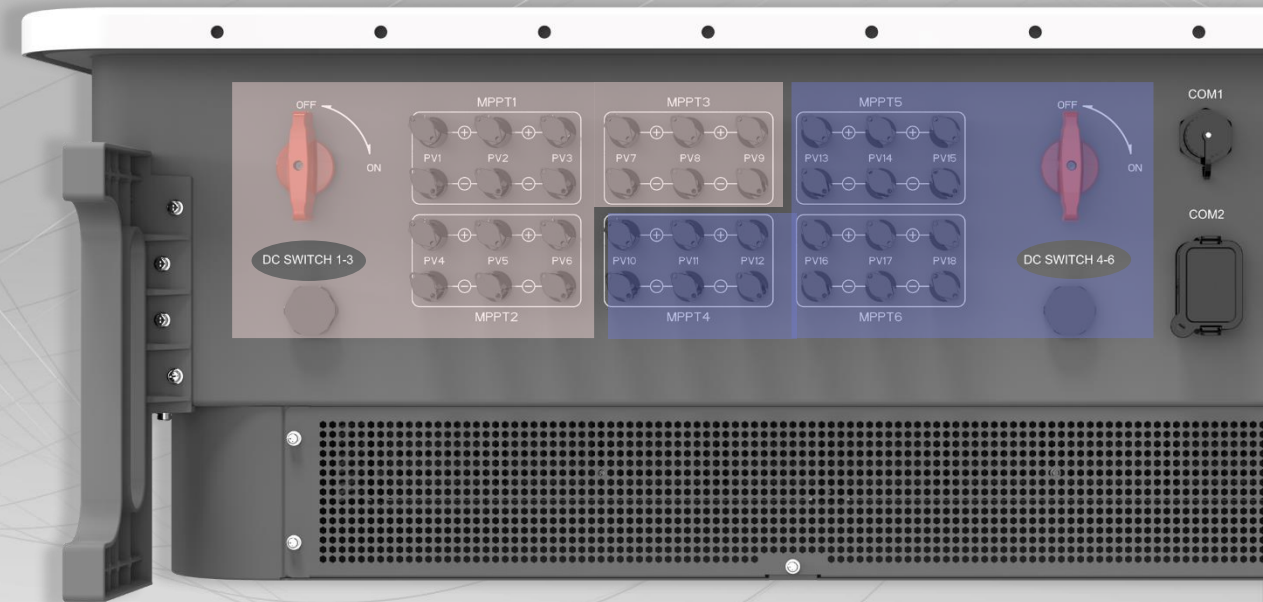
- **Total Capacity:** 18 DC input terminals
- **Switch Control:**
 - DC SWITCH 1:** Controls PV1 – PV9 (MPPT1 – MPPT3)
 - DC SWITCH 2:** Controls PV10 – PV18 (MPPT4 – MPPT6)

➤ Strategy & Rules

- **Full Utilization:** If strings > 6, all MPPTs must be used (no idle units).
- **Even Distribution:** Spread strings evenly across all MPPTs if not fully populated.
- **MPPT Loading:** Fill 2 strings per MPPT before adding a 3rd string to any single path.
- **Prioritization:** Assign new strings to the first and last MPPT paths first.

WARNING

Uneven distribution of PV strings can trigger specific MPPTs to overheat, derate, or cause inverter damage in extreme conditions.



Electrical Connection – DC Side

I. PV Connection

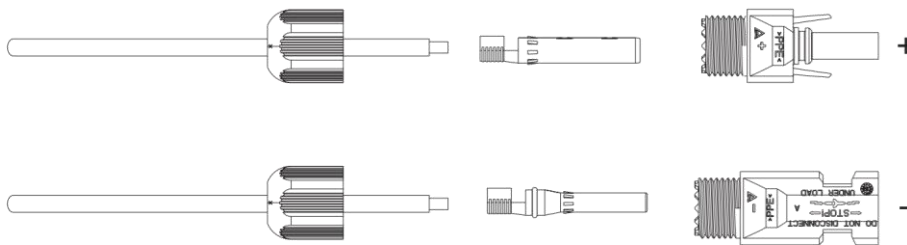
- ① Select the appropriate cable based on specifications

Name	Outside diameter	Conductor cross-section
PV Cable	5.9-8.8 mm	4 mm ² (12AWG) or 6mm ² (10WAG)

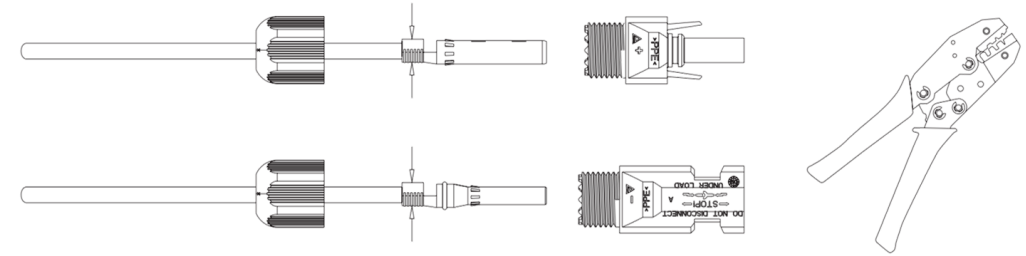
- ② Peel off the DC cable insulation sleeve for 7 mm.



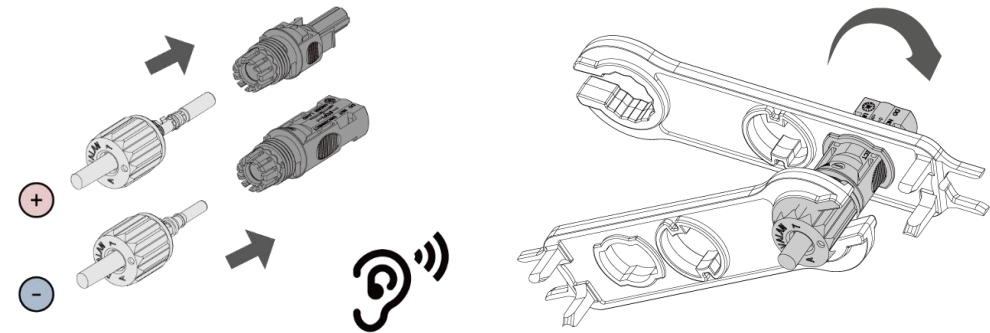
- ③ Disassemble the PV connector in the accessory bag.



- ④ Insert the DC cable through the DC connector nut into the metal terminal and press the terminal with a professional crimping plier.



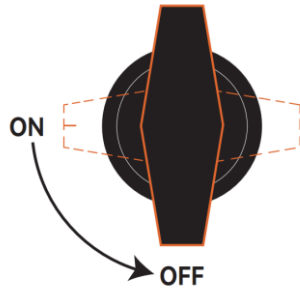
- ⑤ Insert the positive and negative cables into their respective connectors. Gently tug the cables to ensure the terminals are fully seated. Tighten the nut firmly with an open-end wrench to ensure a watertight seal.



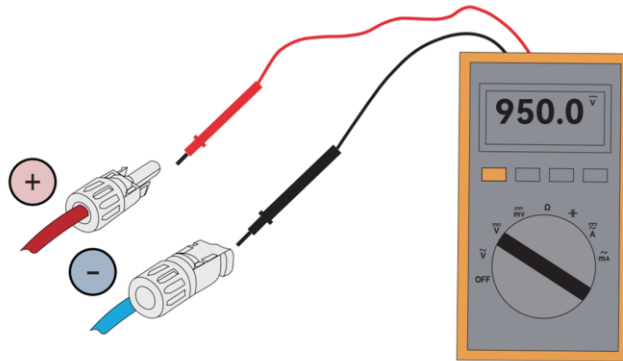
Electrical Connection – DC Side

I. PV Connection

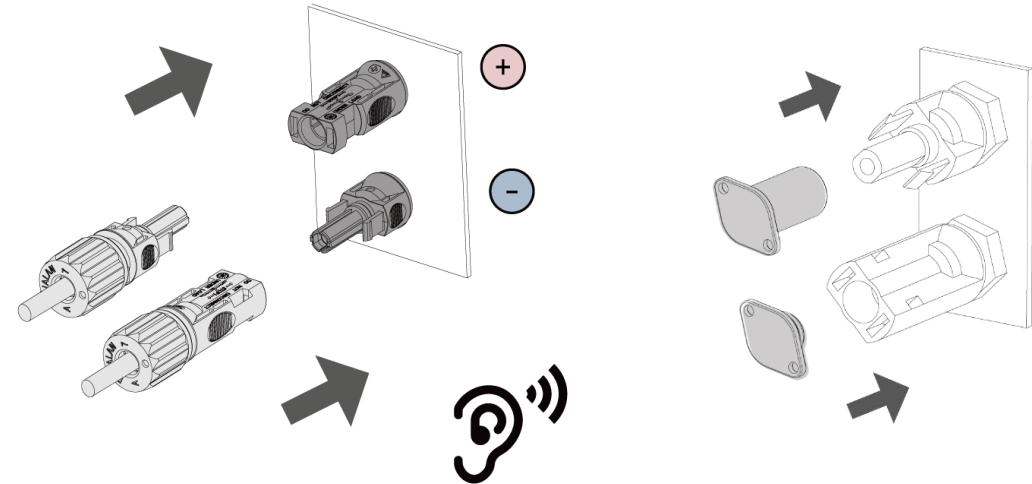
- ⑥ Rotate the DC switch to "OFF" position.



- ⑦ Check whether the cable polarity of the PV string is correct. The maximum input voltage for the PV is 950V.



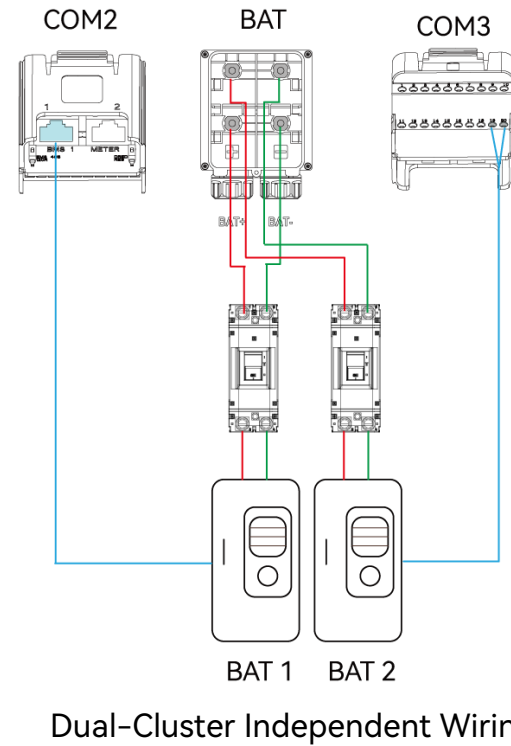
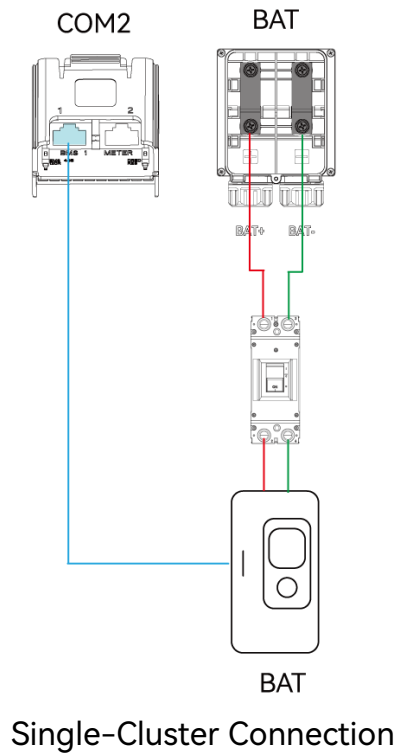
- ⑧ Plug the positive and negative connectors into respective inverter DC input terminals until they click into place. Secure any unused PV terminals with the provided sealing caps.



Electrical Connection - DC Side

II. Battery Cable Connection

Wiring diagrams



Electrical Connection – DC Side

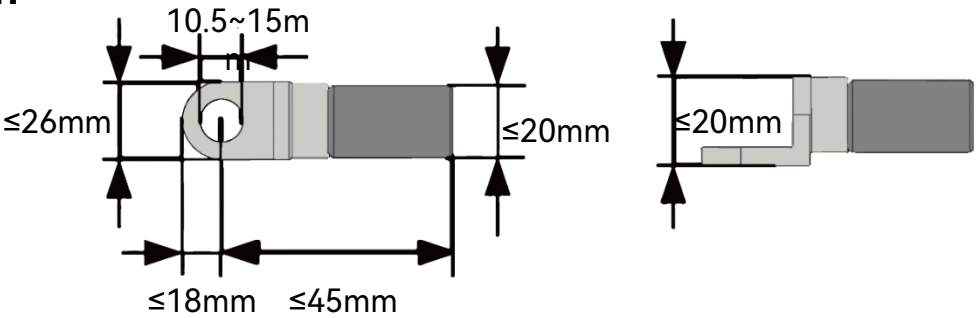
II. Battery Cable Connection

Cable preparation

Two waterproof seal options are available. Choose the one that fits your cable needs:

Seal type	Cable outer diameter (mm)	Cross-sectional area (mm ²)
Single-hole seal (Pre-installed) 	 19.0-21.0  16.5-18.5  14.0-16.0  11.5-13.5	30-120
Dual-hole seal (In accessory kit) 	 11.5-13.5  9.5-11.5	30-50

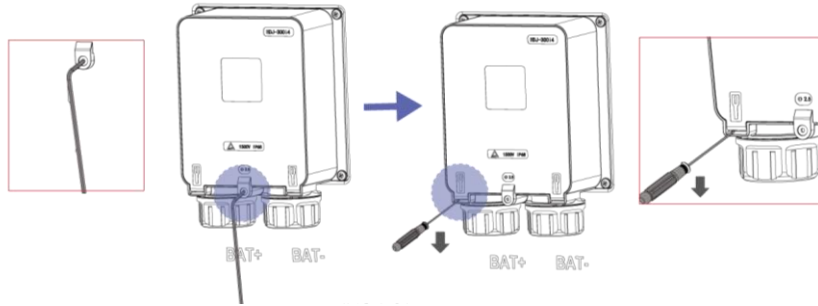
OT/DT terminals preparation



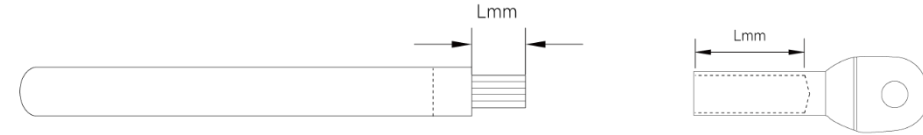
Electrical Connection – DC Side

II. Battery Cable Connection

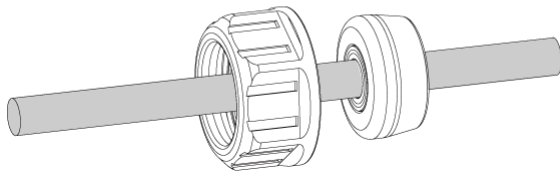
- ① Remove the bolts on the battery junction box and pry open the box using a flathead screwdriver.



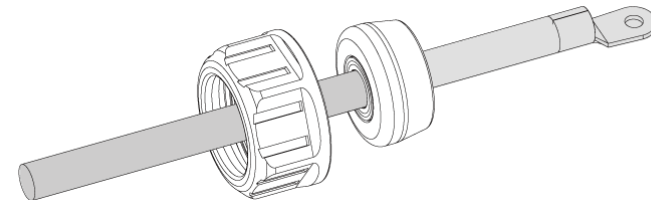
- ③ Strip the insulation sleeve from the battery cables to the specified length.



- ② Pass the battery cables through the waterproof gland.



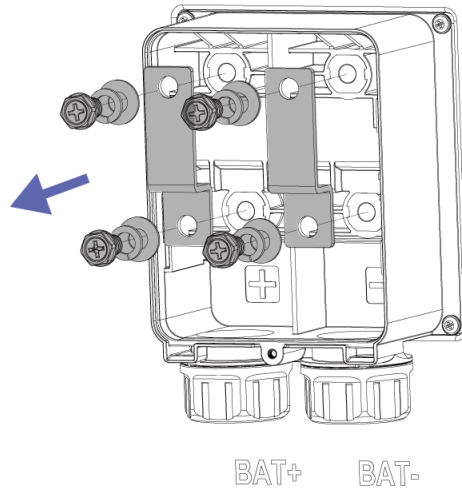
- ④ Use a hydraulic crimping tool to connect the cables to OT terminals.



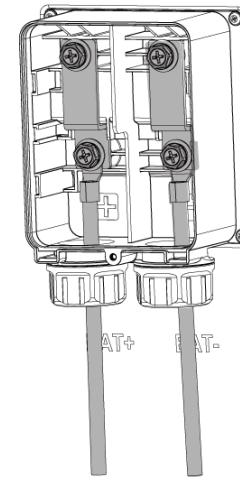
Electrical Connection – DC Side

II. Battery Cable Connection

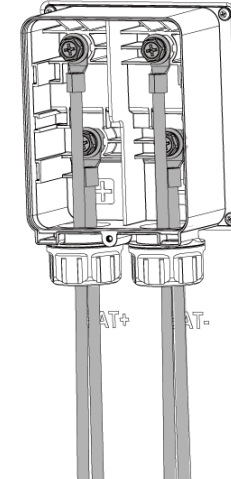
- ⑤ For independent connection of dual battery banks, remove the parallel copper busbar between the battery terminals.



- ⑥ After removing the nuts, install the OT terminals according to polarity.



Single-cluster connection

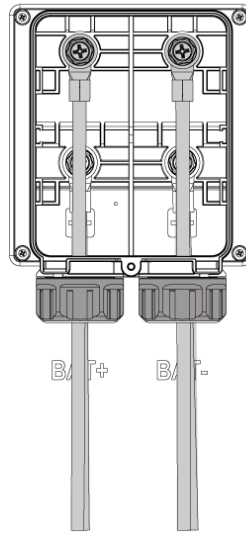
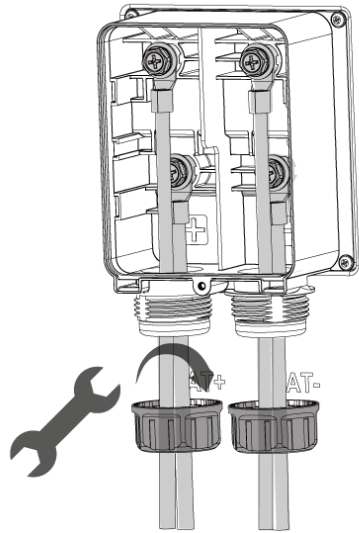


Dual-cluster independent wiring

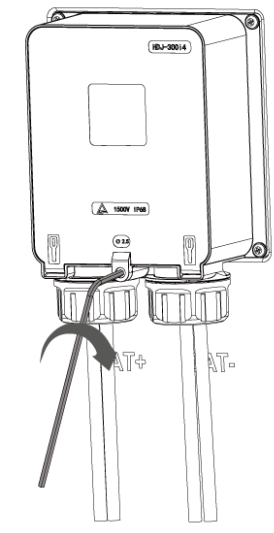
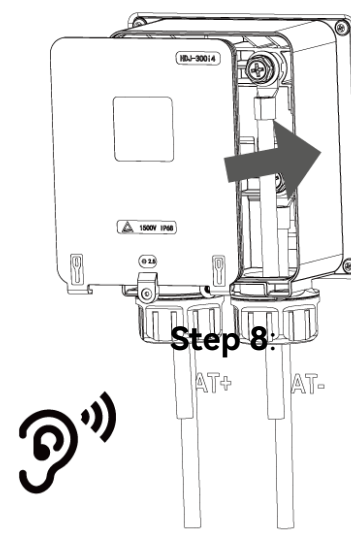
Electrical Connection – DC Side

II. Battery Cable Connection

- ⑦ After confirming the secure connection, use an open-end wrench to tighten the nuts to the terminal end for proper sealing.

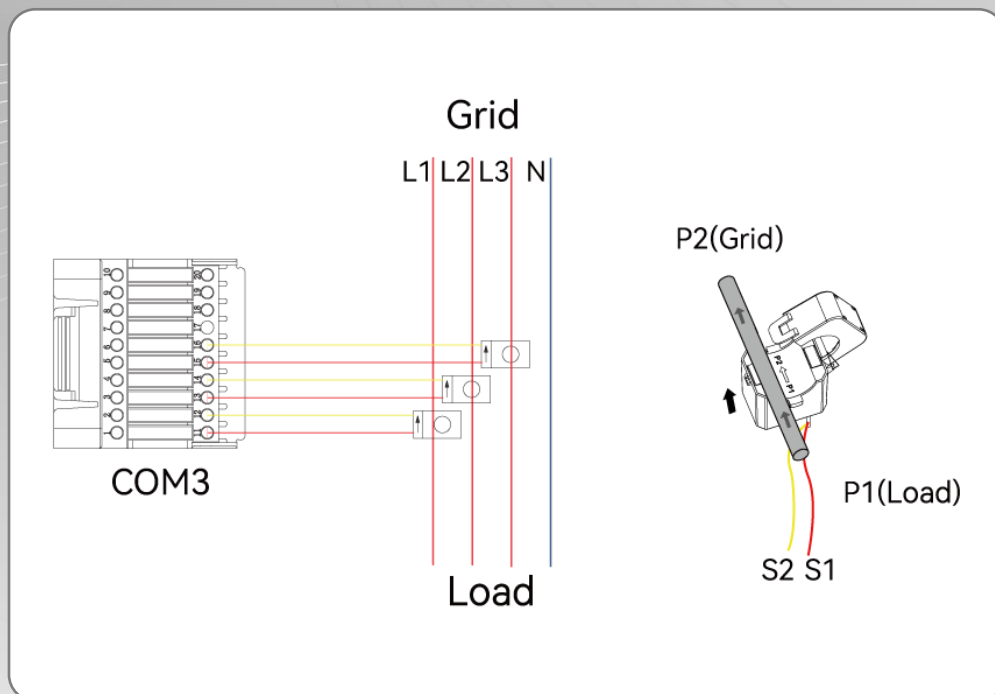


- ⑧ Close the battery junction compartment and secure the bolts on the junction box.



Meter & CT Connection

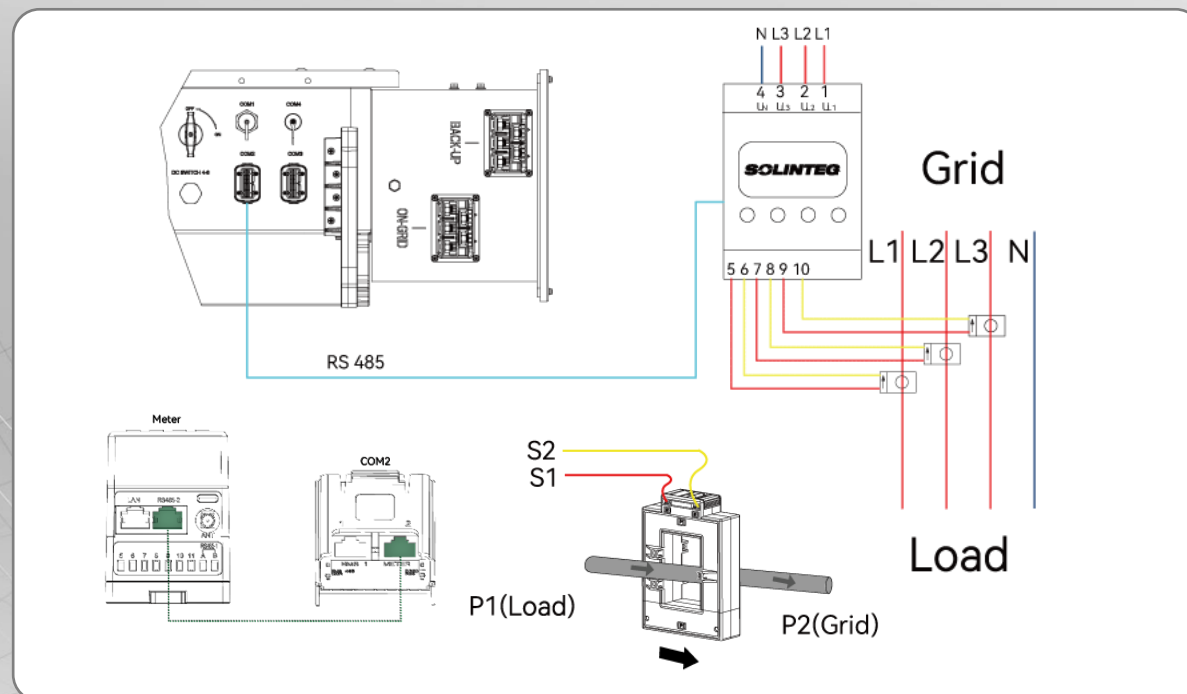
Method 1 : Use CT directly



Note:

1. **Default Component:** 3 CTs are included by default.
2. **Installation:** Follow the arrow marking (**P1 Load → P2 Grid**).
3. **Compatibility:** Use only Solinteg-provided **100mA output CTs** for direct inverter connection.
4. **Setup:** Set the CT ratio on the inverter.

Method 2 : Use Meter & CT



Note:

1. **Component:** Solinteg RMM meters must be ordered separately. If using an RMM-5A meter, the CT must be purchased separately (Class 0.5 or higher).
2. **Installation:** Install the CT pointing from P1 (Load) to P2 (Grid) and ensure an AC-side circuit breaker/fuse is installed for the meter.
3. **Configuration:** Set the CT ratio directly on the meter.

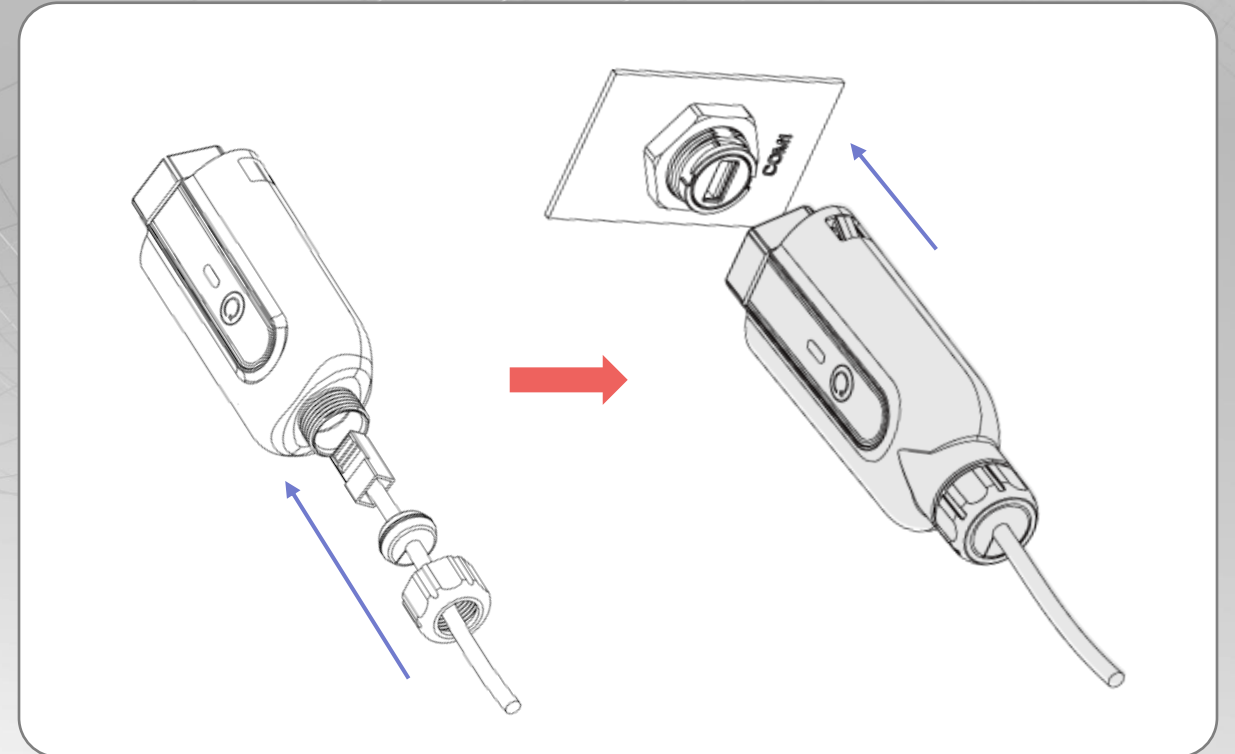
Communication Connection

I. Communication Module Connection

Step 1: Connect the network cable to the communication module (required for LAN connection).

Step 2: Unscrew and remove the protective cover from the COM1 port.

Step 3: Insert the communication module into the COM1 port until fully seated. Rotate the nut clockwise until an audible "click" confirms a secure connection.



Communication Connection

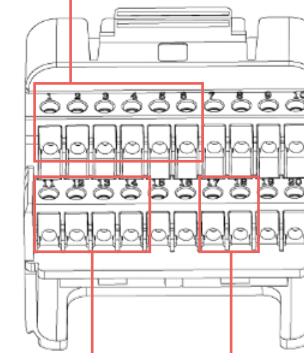
II. Multifunction Port Connection

External devices can be controlled or connected to the inverter through its Multifunction COM2 and COM3 ports.

COM2 port function

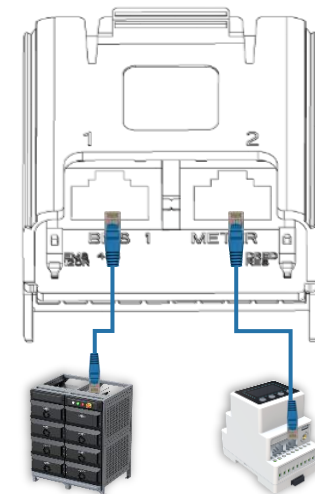


Pin 1~6 for DRED/RCR/§14a



Pin 17~18 DI from ATS

Pin 11~12 / Pin 13~14
Control DG or smart load



BAT comm.
(BMS1)

Meter comm.
(Optional)

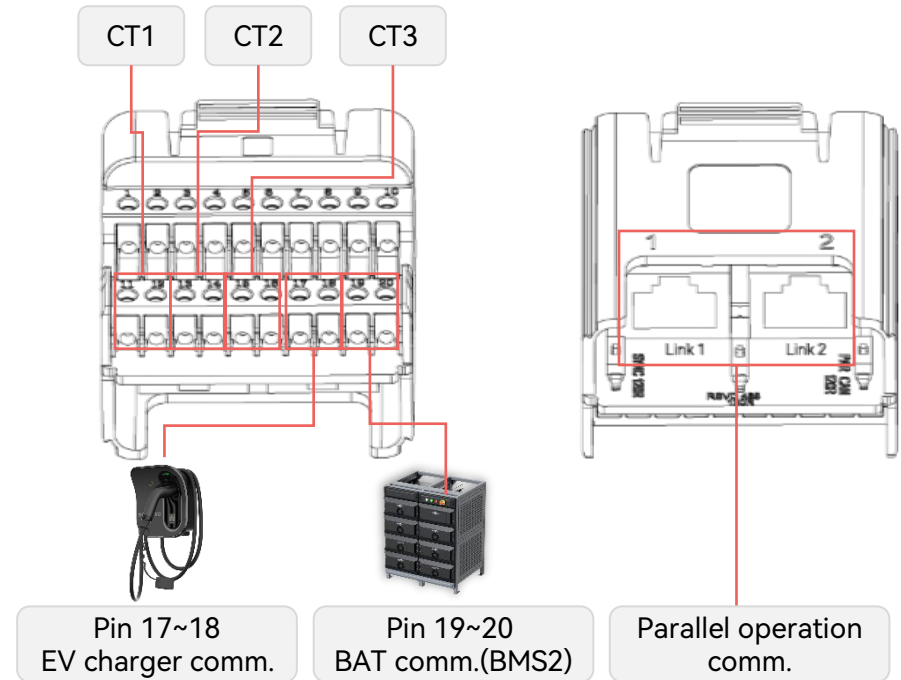
Communication Connection

II. Multifunction Port Connection

External devices can be controlled or connected to the inverter through its Multifunction COM2 and COM3 ports.

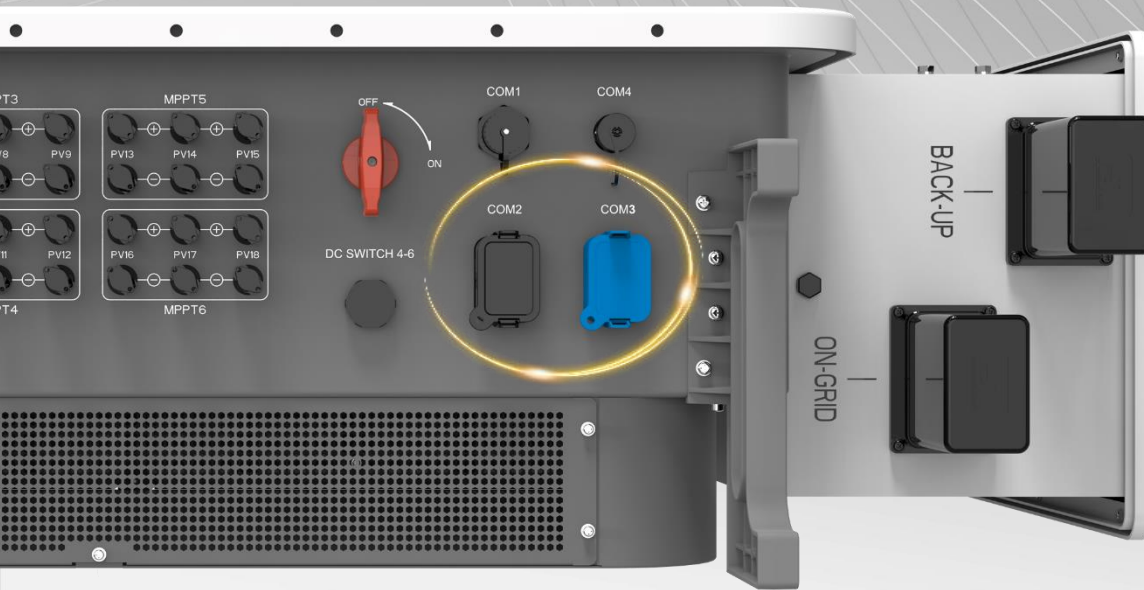


COM3 port function



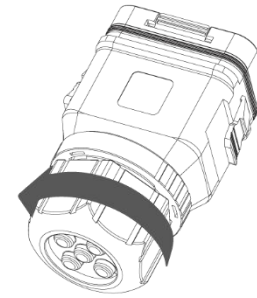
Communication Connection

II. Multifunction Port Connection

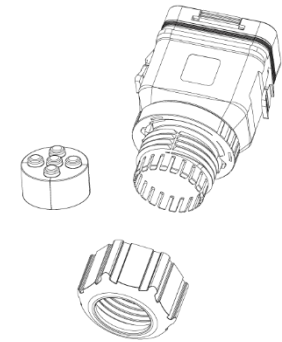


Step 1: Split Multi-Function Connector

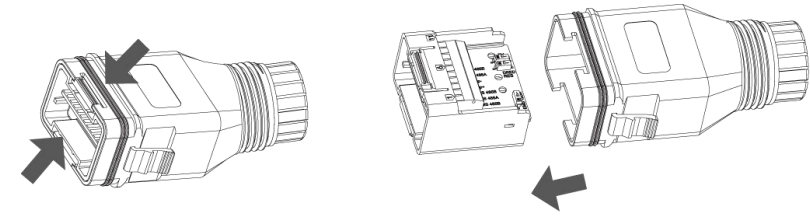
① Unscrew the swivel nut from the connector.



② Remove the seal and thread the cable through the gland.



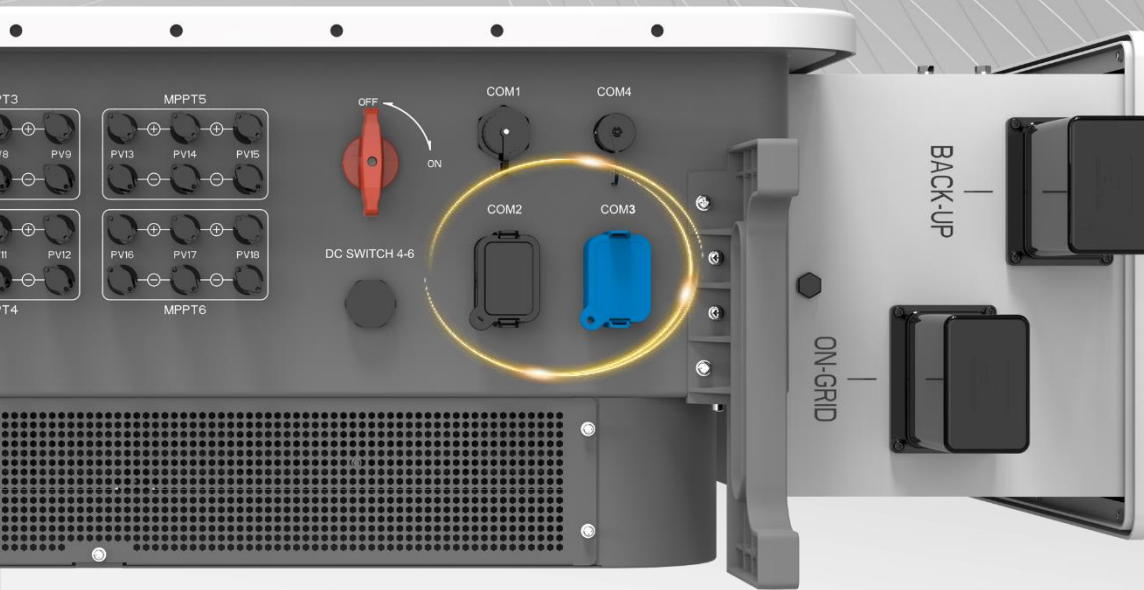
③ Take out the terminal block.



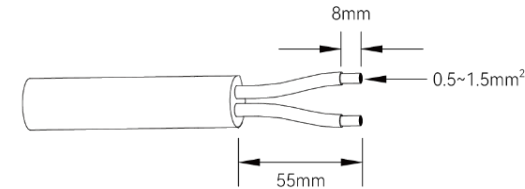
Communication Connection

II. Multifunction Port Connection

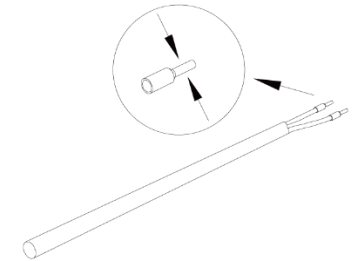
Step 2: Terminal Block Wiring



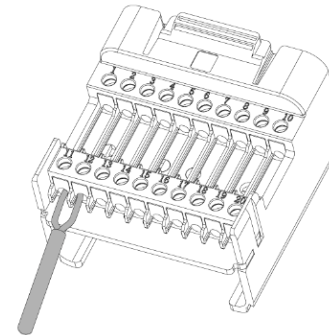
① Prepare the cable



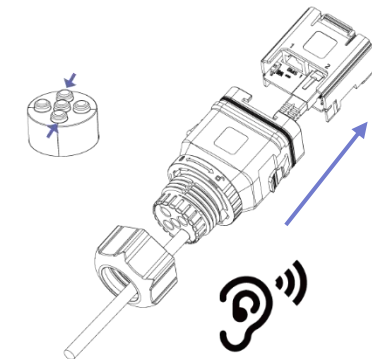
② Wire termination (optional for multi-strand copper cable)



③ Secure connections
(1.2+/-0.1N·m)



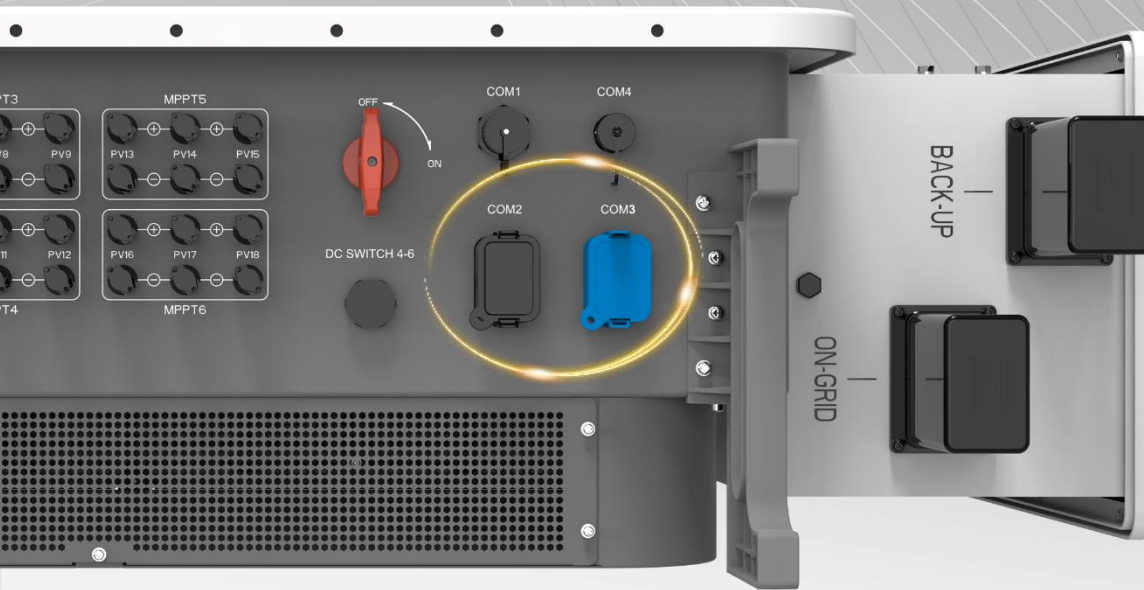
④ RJ45 assembly



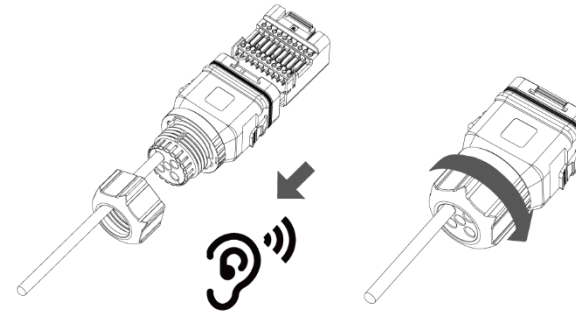
Communication Connection

II. Multifunction Port Connection

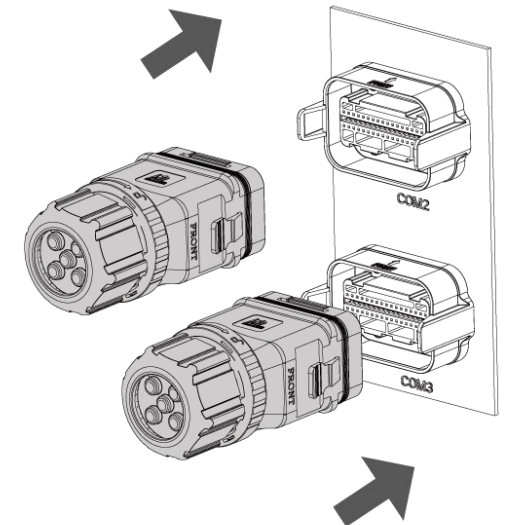
Step 2: Terminal Block Wiring



- ⑤ Insert the terminal block into the connector.



- ⑥ Plug the COM2 and COM3 connectors into their respective inverter ports.

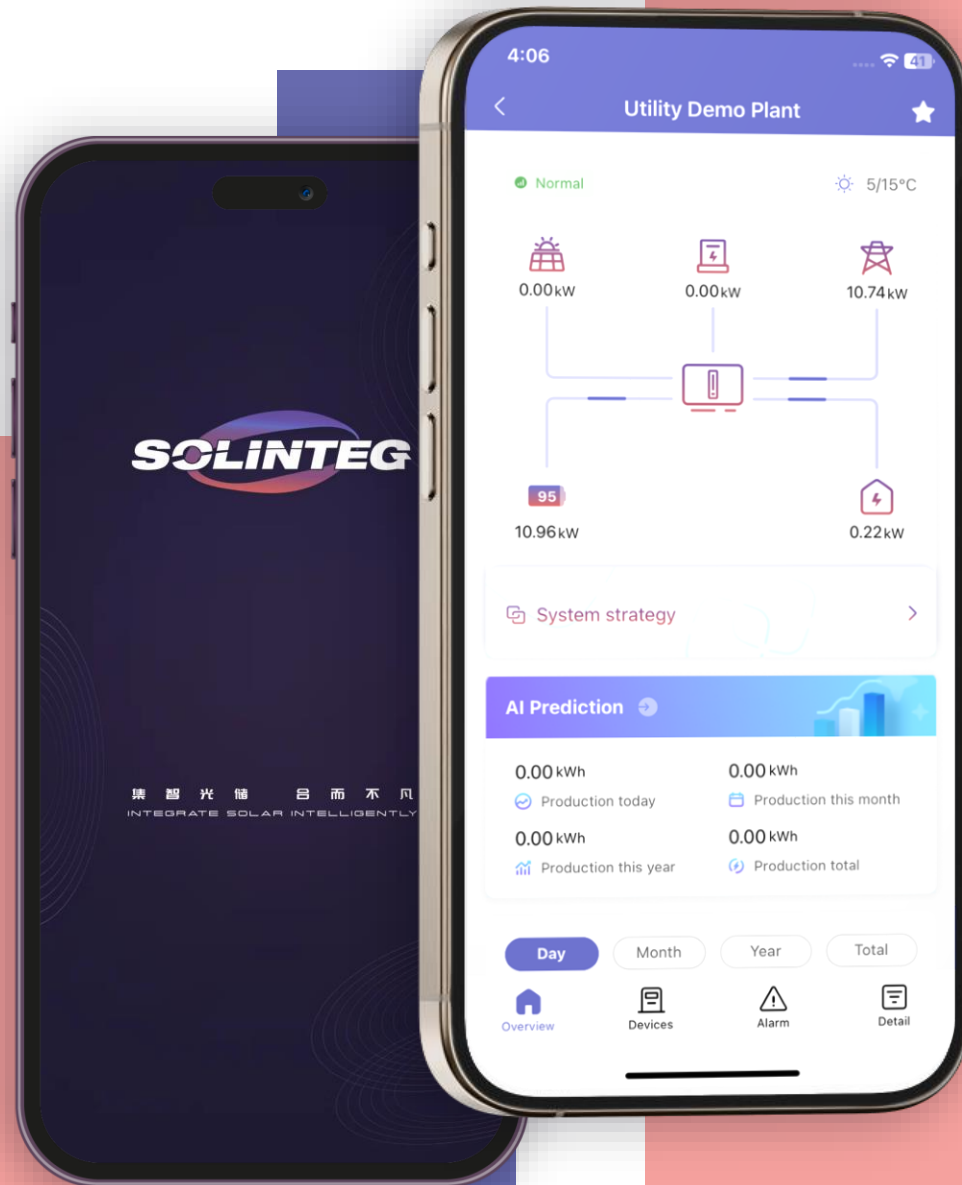


04

Commissioning

SOLINTEG

I. App Download



SOLINTEG

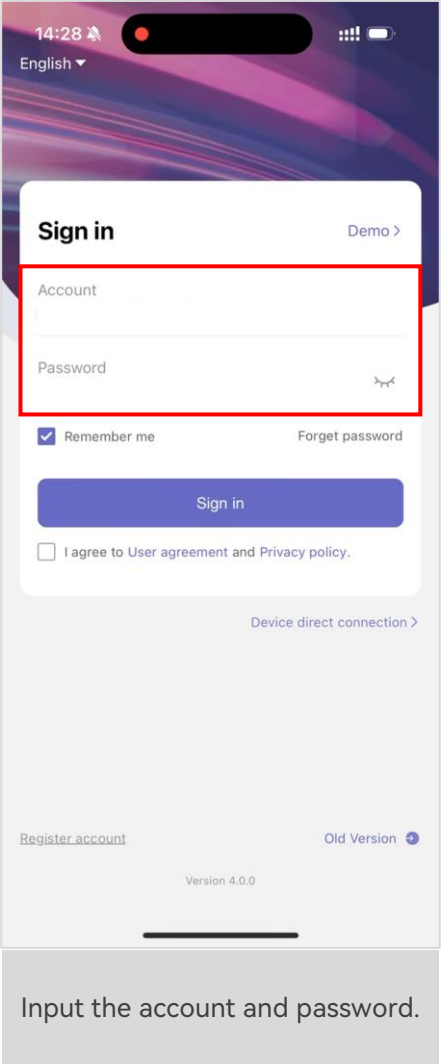
Monitoring App - IntegHub

Available on the
App Store

Available on
Google Play

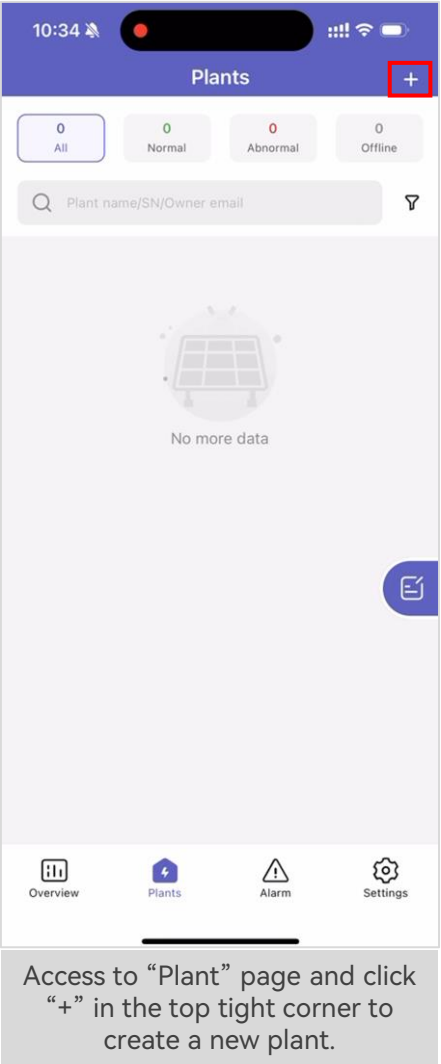


II. Create a New Plant



Input the account and password.

*Organization account can be requested from Solinteg after-sales team.



Access to “Plant” page and click “+” in the top tight corner to create a new plant.

Select the organization to which the plant belongs.

Basic information of plant.

For calculating the revenue.

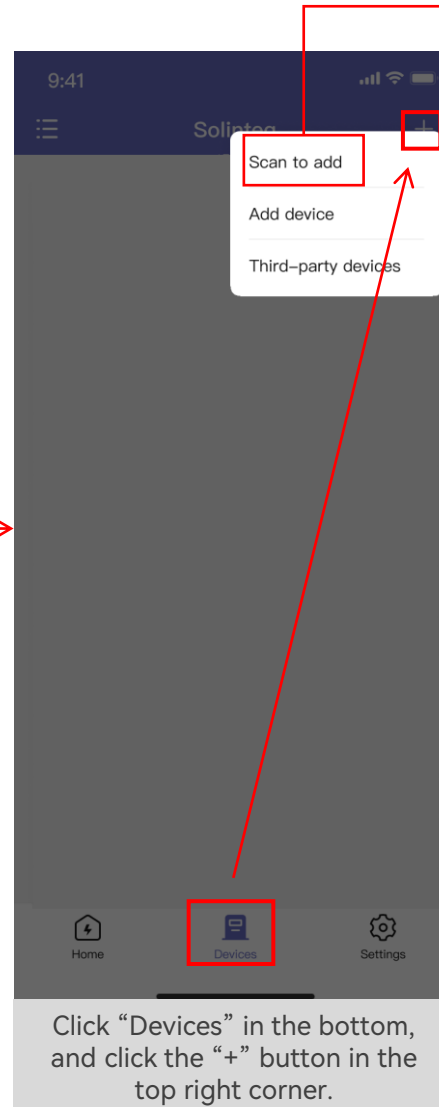
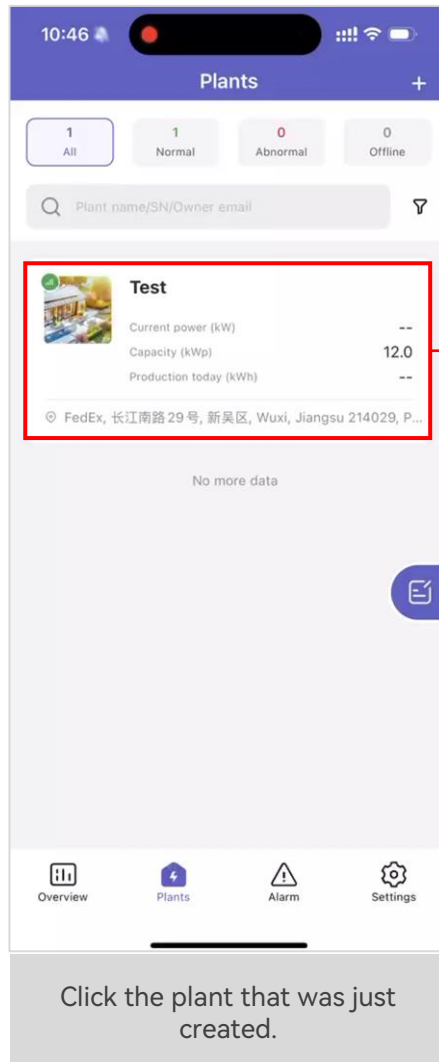
Complete the required information, with an asterisk (*) indicating mandatory fields.



The new plant will be created.

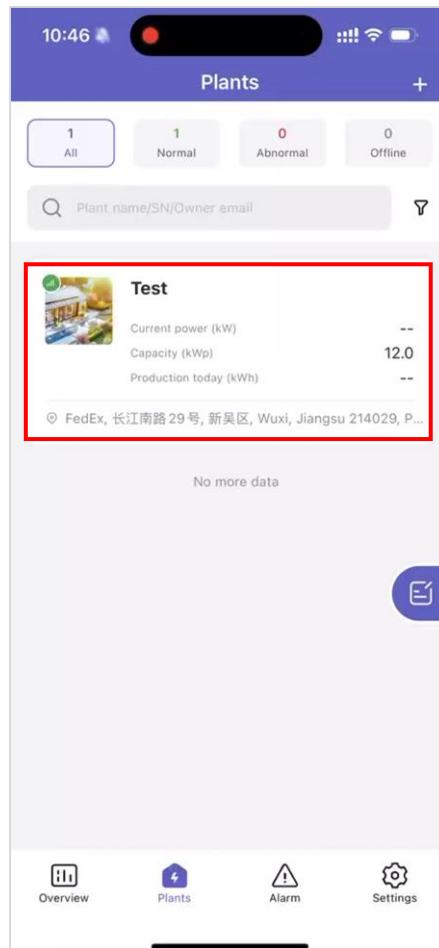
III. Add the Device

Method 1: Scan to add

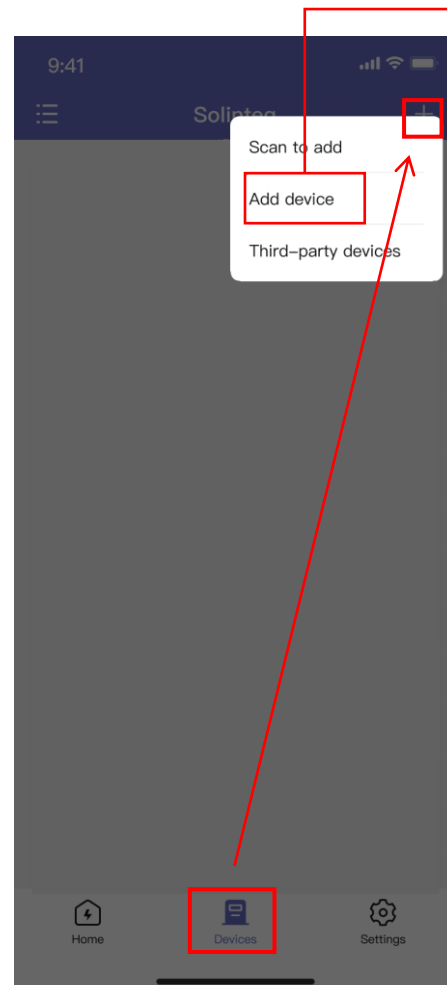


III. Add the Device

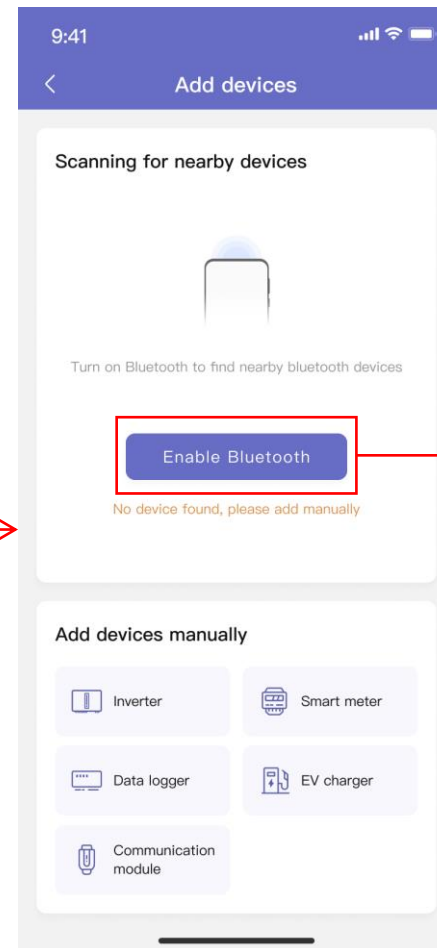
Method 2: Bluetooth connection



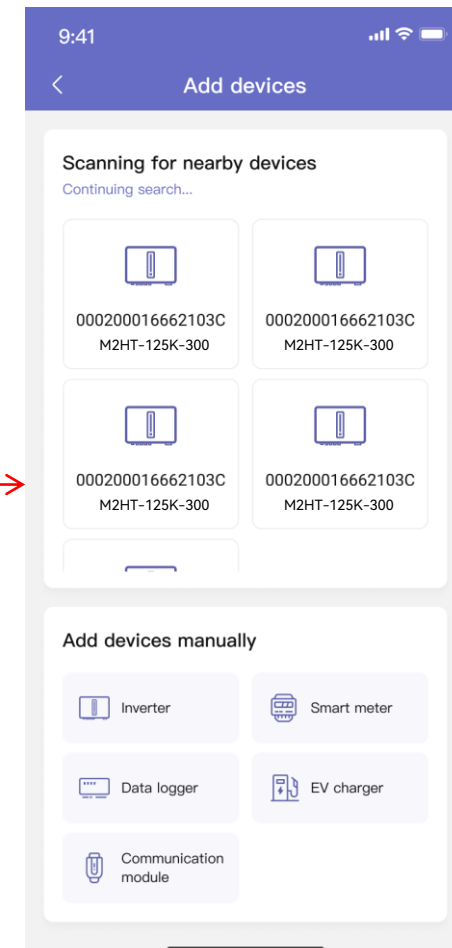
Skip the "Direct Connection", create a new plant and click the plant.



Click "Devices" in the bottom, click the "+" button in the top right corner, and then click "Add device".



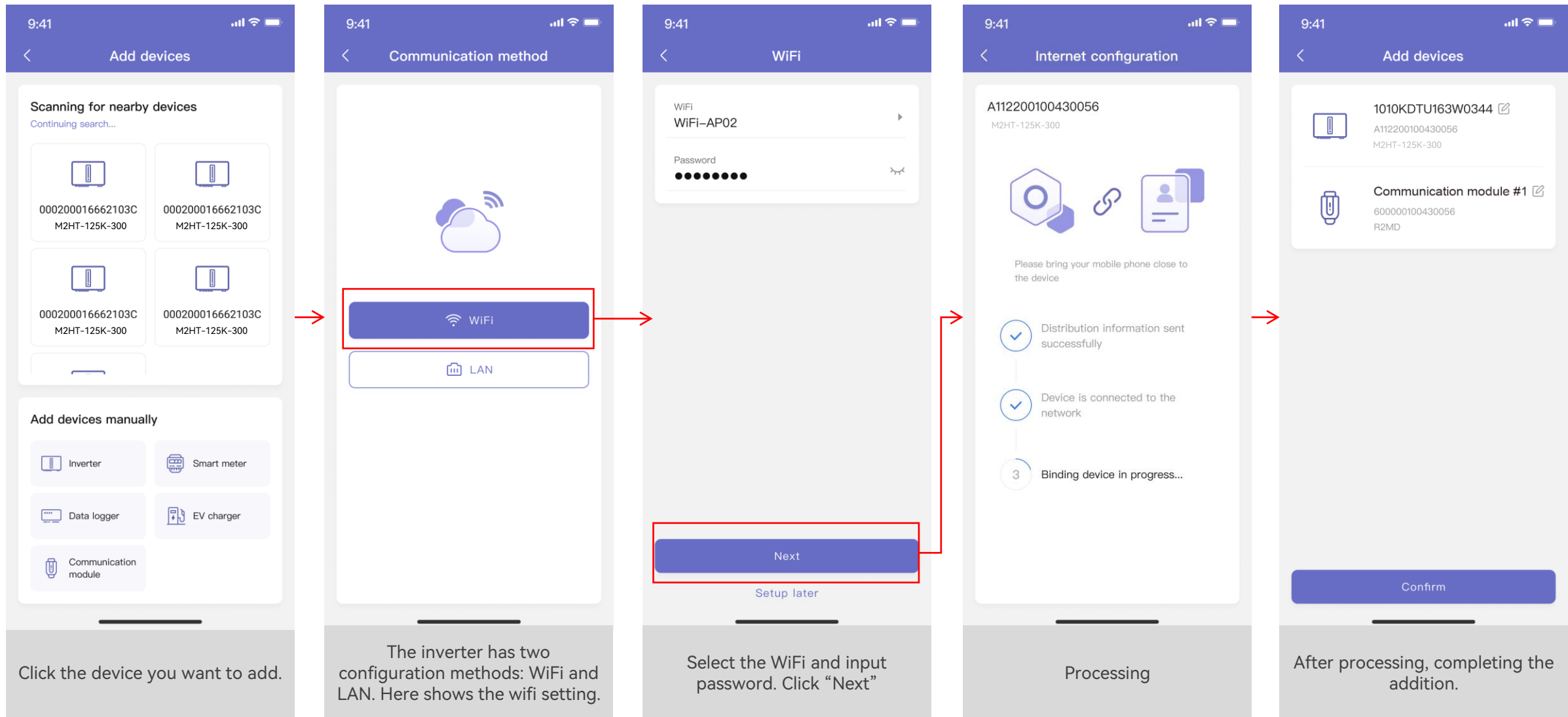
Click "Enable Bluetooth"



The nearby devices will be found.

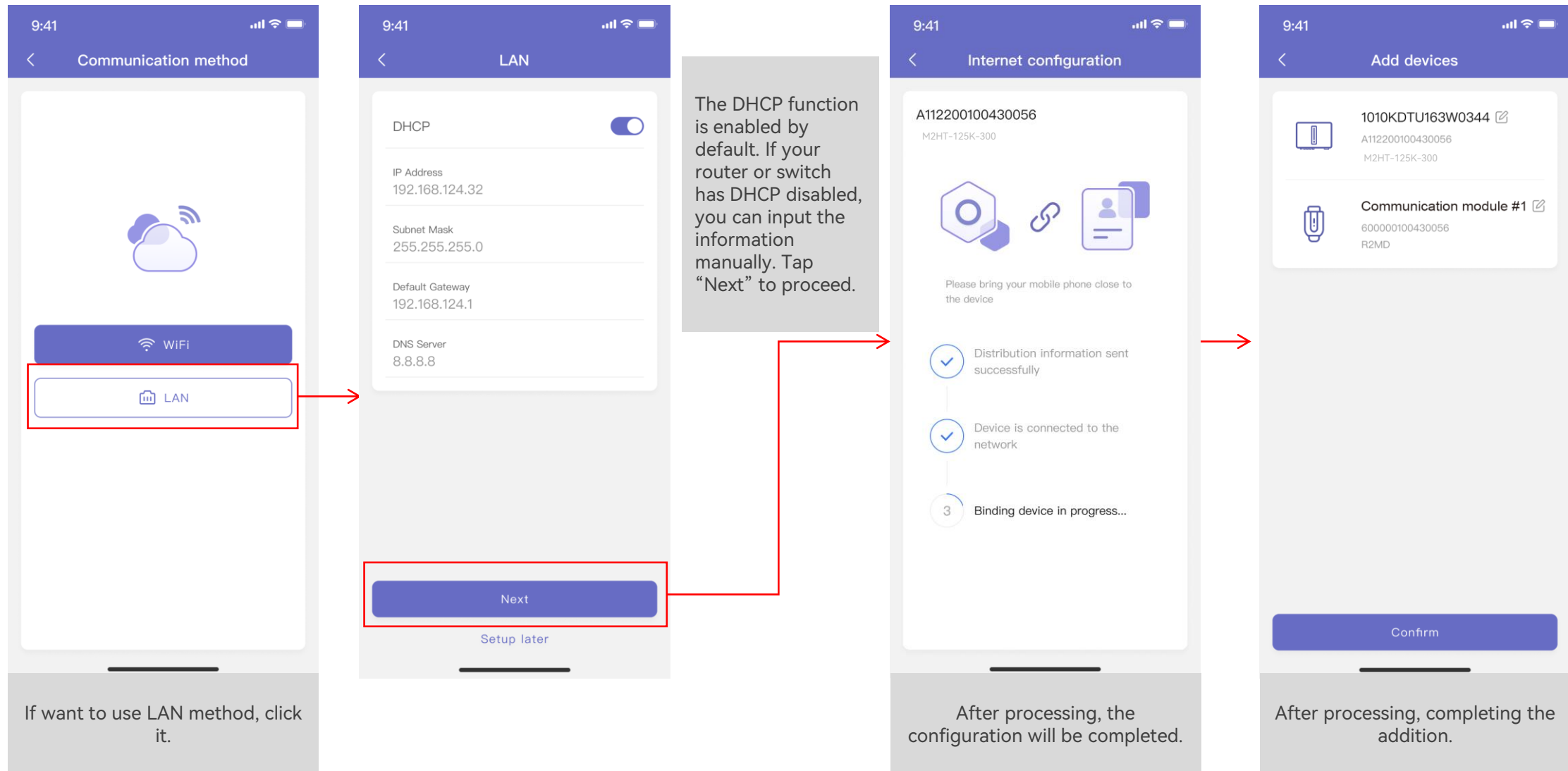
IV. Configure the Network

Method 1: Wi-Fi setting

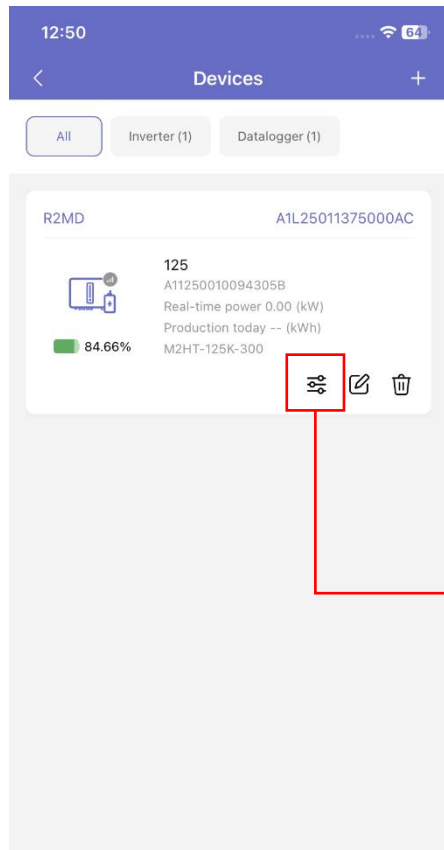


IV. Configure the Network

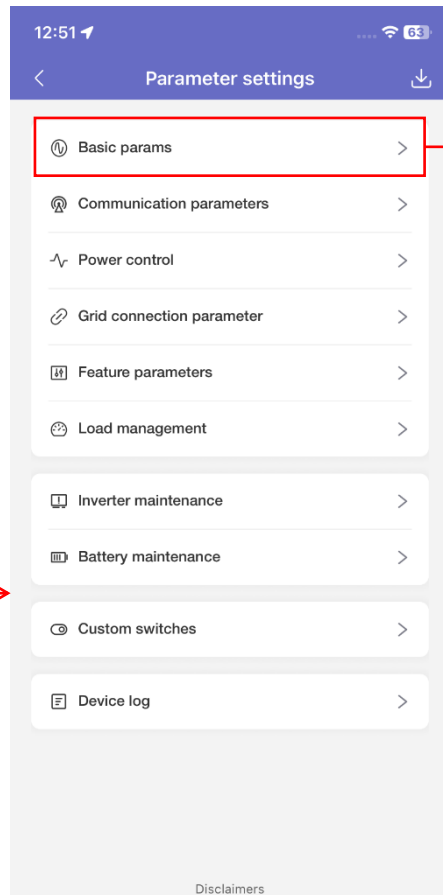
Method 2: LAN setting



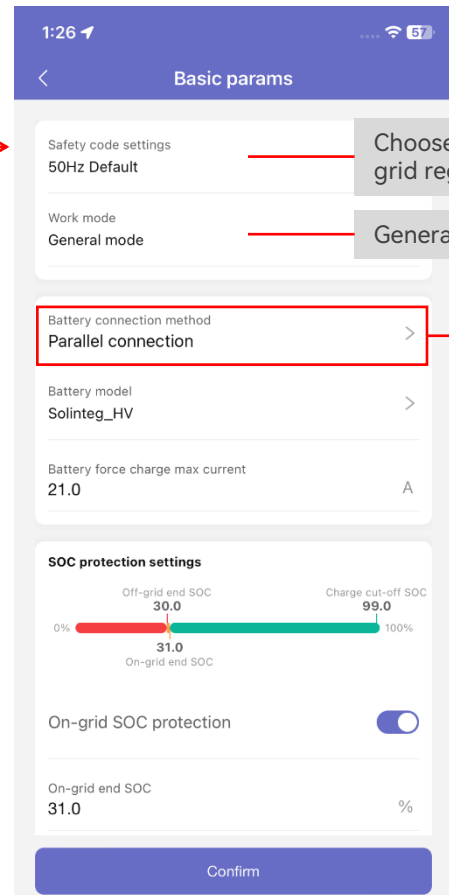
V. Inverter Configuration



After adding a device, you can see the added device on the “Devices” page.



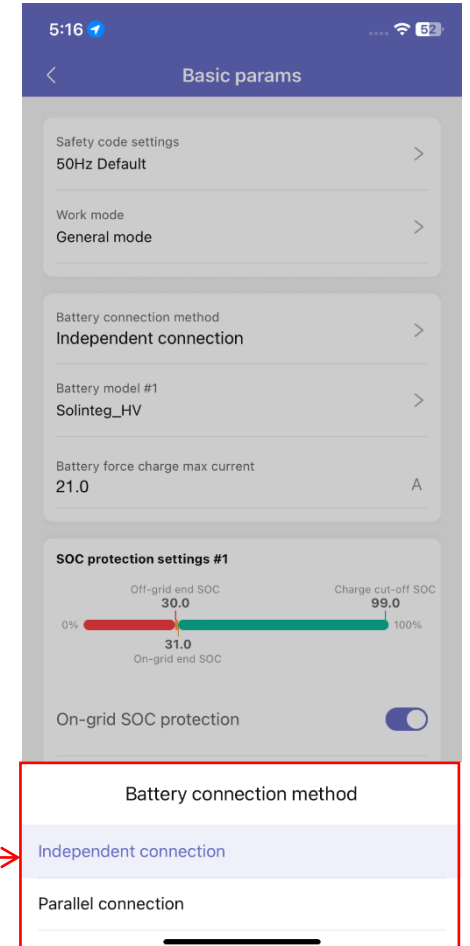
Click this button, jump to the “Parameter settings” page.



Basic parameters configuration

Choose according to the grid regulations

General mode as default.



Select battery connection method based on site conditions.

V. Inverter Configuration

Parameter settings

- Basic params
- Communication parameters
- Power control
- Grid connection parameter
- Feature parameters
- Load management
- Inverter maintenance
- Battery maintenance
- Custom switches
- Device log

Basic params

Safety code settings
50Hz Default

Work mode
General mode

Battery connection method
Independent connection

Battery model #1
Solinteg_HV

Battery force charge max current
21.0 A

SOC protection settings #1

Off-grid end SOC: 30.0
Charge cut-off SOC: 99.0
On-grid end SOC: 31.0

On-grid SOC protection: ☒

BAT#1 setting

Battery model #1
Solinteg_HV

Battery force charge max current
21.0 A

SOC protection settings #1

Off-grid end SOC: 30.0
Charge cut-off SOC: 99.0
On-grid end SOC: 31.0

On-grid SOC protection: ☒

On-grid end SOC: 31.0 %
Off-grid SOC protection: ☒
Off-grid end SOC: 30.0 %
Charge cut-off SOC: 99.0 %

BAT#2 setting

Synchronize configuration from Battery 1: ☒

Battery model #2
Solinteg_HV

SOC protection settings #2

Off-grid end SOC: 29.0
Charge cut-off SOC: 88.0
On-grid end SOC: 35.6

On-grid SOC protection: ☒

On-grid end SOC: 35.6 %
Off-grid SOC protection: ☒
Off-grid end SOC: 29.0 %
Charge cut-off SOC: 88.0 %

Battery connection method

- Independent connection
- Parallel connection

Parallel connection (Only one battery)

Independent connection (Two batteries connected)

Annotations:

- Select battery model by usage.
- Set the max force charging current.
- Turn on or off as needed. It is recommended to keep it on and set the on-grid SOC higher than the off-grid SOC.
- Enable "Synchronize" if BAT#2 settings match BAT#1.

V. Inverter Configuration

Parameter settings

- Basic params
- Communication parameters**
- Power control**
- Grid connection parameter
- Feature parameters
- Load management
- Inverter maintenance
- Battery maintenance
- Custom switches
- Device log

Disclaimers

Communication parameters

Modbus address
246

Confirm

Power control

Export limit ☒

Power to grid
0.0 kW

Import limit ☒

Power from grid ①
650.0 kW

Export control ①
Hard

Select export limit device
Meter

AC power setting ①
Rated

Max AC power limit
0.00 kW
Correct value range[0.00,137.50]

DI port configuration
Off

\$14a switch ① ☐

Confirm

Turn on or off as needed of export limit.

If on, set the maximum export power.

Turn on or off as needed of import limit.

Export control

Hard
Inverter stop generation

Soft
Output power = Feed in grid set value

Export control mode upon meter/CT communication failure.

Select export limit device

CT only

Meter

Select CT or Meter based on actual connection.

DI port configuration

Off

DRM

RCR

Adapted to power dispatching devices RCR and DRM.

V. Inverter Configuration

The image displays three sequential screenshots of an inverter configuration application, illustrating the steps to configure various parameters. Red boxes and arrows highlight key settings and their recommended values.

Screenshot 1: Parameter settings
The 'Feature parameters' option is highlighted with a red box. A callout states: **Not recommended to change.**

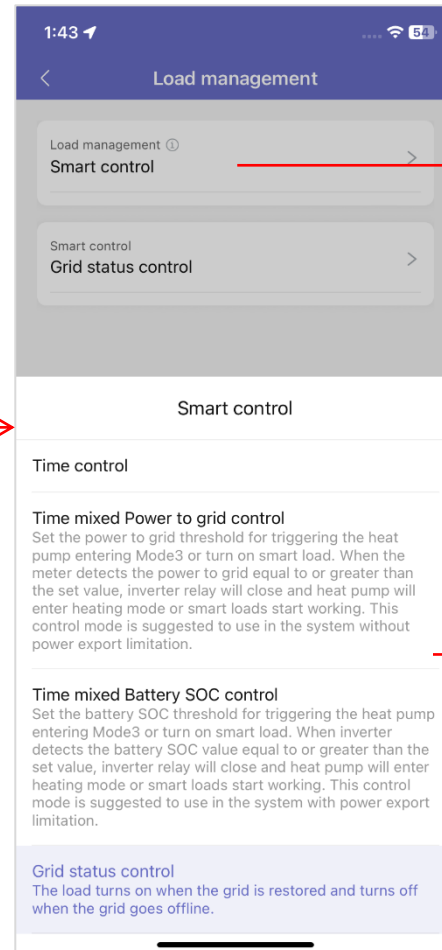
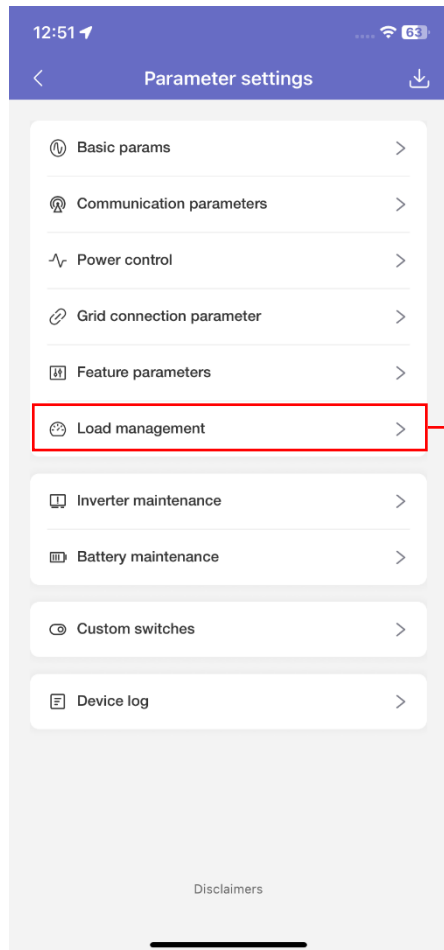
Screenshot 2: Feature parameters
This screen shows various configuration options with callouts explaining their function:

- Multiple inverter role:** Set to **Independent**. Callout: Select "Independent" in single inverter application, select "Master" or "Slave" in parallel system.
- CommsWatchDog:** Enabled (toggle on). Callout: Enable: Stop on EMS communication loss. Disable: Continue running on EMS communication loss.
- On/Off-grid switch:** Enabled (toggle on). Callout: If turn on, the inverter can realize auto switch between on-grid and off-grid when grid fail or recover.
- MPPT parallel connection:** Enabled (toggle on). Callout: Turn on or off as needed.
- MPPT1 Shadow Scan, MPPT2 Shadow Scan, MPPT3 Shadow Scan, MPPT4 Shadow Scan, MPPT5 Shadow Scan, and MPPT6 Shadow Scan are all enabled (toggles on).

Screenshot 3: Advanced settings
This screen shows additional configuration options with callouts:

- Unbalanced output:** Enabled (toggle on). Callout: Default to open to enable phase unbalanced output on the on-grid side.
- Off-grid overload reconnection delay:** Set to 35 s.
- Off-grid voltage setting:** Set to 236.0 V.
- N-PE check:** Disabled (toggle off). Callout: If there are no special requirements, you can save the default settings.
- Emergency shutdown mode:** Set to Normally open.
- Grid phase sequence settings:** Set to Auto adaption.

V. Inverter Configuration



“Turn off” by default. “Manual mode” and “Smart mode” can be used in different situations to increase the utilization rate of green power.

Under "Smart Control," choose from four modes: Time control, Time-mixed grid export, Time-mixed SOC, or Grid status control

THANK YOU

www.solinteg.com