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pv magazine webinars

# New entrants bring new perspectives: Hybrid inverter series for C&I applications

**7 December 2022**

9:00 am – 10:00 am | GMT, London
10:00 am – 11:00 am | CET, Berlin
11:00 am – 12:00 pm | EET, Athens

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# Welcome!

pv magazine webinars

**Do you have any questions?** ? 

Send them in via the Q&A tab.  We aim to answer as many as we can today!

You can also let us know of any tech problems there.

**We are recording this webinar today.** 

We‘ll let you know by email where to find it and the slide deck, so you can re-watch it at your convenience.  

# Solinteg Introduction

www.solinteg.com


SOLINTEG
SOLINTEG
Integrate
Solar
Intelligently

# About **Solinteg**

Solinteg, a leading technology and innovative thinking enterprise, provides advanced and optimized energy storage solutions to intelligently integrate solar energy into the distributed grid.

Driven by cutting-edge technology and the MORE platform, Solinteg offers reliable products with outstanding performance, including PV inverters, batteries, smart terminals, monitoring devices and EMS services.

Solinteg has deployed global sales channels and customer service centers dedicated to delivering safe, intelligent, cost-effective and sustainable clean energy to residential, commercial and industrial users around the world.

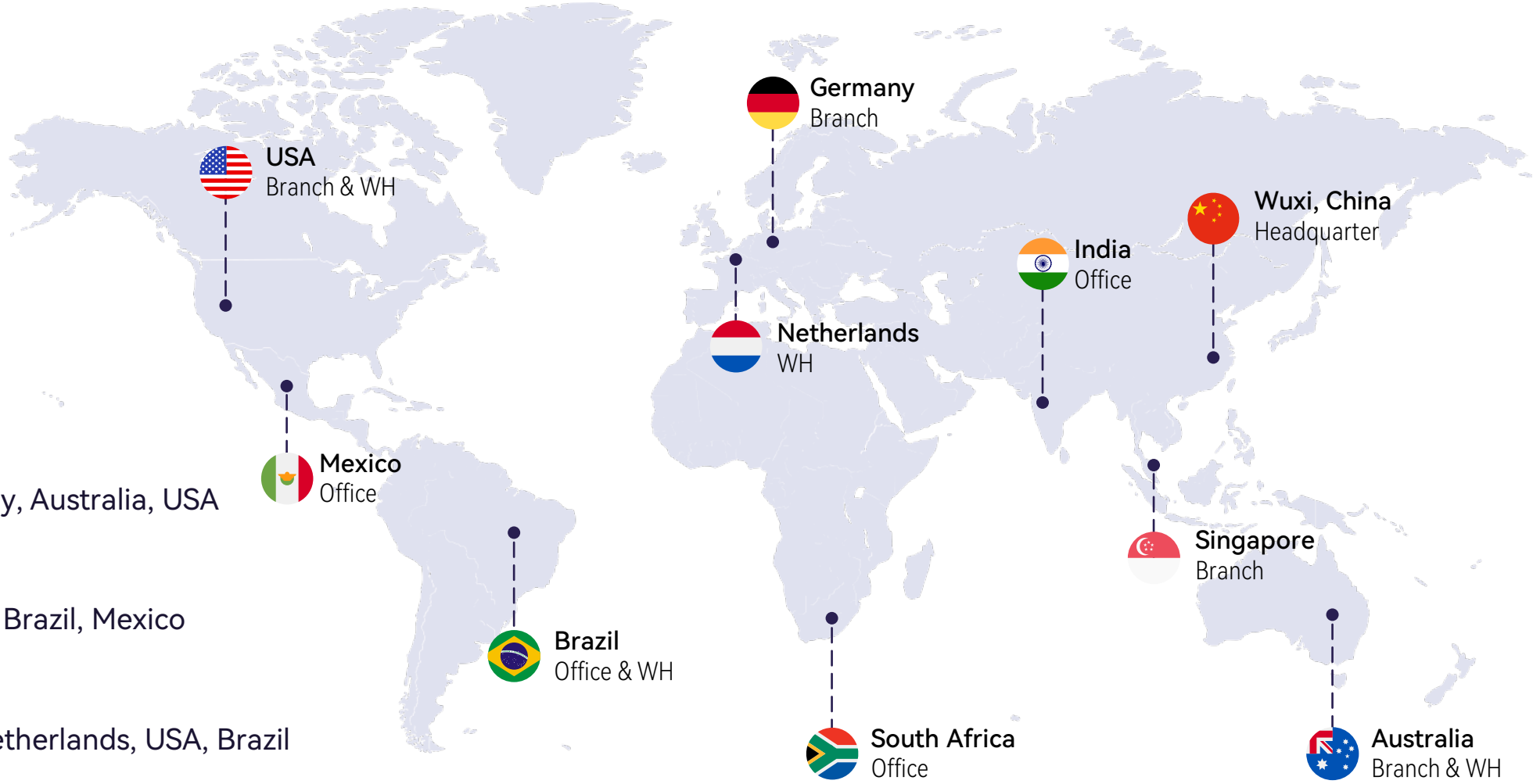
# Strategic Investment for Global Sales & Service

**Headquarter**
Wuxi, China

**Branch**
Singapore, Germany, Australia, USA

**Office**
India, South Africa, Brazil, Mexico

**Warehouse**
China, Australia, Netherlands, USA, Brazil



# MORE to ONE – Design for Intelligent Clean Energy

**Integ M Series**
- The Power Master -
Hybrid Inverter

**Integ O Series**
- The Power Operator -
On-grid Inverter

EMS

**Integ ONE Solution**

HomeOne for Residential

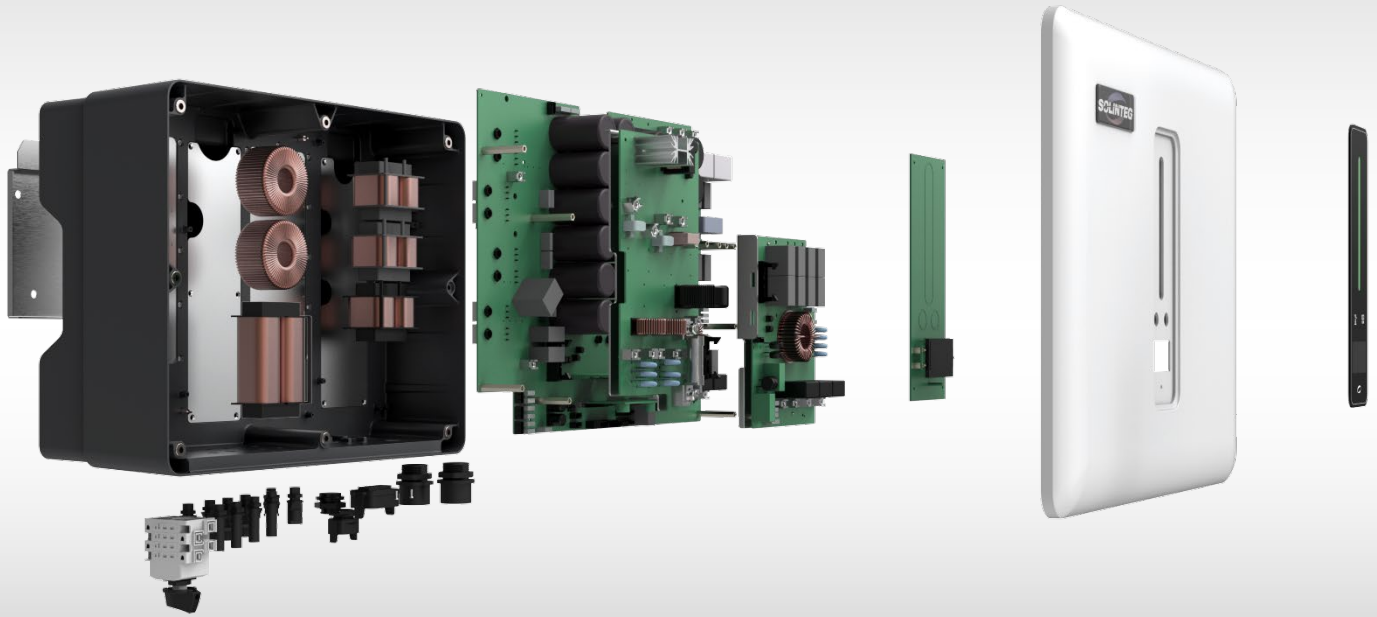
ParkOne for Commercial

EMS

**Integ R Series**
- The Power Reader -
Monitoring Device

**Integ E Series**
- The Power Extender -
Battery / Smart Terminal

# Solinteg MORE Platform with Advanced R&D Concept



## Modular

- CBB (Common building block) design concept for hardware and structure
- Firmware integrated with modular function optimized by intelligent algorithm

## Optional

- Easy for functional configuration with modular design of firmware and hardware
- Flexible and achievable for deep customization

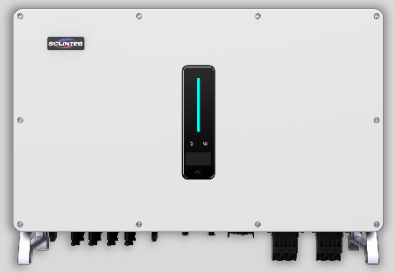
## Reliable

- Stable performance and high reliability for all series products
- Highly share design ideas, validation techniques and supply chain management

## Extensible

- Simple for external expansion with standardized components
- Easy for performance adjustment due to ability to customize

# Integ M — High Voltage Hybrid Inverter

| Product Overview |  3-8 kW Single phase |  4-12 kW Three-phase |  10-20 kW Three-phase |  25-50 kW Three-phase |
|---|---|---|---|---|
| Battery Voltage Range | 85-465V | 135-750V | 135-750V | 135-750V |
| Max. Efficiency | 97.6% | 98.2% | 98.4% | 98.8% |
| PV Input Current | 15A | 15A | 30A | 30A |
| Unbalanced Load | N/A | 110% | 110% | 100% |
| Charge & Discharge | 30/30A | 25/25A | 40/40A | 100/100A |
| UPS Switching Time | < 10ms | < 10ms | < 10ms | < 20ms |
| Dimensions | 534×418×210 mm | 534×418×210 mm | 534×418×210 mm | 800×620×300 mm |

# Integ O – Grid Connected PV Inverter

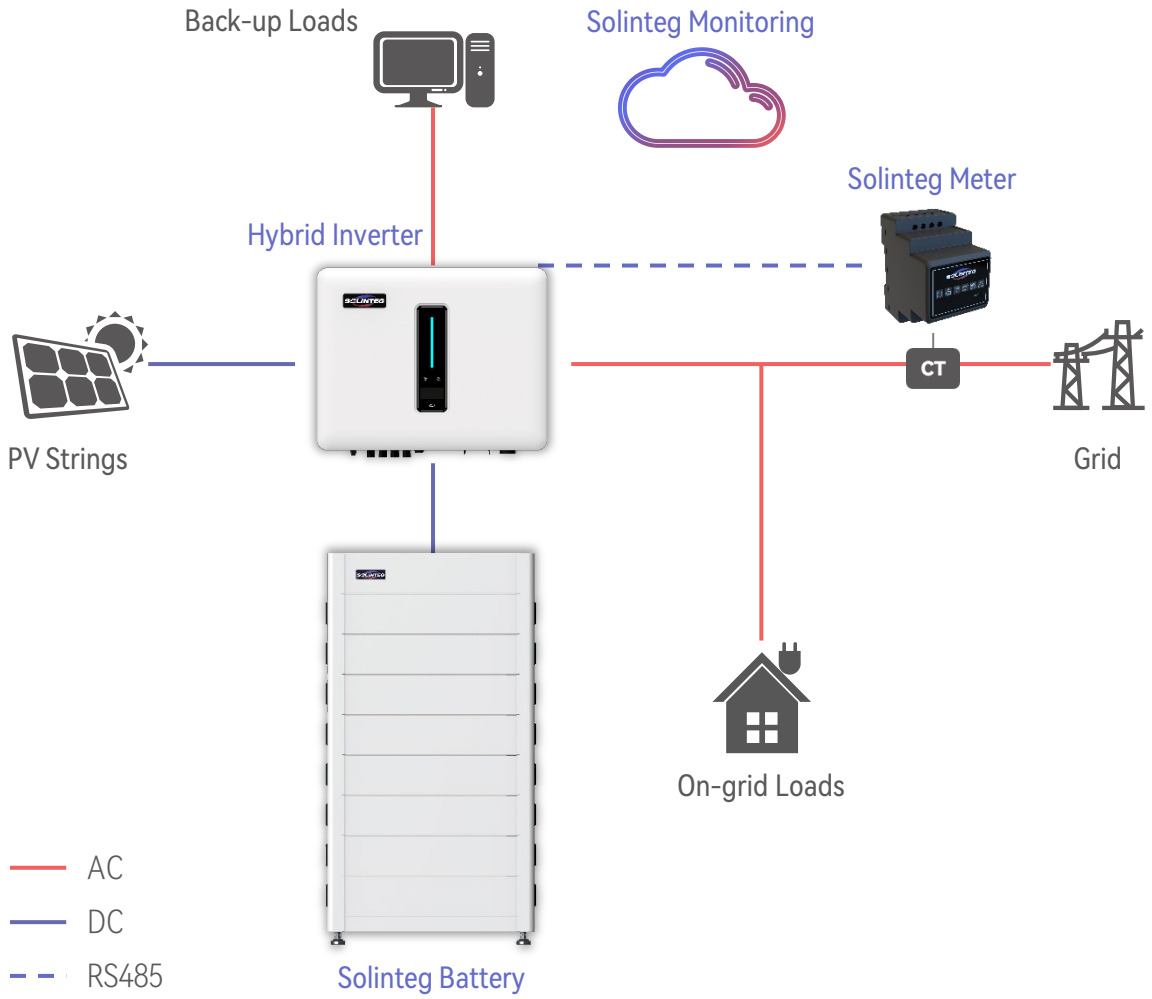
| | 1.5-3.3kW<br>Single Phase<br>(Launched) | 3.6-6kW<br>Single Phase<br>(Launched) | 7-10kW<br>Single Phase<br>(Coming Soon) | 4-25kW<br>Three-Phase<br>(Coming Soon) | 80-125kW<br>Three-Phase<br>(Coming Soon) |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| Max Input Voltage (V) | 500 | 600 | 1100 | 1100 | 1100 |
| Max PV Input Current (A) | 15 | 15/15 | 15/30 | 15/15; 30/30 | 10×26/5×52 |
| No. of MPP Trackers | 1 | 2 | 2 | 2 | 10/5 |
| MPPT Voltage Range (V) | 50-450 | 50-500 | 50-500 | 160-1000 | 200-1000 |
| Start-up Voltage (V) | 60 | 60 | 60 | 180 | 200 |
| Max Efficiency | 97.5% | 98.1% | 98.1% | 98.6% | 98.8% |

SOLINTEG


HomeONE
Residential Energy Storage Solution


ParkONE
Commercial Energy Storage Solution

# HomeOne – Intelligent Energy Solution for Home




**Integration**
Key components from Solinteg

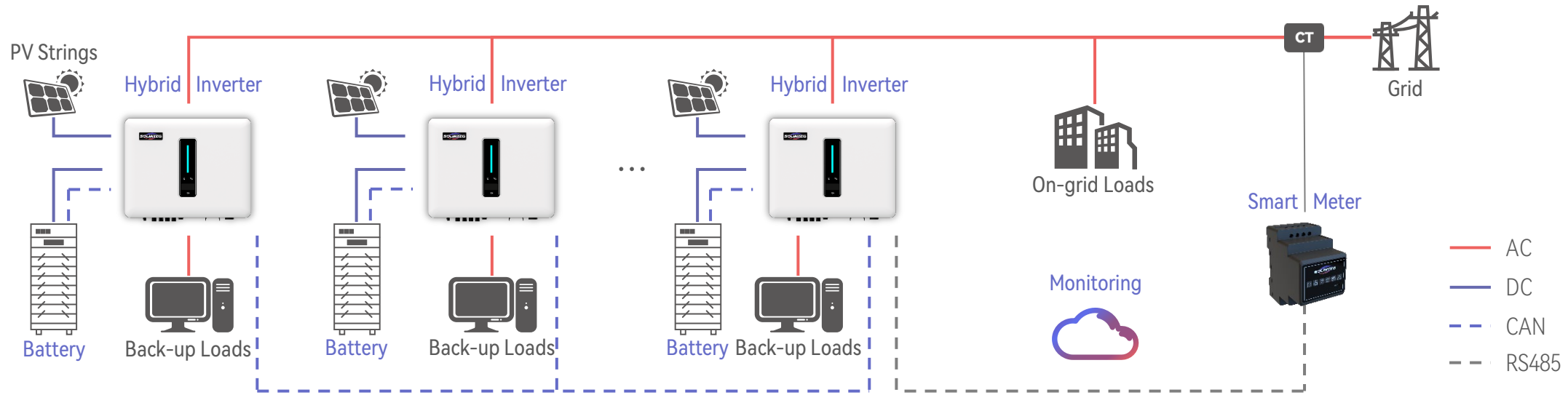
**Efficiency**
Efficient coordination for system operation

**Extensibility**
Flexibly expand capacity of system

**Intelligence**
Harvest more power with intelligent EMS

| System Components | |
|---|---|
| Solinteg Hybrid Inverter | Integ M 3-8kW Single Phase<br>Integ M 4-20kW Three-Phase |
| Solinteg Battery | Integ E Battery |
| Solinteg Meter | Integ R Meter |
| Solinteg Monitoring | Integ EMS |

# ParkONE – Intelligent Energy Solution for C&I




| System Components | |
|---|---|
| Solinteg Hybrid Inverter | Integ M 10-20kW Three-Phase<br>Integ M 25-50kW Three-Phase |
| Solinteg Battery | Integ E Battery |
| Solinteg Meter | Integ R Meter |
| Solinteg Monitoring | Integ EMS |

**Integration**
Key components from Solinteg

**Efficiency**
Efficient coordination of operation

**Extensibility**
Flexibly expand capacity of system

**Intelligence**
Harvest power with intelligent EMS

# Solinteg Focus On Delivering Value

## TECHNOLOGY

40%

R&D Staff Approx.

## GLOBAL & LOCAL

4

Branches in Plan
Singapore/Germany/
USA/Australia

## SUPPLYCHAIN

90%

Strategic Partners
from World-leading
Level

## CAPACITY

10GW

Production Capacity
Ready in 2025

# THANK YOU

www.solinteg.com

# Three-phase C&I Hybrid Solution MHT 25-50KW

www.solinteg.com

2022.12.04

SOLINTEG ACADEMY

INTEGRATE SOLAR INTELLIGENTLY

# MHT25-50K Hybrid Comprehensive Highlights

**PV**
2/4 MPPT-6/8 PV inputs
15-30A PV Input current, compatible with high-power PV panels
150% DC/AC ratio

**On-grid**
110% Continuous AC overloading
120% Input power from grid to support back-up load and battery
98.8% Industry-leading efficiency


**25K/30K/36K/40K/50K**

**Battery**
135-750V Wide battery volt range
100A Charging/Discharging current
6.72-99.61kWh flexible battery capacity
Integrated EMS with four preset work modes

**Back-up**
<20ms UPS switching over time
110% More than full-load output power
120% Back-up overloading @60s
100% Unbalanced output

# MHT25-50K Hybrid Key Advantages


## PLUG&PLAY
Plug-and-play connectors offer time-saving and convenient installation

## APP/OLED
Two ways of configuration and data managing offers operation reliability & flexibility

## Breathe Light
Inverter working status at a glance

## IP65
For indoor and outdoor use

## HIGH POWER DENSITY
Much smaller compared with other same power range inverters in the market

## 10UNITS
Extend the application from 50kW to 500kW

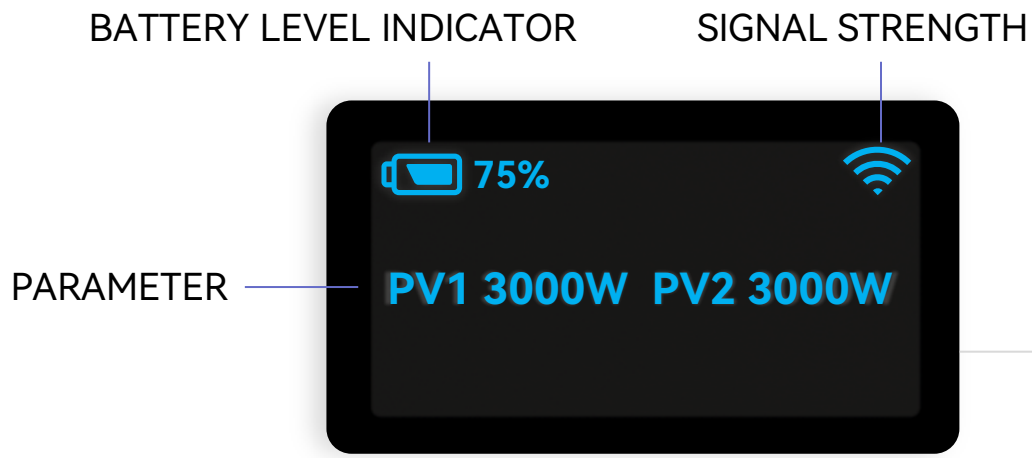
## PARALLEL CONNECTION

## Compatibility
Pylontech / Dyness / Wattsonic
AOBO / Soluna / Solinteg EBS

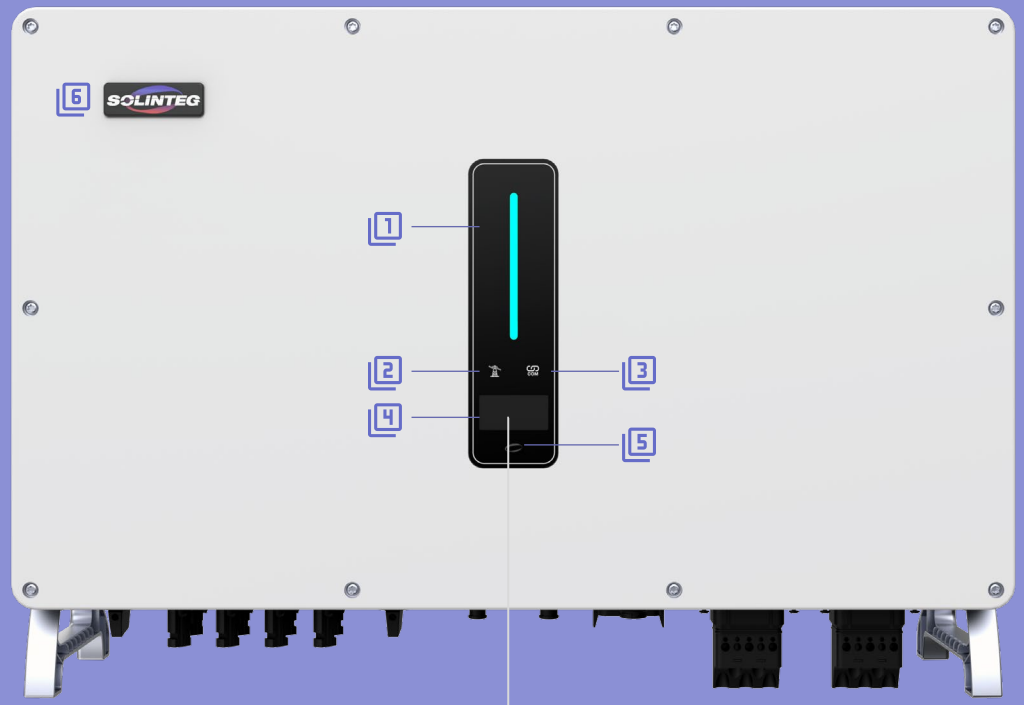
## Dry Contact
For heat pumps and other smart loads control

# Easy to Read Data

1. I-LIGHT - INTELLIGENT POWER & ALARM INDICATOR
2. GRID STATUS LED INDICATOR
3. COMMUNICATION INDICATOR
4. MULTI-FUNCTION OLED DISPLAY*
5. OPERATION BUTTON
6. SOLINTEG LOGO




Integ M
MHT 25-50KW

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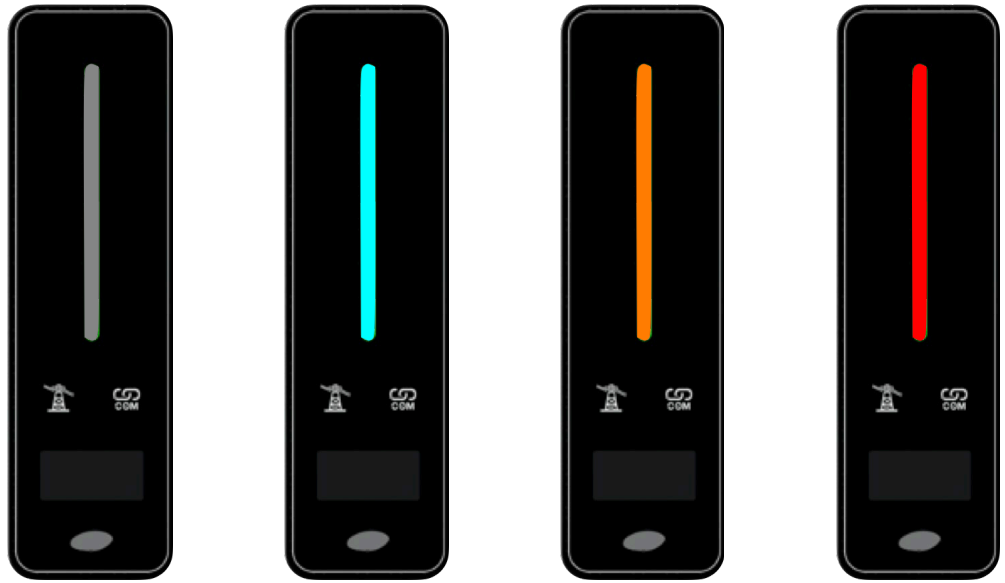
# I-Light-Easy to Identify Working Status



- NO AC OUTPUT POWER
- NORMAL
- LOW BATTERY WARNING
- FAULT OCCURS

Integ M
MHT 25-50KW


SOLINTEG ACADEMY

# Easy Commissioning


SolintegSet

## OLED/APP

Easy commissioning by Oled display and SolintegSet App, more flexible and reliable

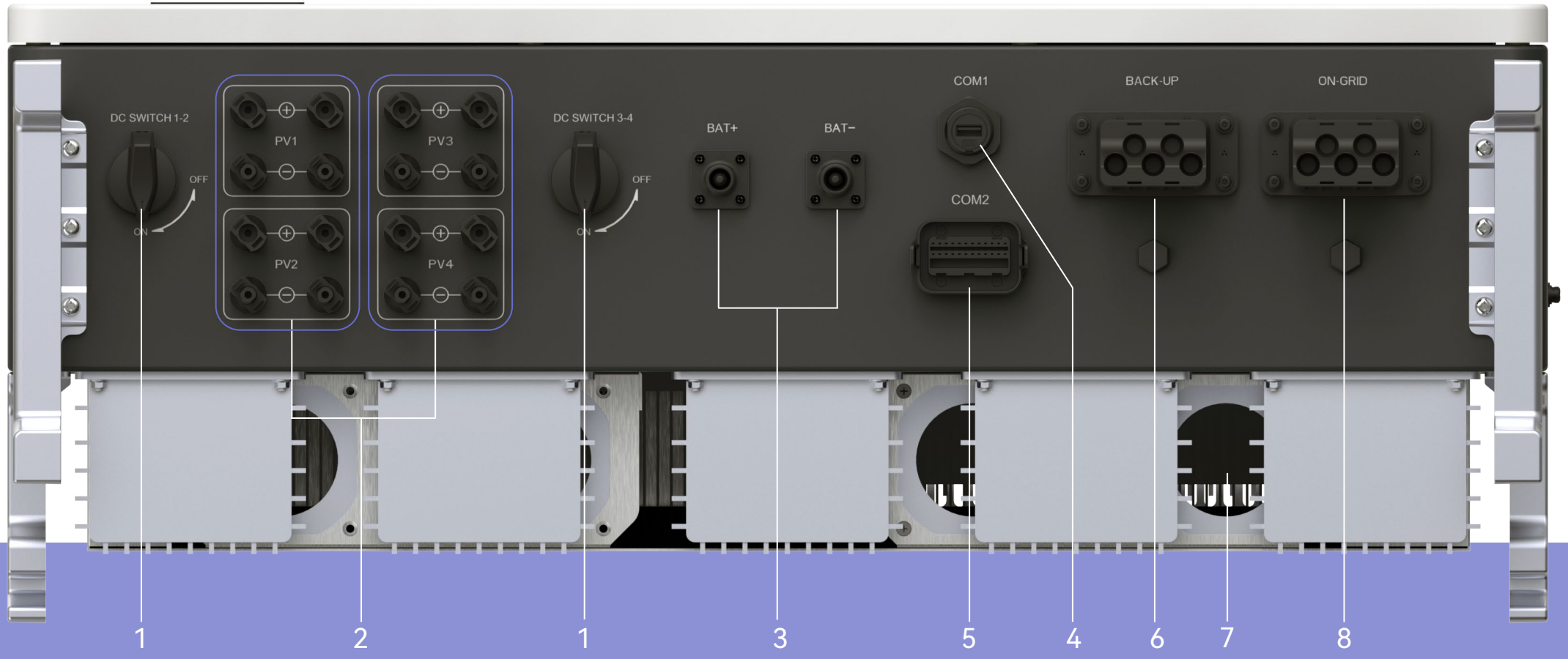
## General Settings

Support language, DHCP, time, IP, Modbus settings, etc.

## Advanced Settings

Support safety code, battery brand, work mode, export limit, power factor, SOC protect, SOC value, unbalanced output, MPPT parallel settings, etc.

# Spacious Room for Installation & Maintenance



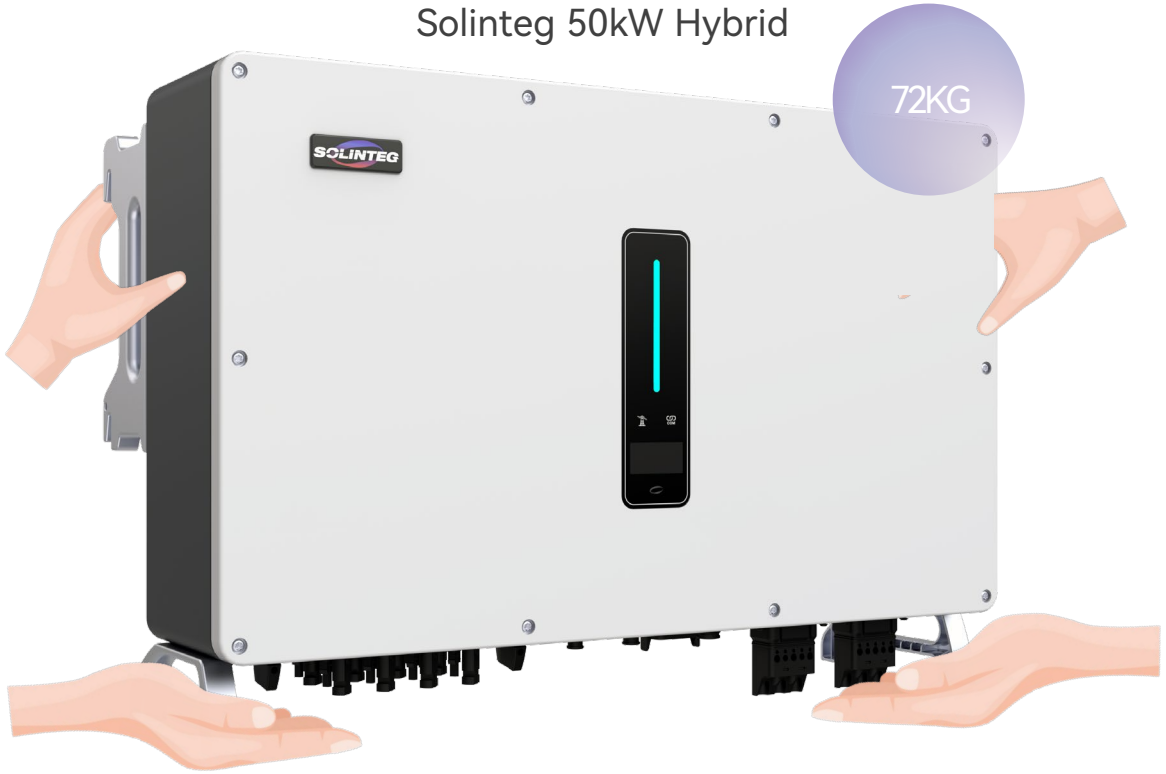

1 DC Switches(Optional) 2 PV Terminals 3 Battery Terminals 4 Communication Port(WiFi/LAN/4G)

5 Multi-function Connector(METER/BMS/RS485/DRED/RRCR) 6 Back-up Connector 7 Fan 8 On-grid Connector

# Convenient and Cost-saving Installation

Easy to hang on the wall with only two persons,
saving time and money on the installation

Solinteg 50kW Hybrid




Others 50kW Hybrid

Need to use **forklift**
to install the inverter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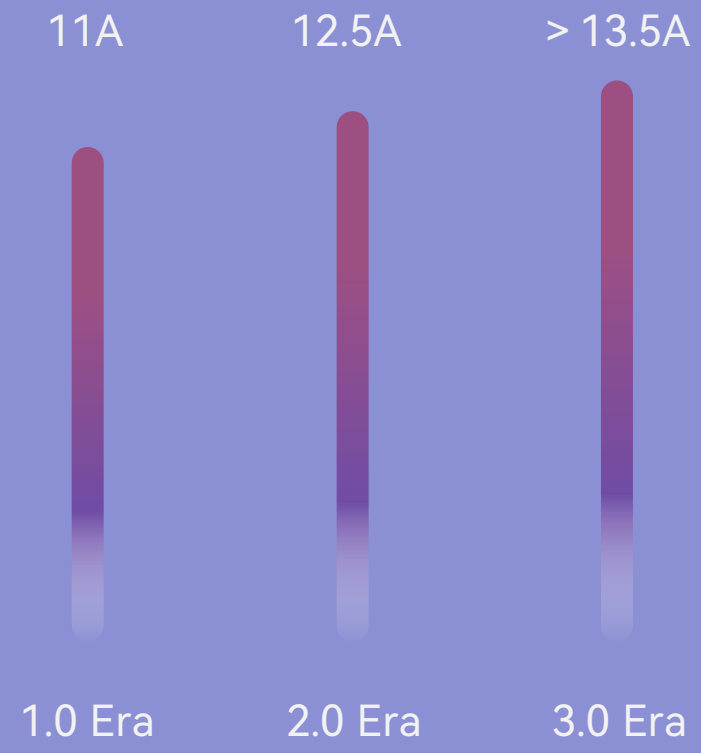
# 15A PV Input-No PV Power Loss


# More Power Generation

Compatible with high-power PV panels

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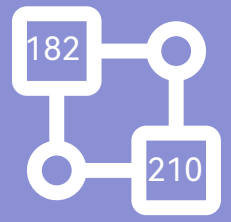
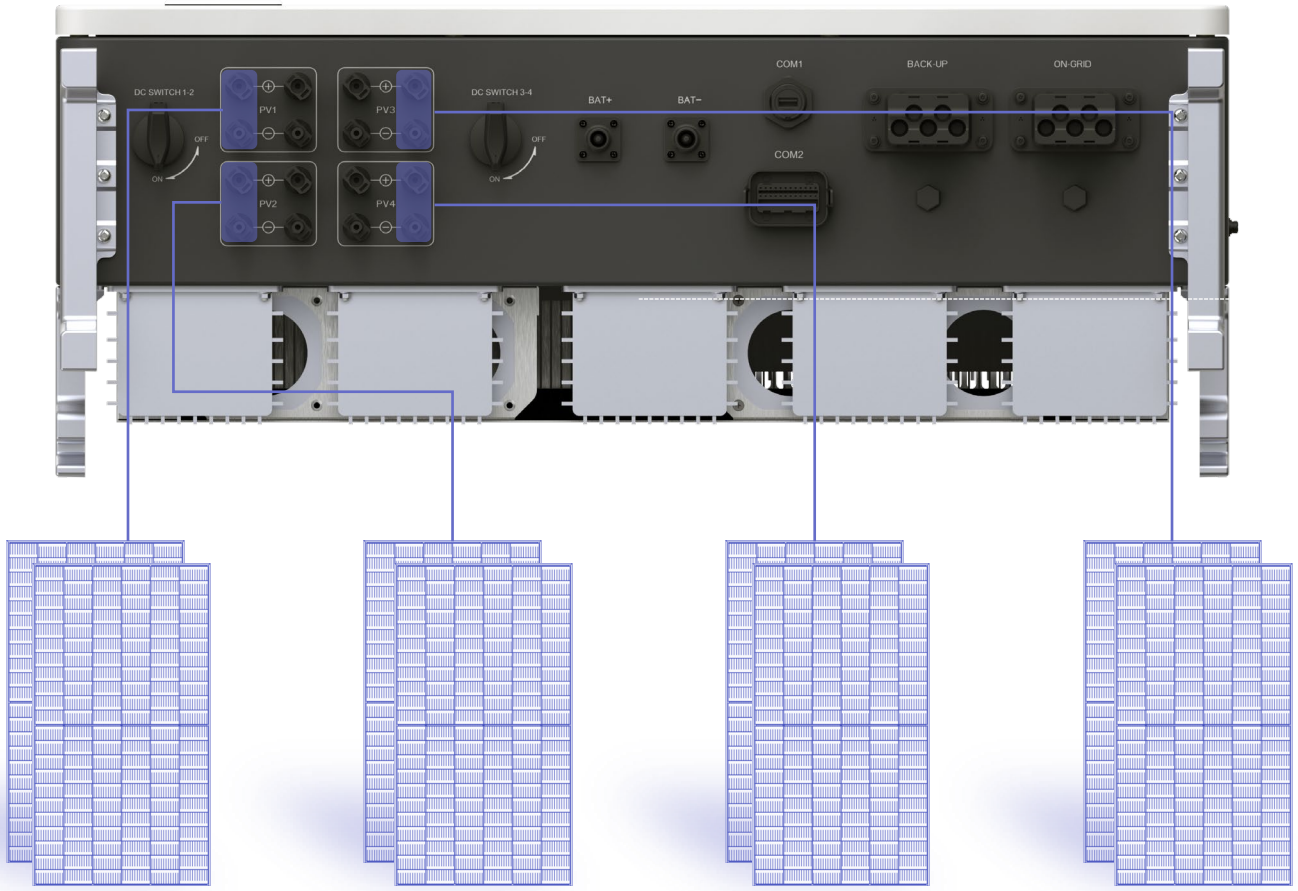
# 30A MPPT Input-Compatible with 210mm PV Panels

## MHT25-50K Super High Current(>15A) Solution One




### Compatible With 182/210mm PV Panels

MHT25-50K can connect high current (>15A) panels by using one of two PV strings in a MPPT without any PV power loss

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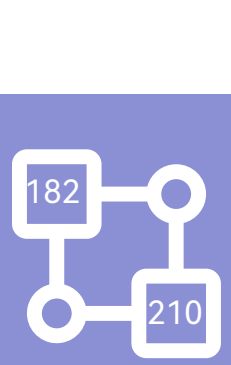
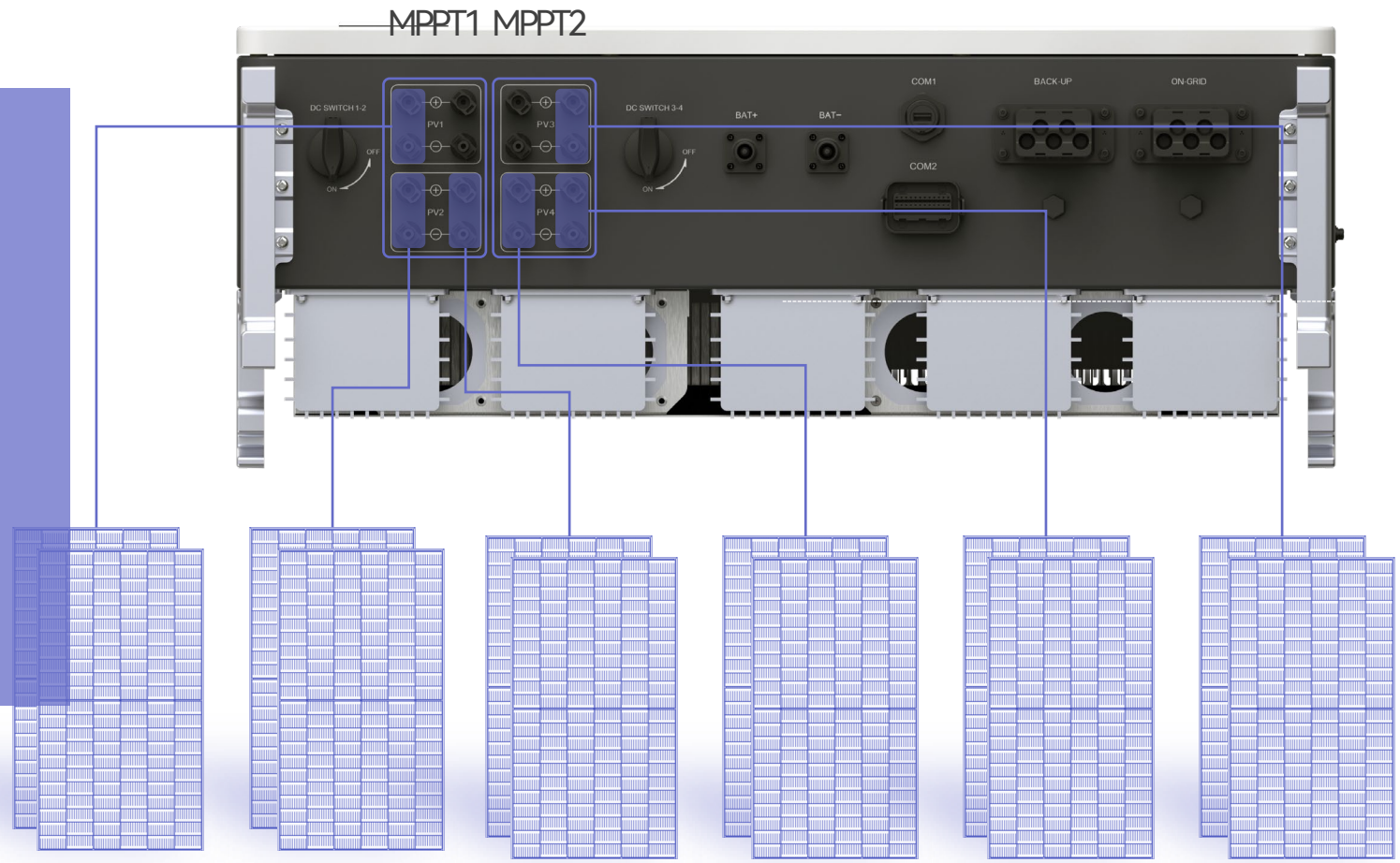
# 60A MPPT Input-For High Current PV Overloading

## MHT40-50K-P Super High Current Solution Two




### Compatible With 182/210mm PV Panels

MHT40-50K-P with 2MPPTs and 6PV inputs, allowing up to 20A high current PV panels connection.

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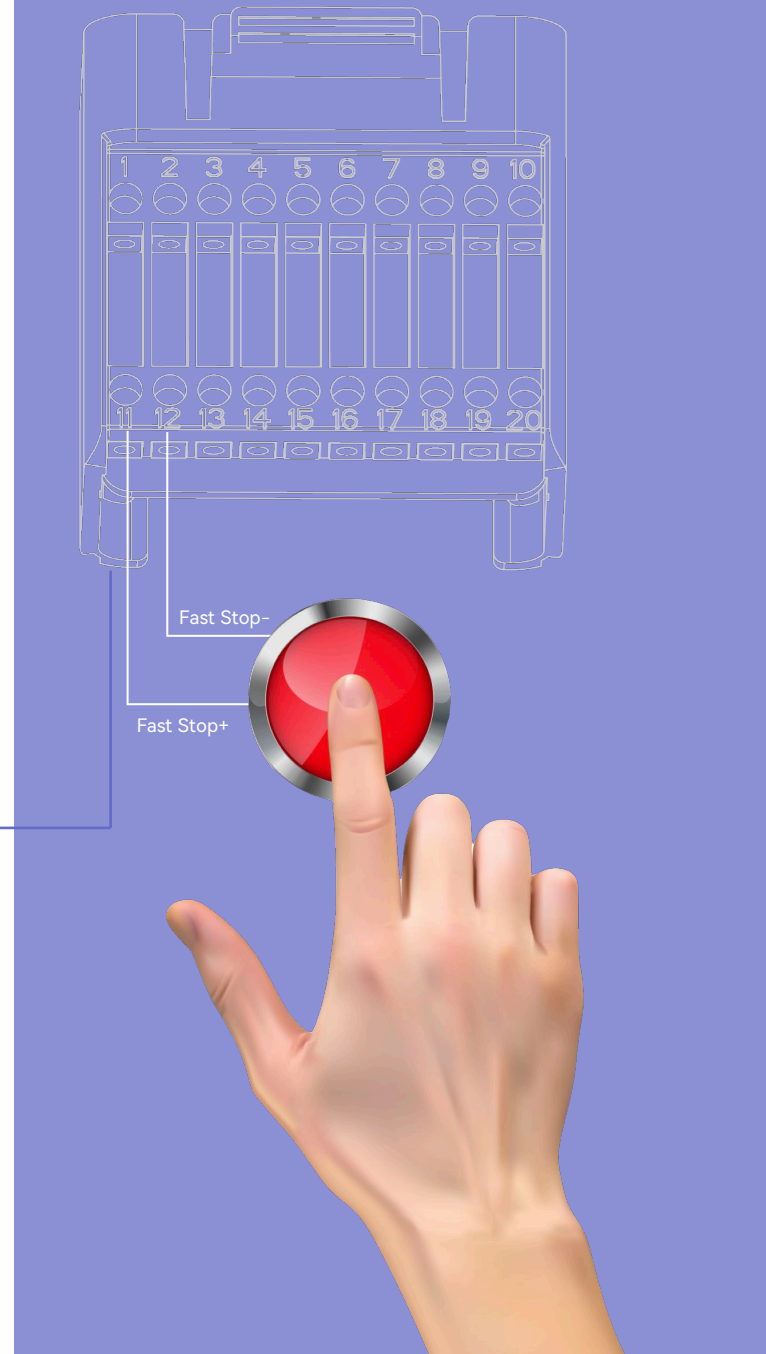
# Fast Stop-Increase System Safety

## Increase System Safety

Solinteg hybrid inverter comes to stand with a fast stop function that can stop the inverter with just a press when an accident occurs and prevent system damage from being enlarged.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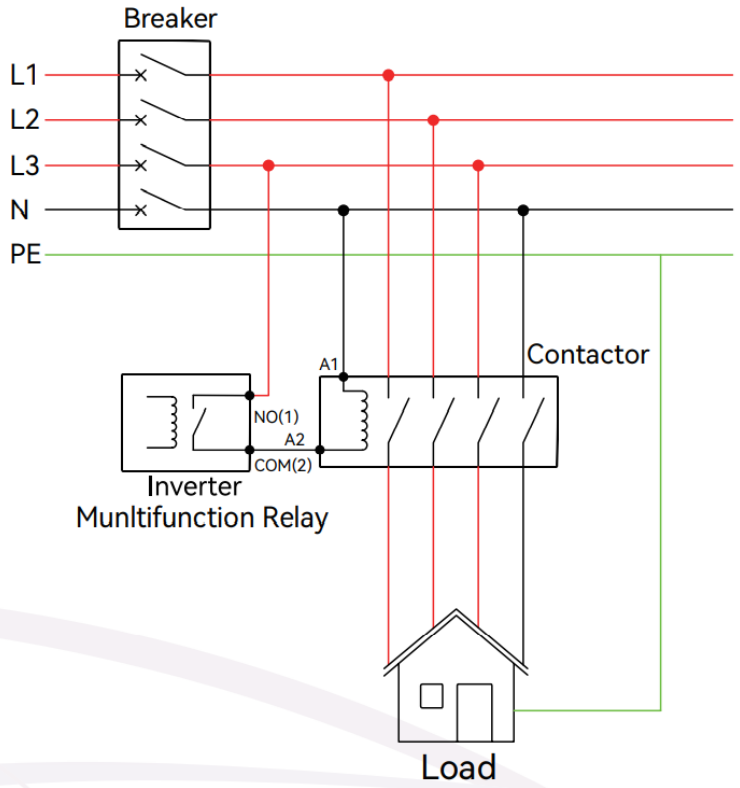
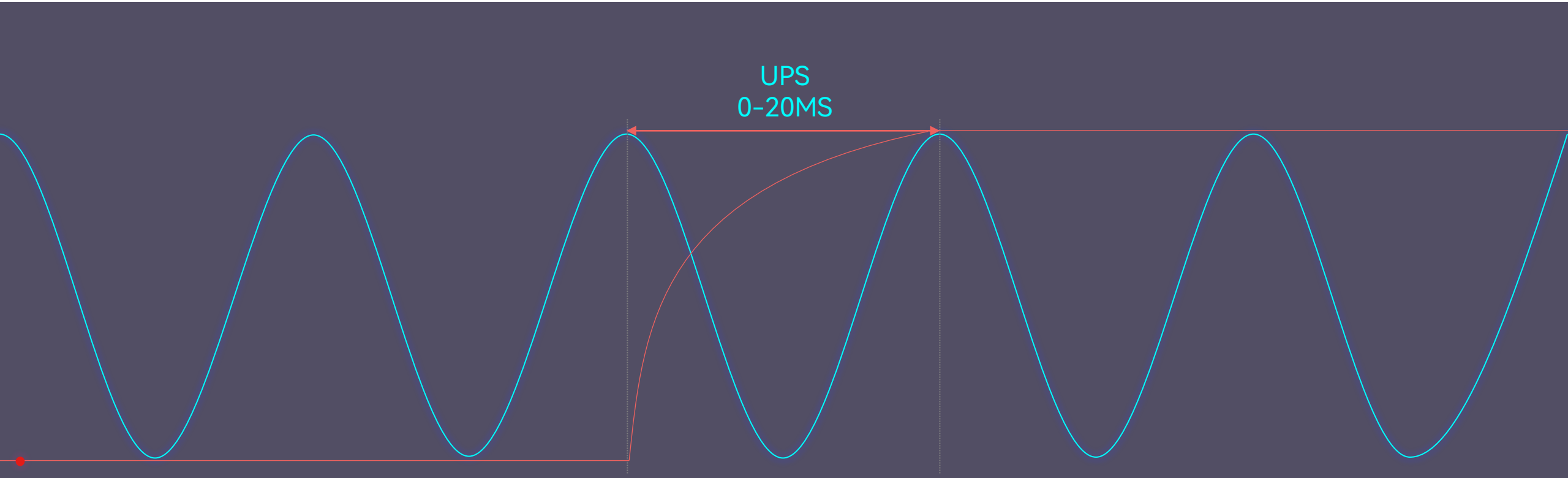
# Dry Contact-For Heat Pump or Water Heater Control




Solinteg MHT hybrid inverter integrated with dry contact function which helps to realize the on and off control of the smart load like the heat pump or water heater. In addition to connecting a smart load through a contractor purchased from the market to the dry contact on the inverter, you just need to set the work mode on the application.

| | |
|---|---|
| Manual Mode | Turn On and Off of the load manually on the App |
| Time Mode | Set a specific time for starting and ending the load on the application according to your habit |
| SOC Mode | Protect the energy stored in the battery for emergency usage. When the SOC value is lower than the value set on the App, the smart load will be disconnected and won't be turned on again until the SOC value reaches the set value plus 10%. |

# Energy Security <20ms UPS Switching Time




UPS level switching over within 20ms, when the power grid blackouts, the inverter will switchover from on-grid to back-up mode with 20ms, security for your critical loads

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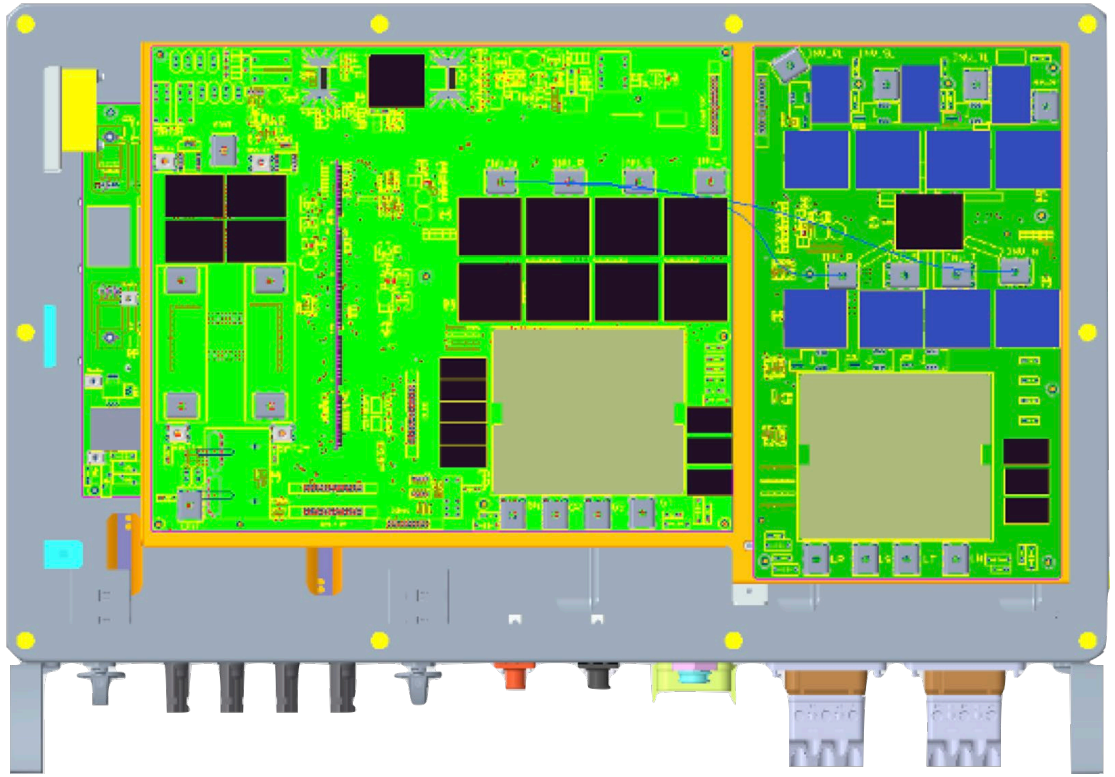
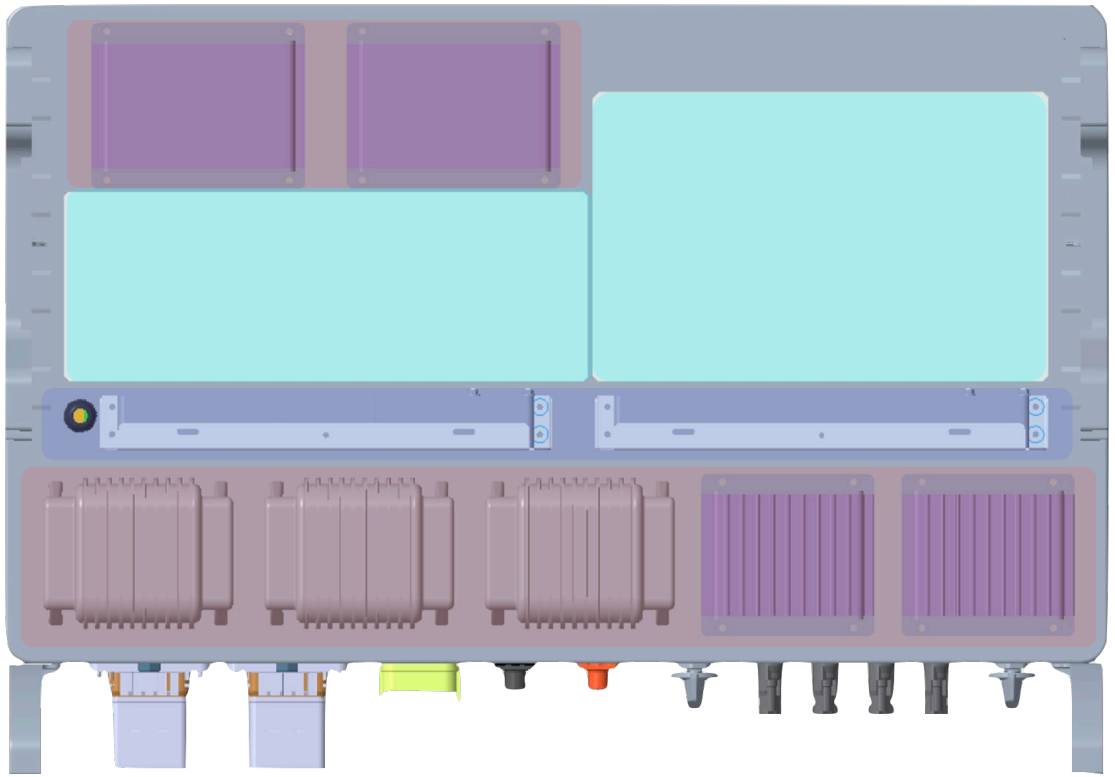
# Excellent Heat Dissipation-Reliable Performance





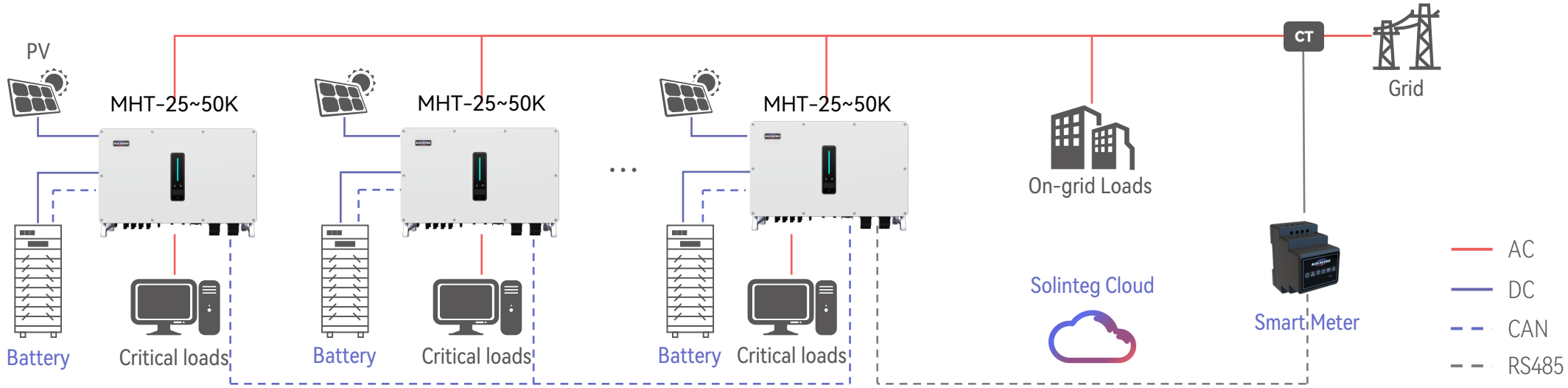
The core components such as the boost power device and IGBT use high thermal conductivity Al heat sink for quick heat dissipation

Each inductor has its inductor box with thermal conductive silicone grease filled for good heat dissipation

Six intelligent fans ensure the fast heat dissipation and equalize the inverter chamber temperature

Shorter heat dissipation duct accelerates heat dissipation

# Up To 10 Units On-grid Parallel Connection




## Meet Various Applications Commercial To Industrial

Solinteg hybrid inverter offers up to 10 units of paralleling connection with master-slave controlling technology, which can expand a three-phase hybrid system from 25kW to 500kW with a wide battery capacity from 6.72kWh to 966.1kWh *, suitable for commercial and small industrial projects.

## Up to 500kW

* Calculated on Pylontech PowerCube battery

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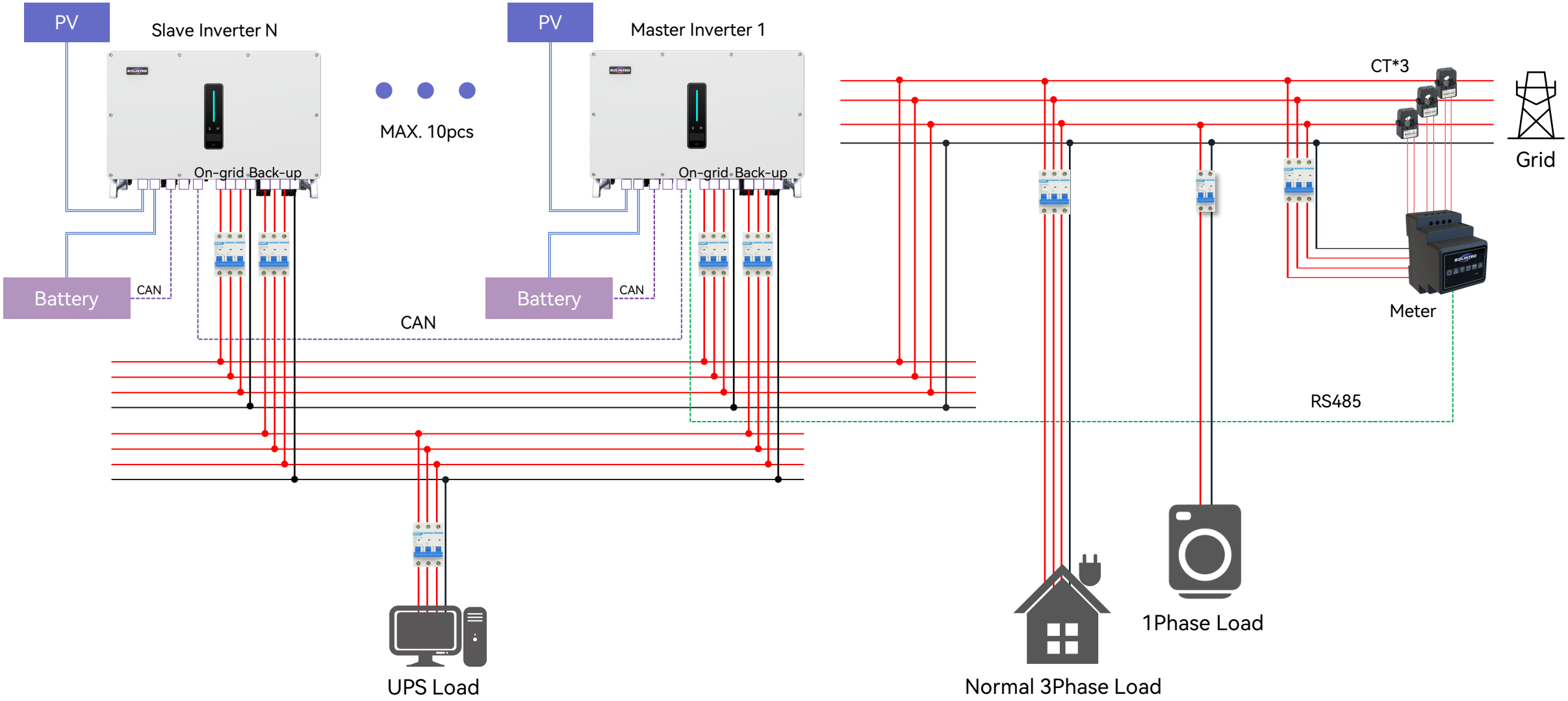
# Great Combination for Commercial Storage

A wide battery configuration range from **6.72 -96.61kWh**

| Series | Capacity/Pack | Compatible Battery Packs | Compatible Battery Capacity |
|---|---|---|---|
| Powercube H1 (Residential) | 2.4kWh | 5-13pcs | 12-31.2kWh |
| Powercube H2 (Residential) | 3.55kWh | 5-13pcs | 17.76-46.17kWh |
| Powercube X1 (Commercial) | 1.68kWh | 4-10pcs | 6.72-16.8kWh |
| Powercube X2 (Commercial) | 2.49kWh | 4-10pcs | 9.96-24.9kWh |
| Powercube-M1 (Commercial) | 4.74kWh | 5-20pcs | 23.68-94.72kWh |
| Powercube-M2 (Commercial) | 5.683kWh | 5-17pcs | 28.42-96.61kWh |
| Powercube-M3A (Commercial) | 5.683kWh | 5-17pcs | 28.42-96.61kWh |
| Powercube-M3B (Commercial) | 5.683kWh | 5-17pcs | 28.42-96.61kWh |

# Off-grid Parallel Via Master Slave Controlling

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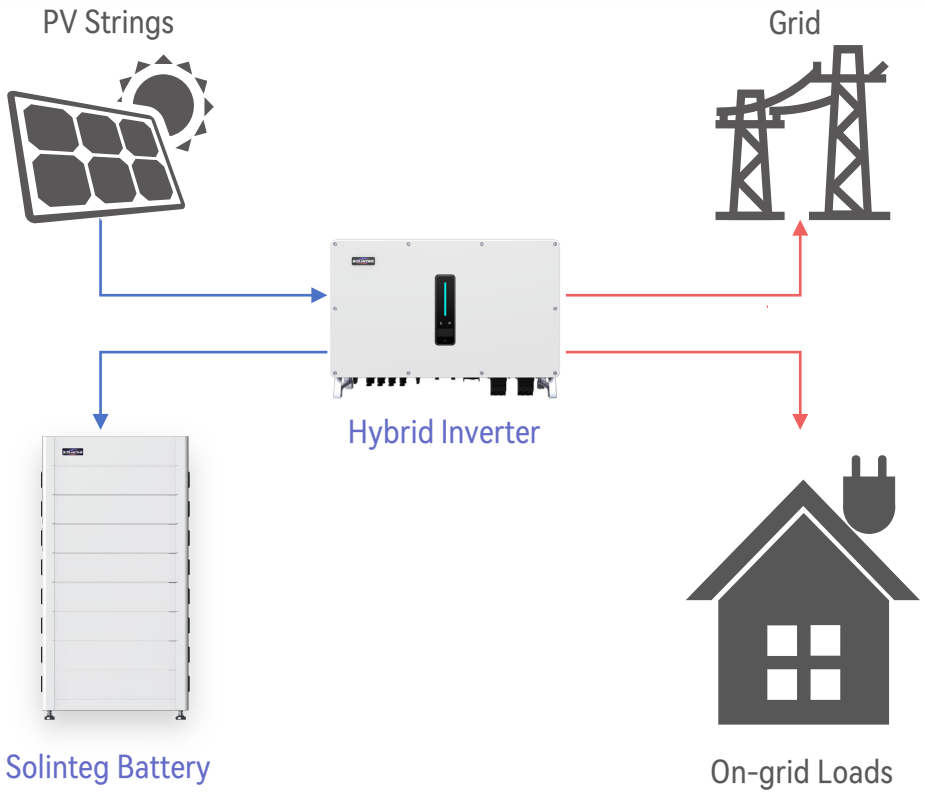
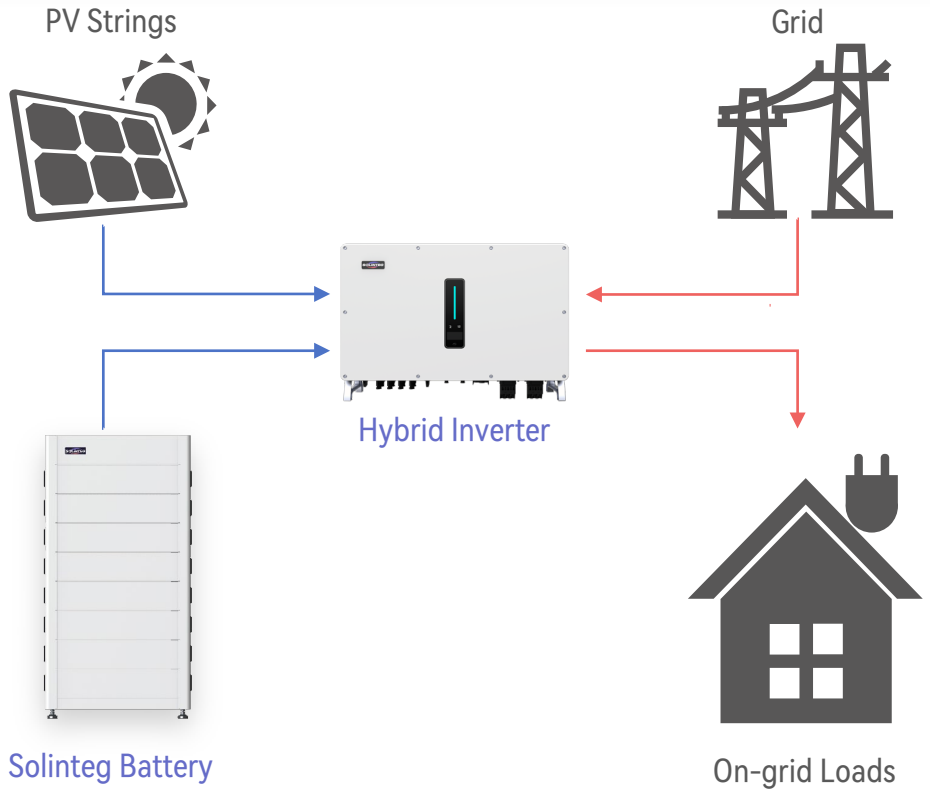
# Work Modes-General Mode

In general mode, when the PV power is sufficient, power from the PV will firstly supply loads, then excess power charge battery, and any surplus power will be fed to the grid.




In general mode, when the PV power is insufficient to satisfy loads, the battery will discharge power to fill the power gap, and the grid will join in if it's still not enough.

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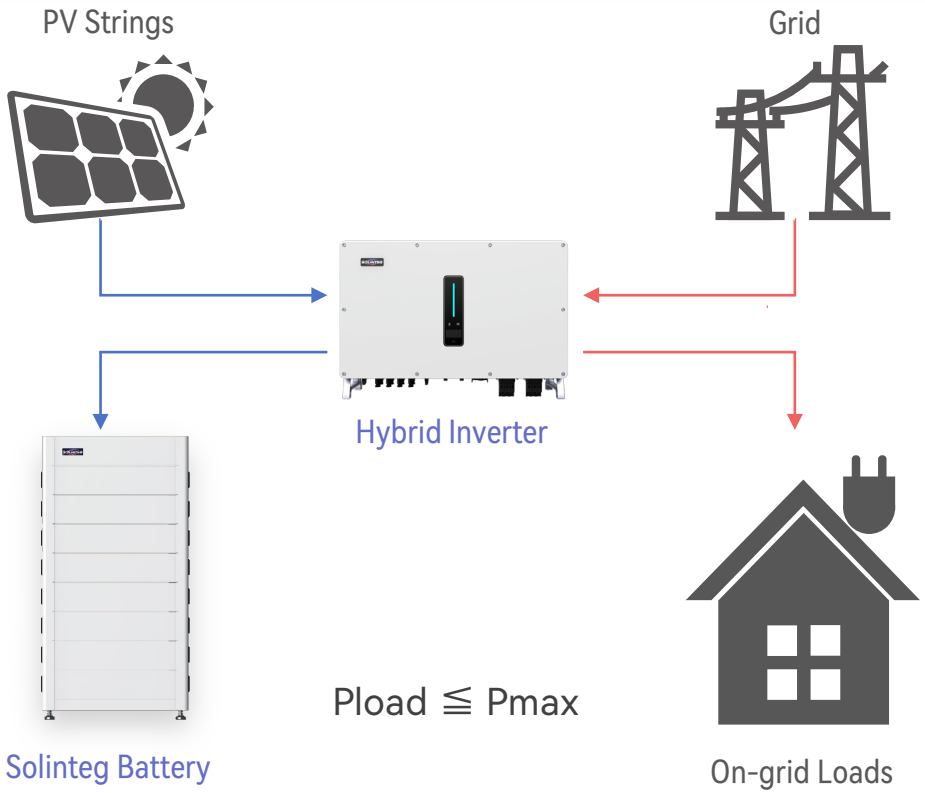
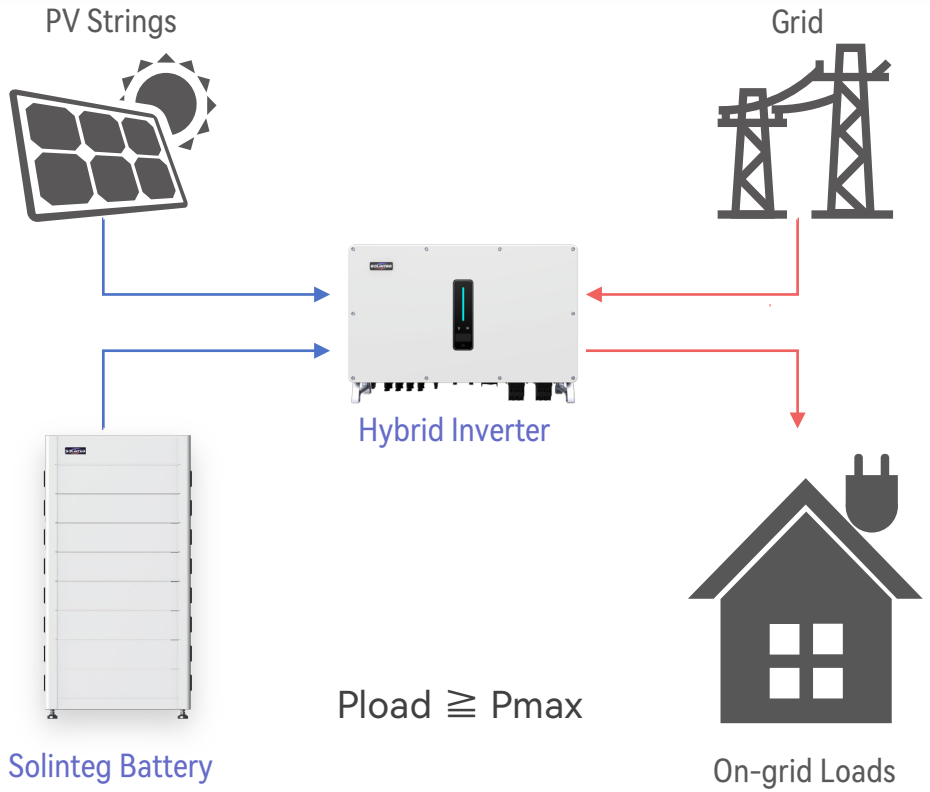
# Work Modes-Peak Load Shifting

When the Pload ≦ Pmax(Power contracted with the grid), PV power will charge battery first and the load is supplied by the grid; when the battery is full, PV will supply the load together with grid while battery doesn't.




When the Pload ≧ Pmax(Power contracted with the grid), the inverter will take power from PV, battery and grid to offset the gap power between Pmax and Pload.

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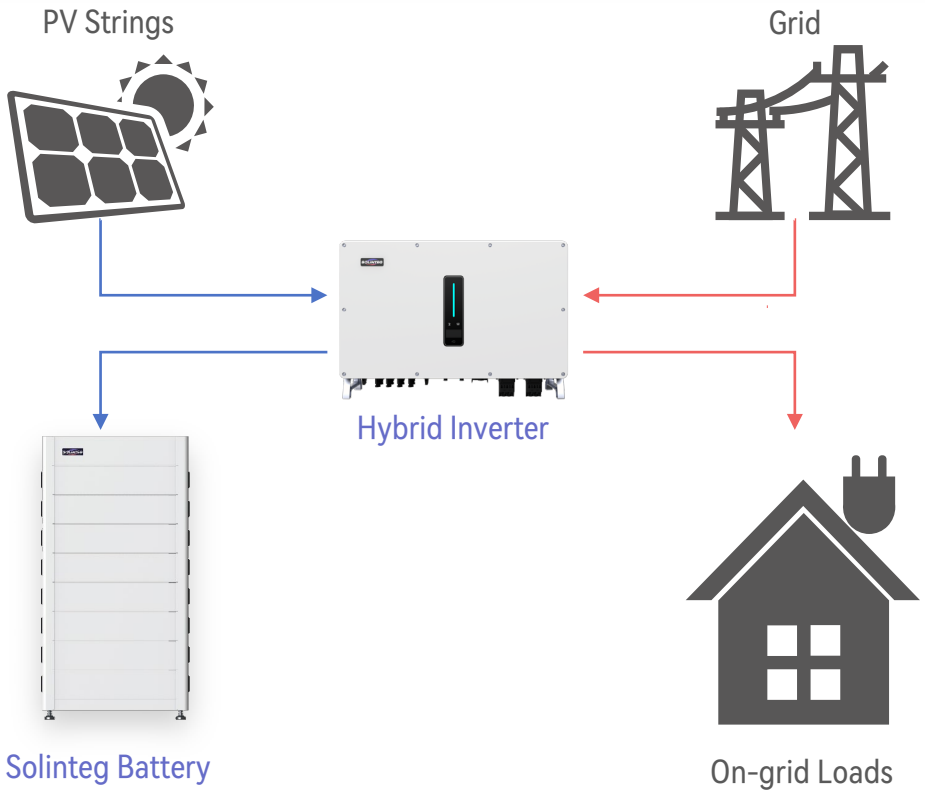
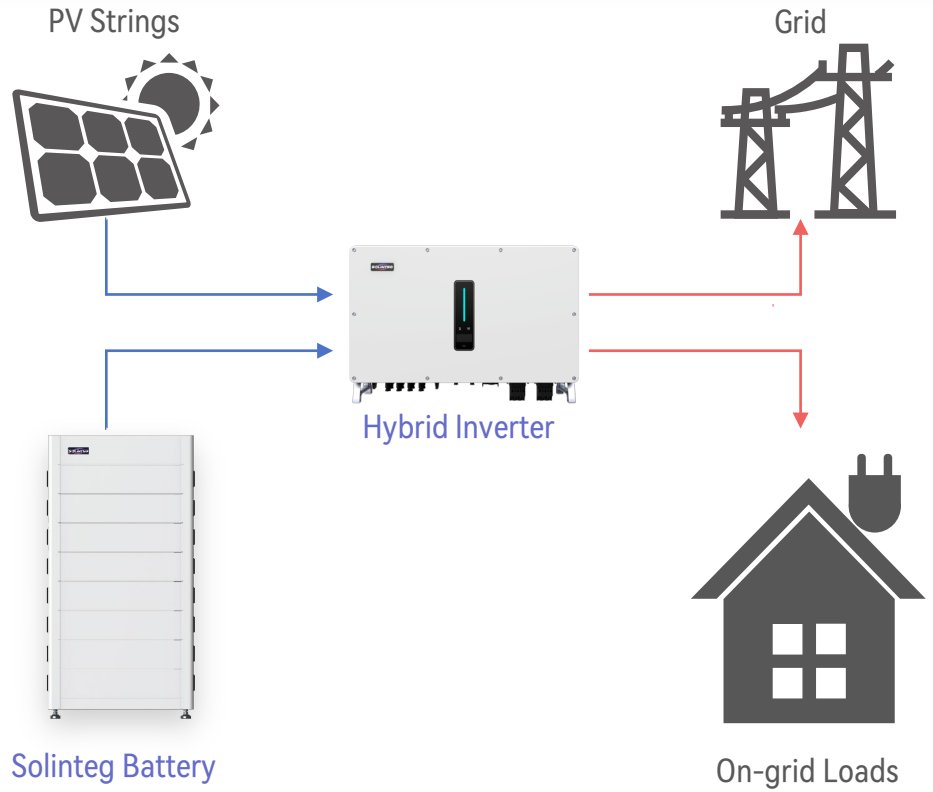
# Work Modes-Economic Mode

This mode usually uses in the places where has peak and valley electricity prices to help customers optimize their energy cost. Customer can charge power from grid or PV in valley hours by setting on the App.




Customer can also discharge power in peak hours by setting on the App, and in this case, battery will discharge power to supply loads or feed to grid.

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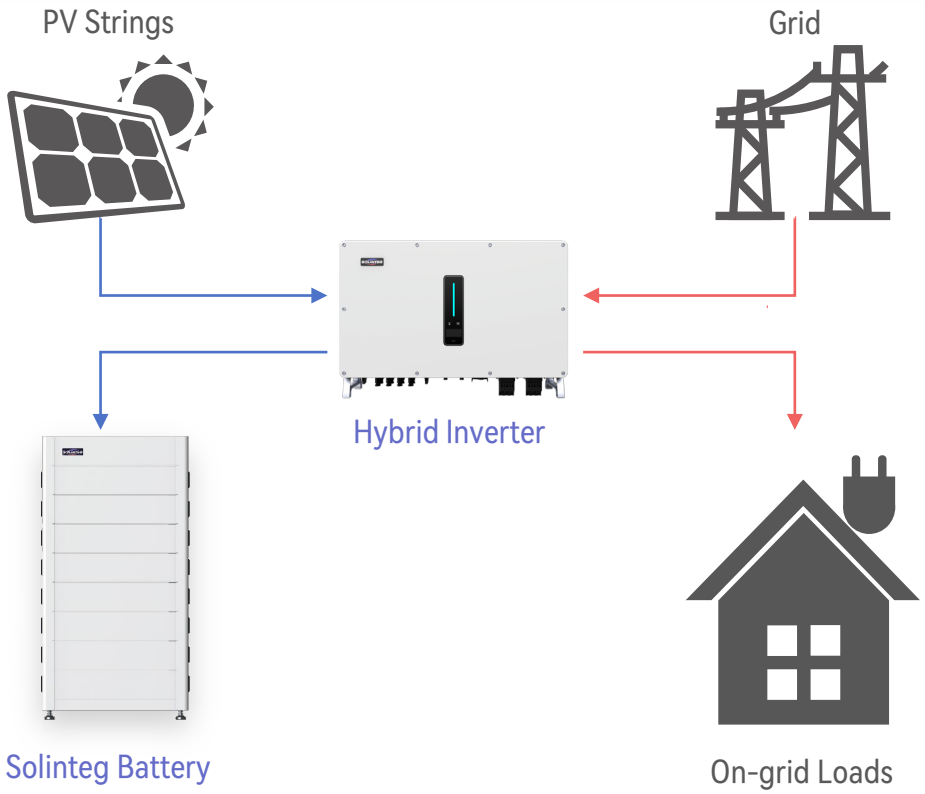
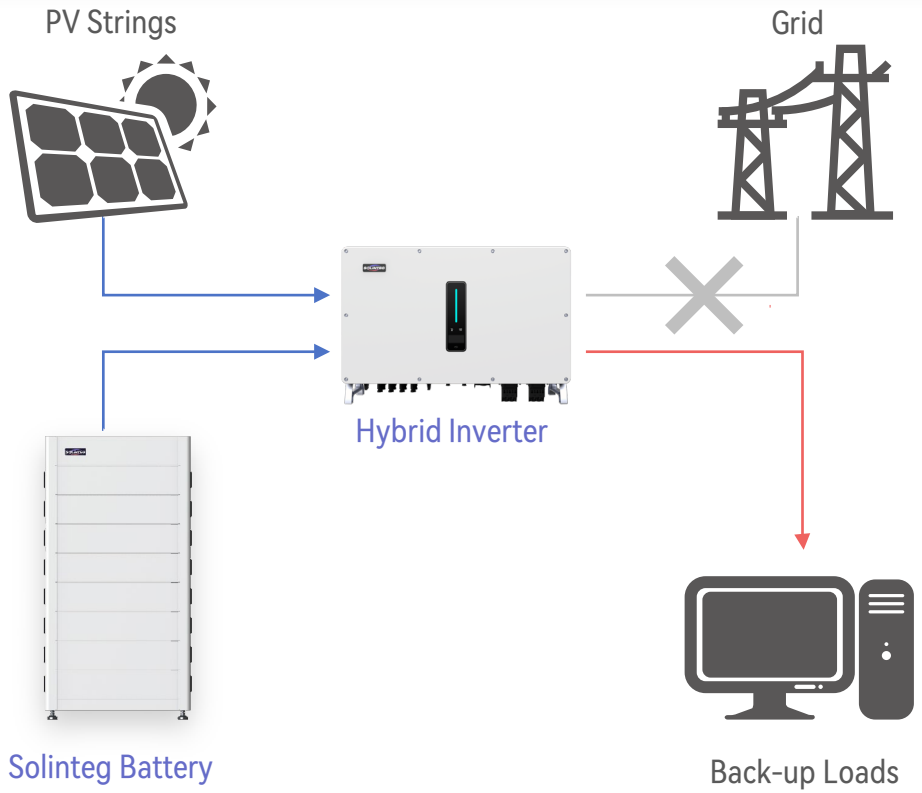
# Work Modes-UPS Mode

In this working mode, power from PV will firstly charge the battery until it's full, and loads will be supplied by the grid during charging period. Battery will not discharge power as long as grid is connected.



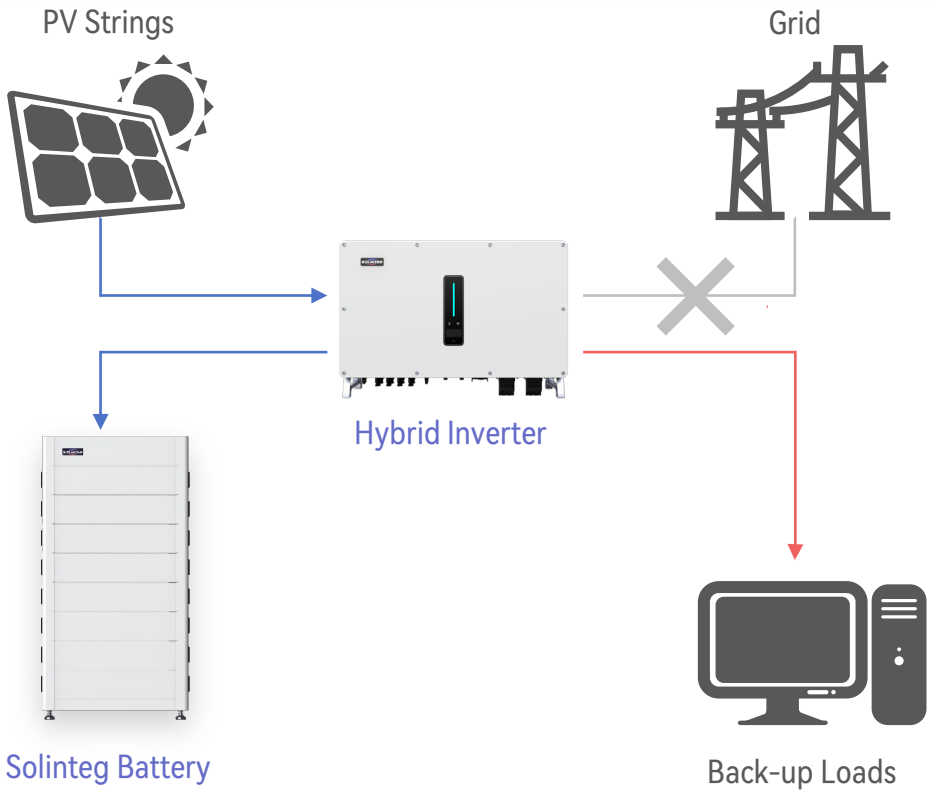

When the grid fails, and PV power is insufficient to meet the loads' consumption, the battery will take part in discharging power to supply loads connected to the back-up port.



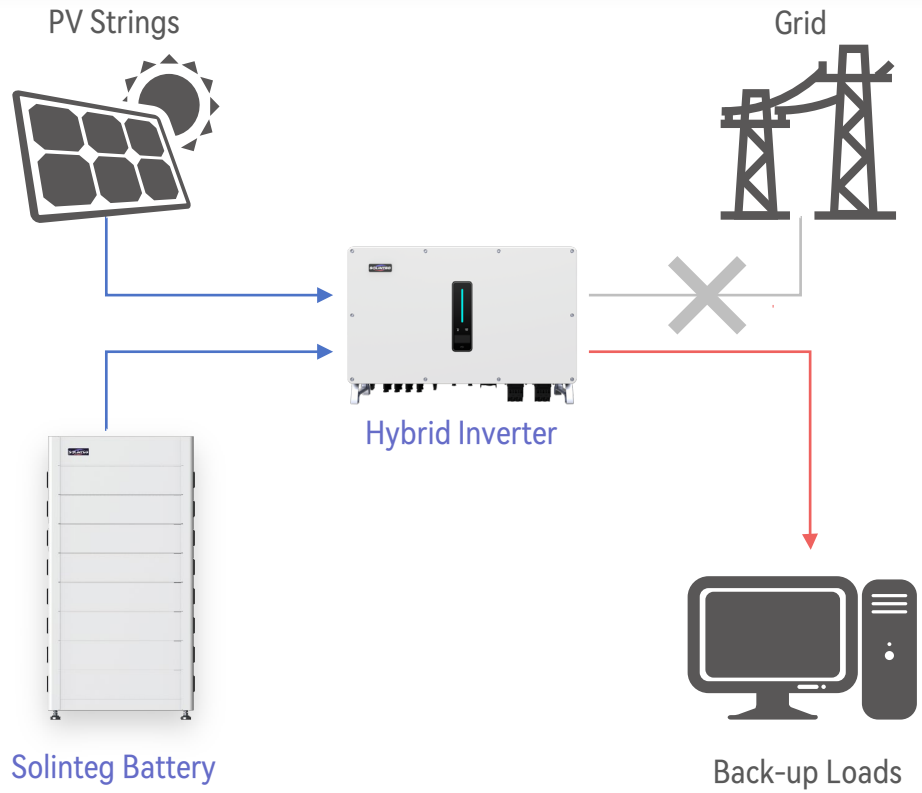

SOLINTEG ACADEMY

# Work Modes-Off-grid Mode

In the purely off-grid mode, power from PV will supply the back-up loads first and then charge the battery if there's surplus power.




When the power from PV isn't enough, the battery will discharge to supply back-up loads together with PV.

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10:00 am – 11:00 am | CET, Berlin
11:00 am – 12:00 pm | EET, Athens

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