



# Solis Inverter Overview

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Zoltán Gábor, Aftersales/Service, HUN

2025-11

## Grid Tied – EPM – Hybrid

# 9 év a csúcson!

A Solis kilencedik éve egymás után őrzi pozícióját a legjobb szolár inverter márkák között!





# Company Profile



**4500+**

Global Employees



**800+**

R&D Team



**80+GW**

Capacity



**26+GW**

2022 Shipment

2023 Expected Shipment: 50GW



**2.1B**

Total Assets



**18Y**

History



Solis: World **3rd** Largest PV Inverter Manufacturer

# Hálózati inverter sorozatok

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## Engedélyezett modellek Magyarországon

### Hálózati



**S6-GR1P(0.7-3.6)K**

Maximum current input 14 A  
Maximum voltage input 600V  
0.7K, 1K, 1.5K, 2K, 2.5K, 3K, 3.6K

2 MPPT



**S6-GR1P(2.5-6)K**

Maximum current input 14 A  
Maximum voltage input 600V  
3K, 3.6K, 4K, 4.6K, 5K, 6K

2 MPPT

*202 model works with SmartMeter  
204 model works with CT*



**S5-GR3P(3-20)K**

Max current input 16 A  
Max voltage input **1100V**  
3K, 3.6K, 4K, 5K, 6K, 10K  
12K, 15K, 20K  
2MPPT



## Engedélyezett modellek Magyarországon

### Hálózati



#### **S5-GC(25-50)K**

Max current input 32 A  
Max voltage input **1100V**  
25K, 30K, 36K, 40K, 50K

**3/4 MPPT**



#### **S5-GC(80-110)K**

Max current input 32 A  
Max voltage input **1100V**  
80K, 100K, 110K

**9/10 MPPT**



# Engedélyezett inverterek Magyarországon

## Hálózati



### S6-GC150K

Max current input 32 A  
Max current input 1100V

50K/60K

5 / 6 MPPTs



### S5-GC(80-125)K

Max current input 5\*42A/36A  
Max current input 1100V

80, 100K, 110K, 125K

10 MPPTs



## Engedélyezett modellek Magyarországon

### Hálózati



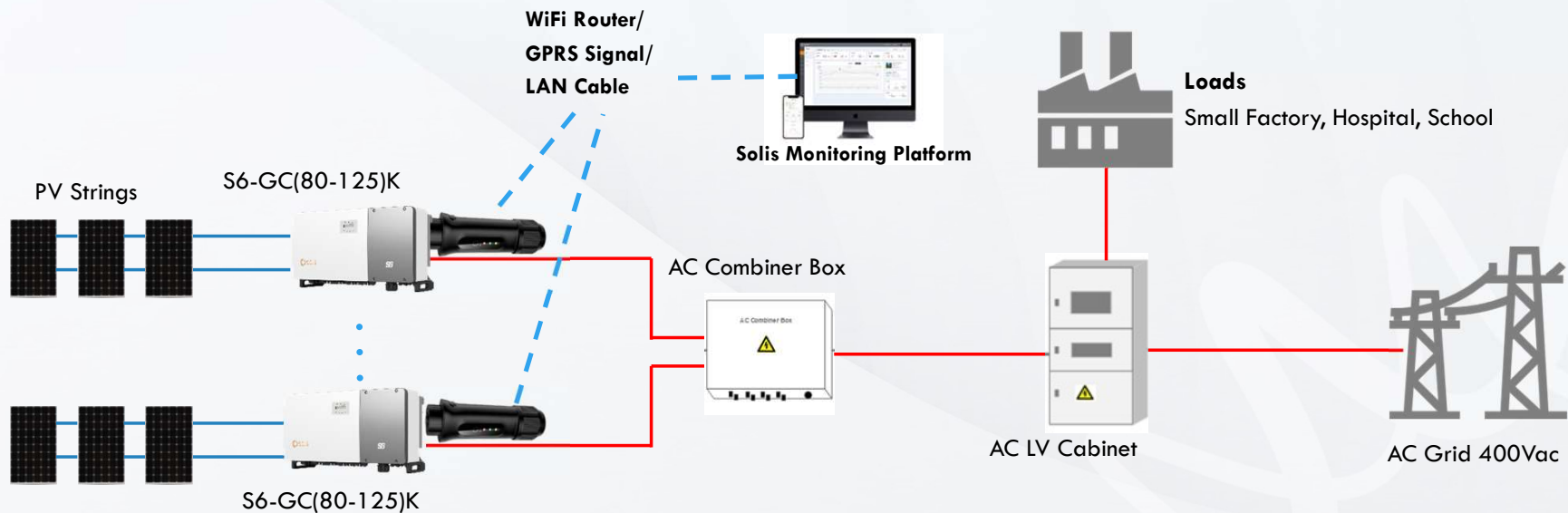
**S6-GC150K**

Max current input 54 A  
Max voltage input **1100V**

7MPPT



## New S6-GC(80-125)K – monitoring adatközlővel



Solis monitoring adatközlő (1~10 inverter/adatközlő)



S5-WiFi-ST: WiFi Datalogger

S2-WL-ST: WiFi+LAN Datalogger

S1-W4G-ST: WiFi+GPRS Datalogger

## Export Control / Fogyasztás felügyelet(Smart meter-rel)

S6-GC(80-125)K



RS485  
Daisy Chain

S6-GC(80-125)K



CT



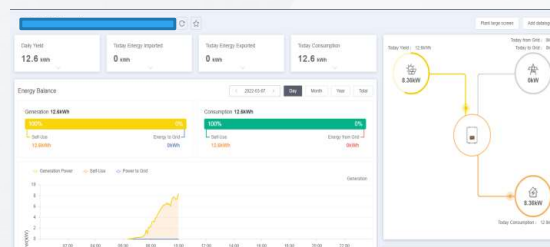
DTSD1352-External CT Type

### Export Control

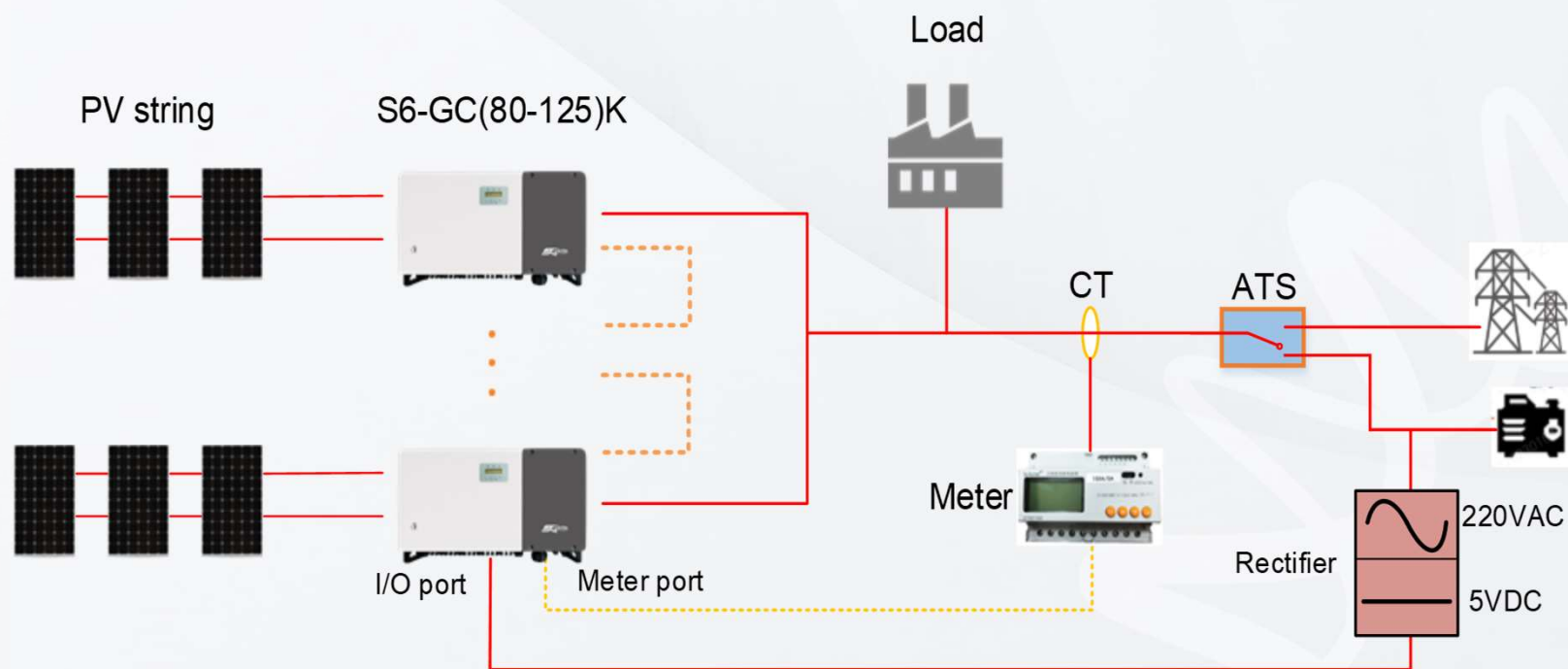
- Rugalmas beállítási lehetőség 0W-ig
- **Zero export control asszimétrikus terhelésnél**
- **Max 10 inverter**
- Dinamikusan korlátozza az inverter kimenetét a változó terhelés kiegyensúlyozása érdekében

### Fogyasztás Monitoring

- A mérőadatok 24/7 feltölthetők a Solis felügyeleti rendszerbe
- A fogyasztási adatok áttekintése éjszaka is



## Új S6-GC(80-125)K – generátor



- ◆ Dízelgenerátorral való párhuzamos működés támogatása
- ◆ 220VAC/5VDC egyenirányító szükséges
- ◆ Max 10 inverter



# Mérő/Vezérlő eszközök

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## EPM (Export Power Manager), „Meter“



### Solis-EPM3-5G-PRO

Maximum x20 3 fázisú inverter

Külső smart meter  
Solis (4-pin) adatközlő



### Solis-EPM3-5G-PLUS

Maximum x20 3 fázisú inverter

Integrált smart meter  
Integrált adatközlő



### Acrel DTSD1352 smartmeter with external CT

### Acrel ADL-3000

3\* 150A:5A CT



### Eastron SDM630MCT

External CT,  
secondary 40mA

Kompatibilis:  
S5-GR1P(7-10)K  
S5-GR3P(3-20)K  
S5-GC(25-40)K  
S6-GC3P(25-36)K03-NV-ND  
S6-GC3P(40-60)K-NV-ND



20<sup>th</sup>  
ANNIVERSARY

# EPM vs Acrel meter

zero export limitation



# Hibrid inverter sorozatok

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## Ügyfélszolgálati ajánlások



A Solis szerviztámogatása elsősorban a telepítőknek szól. Elsőbbségi alapon történik, ezért a telepítőknek maguknak kell kezelniük az ügyfelek kérdéseit, és közvetlenül megoldaniuk azokat, ahelyett, hogy a Solis szervizéhez irányítanák az ügyfeleket.

A Solis Service nem biztosít képzést az inverter konfigurálásával vagy használatával kapcsolatban a végfelhasználók számára.

A végfelhasználó közvetlen ügyfélszolgálathoz irányítása automatikusan megnövelheti a válaszidőket, ami megakadályozhatja, hogy egy másik telepítő sürgős segítséget kapjon.

Ezért a **telepítőnek kell megválaszolnia az ügyfelek kérdéseit**, és csak meghibásodás vagy technikai probléma esetén kell kapcsolatba lépnie a Solis szervizzel.

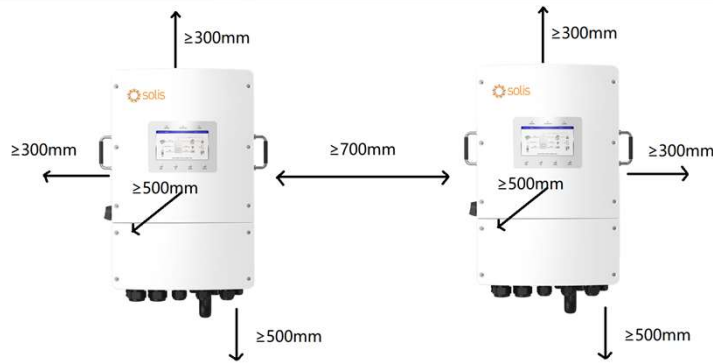


# Inverter Telepítési javaslatok

1. A telepítési helynek meg kell felelnie a következő követelményeknek

2. Teherhordó felület:

3. Környezeti feltételek:






A működést, a telepítést és a karbantartást figyelembe véve a felhasználók a tényleges helyzetnek megfelelően válasszák meg a helyet. (A levegő balról jön be, a levegő jobbról távozik)



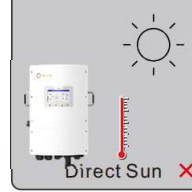

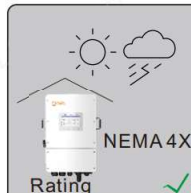

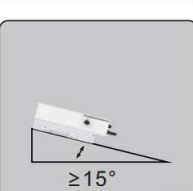
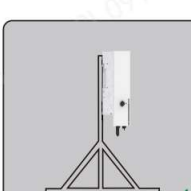
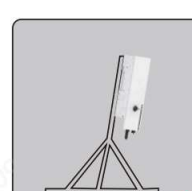


Nem gyúlékony anyagokból készült

KG

 Max: +60°C +140°F	 Max: -40°C -40°F	 Max.RH : 100% (non-condensing)
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4. Elhelyezkedés:

 Indoor ✓	 Shade Cover ✓	 Direct Sun ✗
 Shade Cover ✓	 NEMA 4X Rating ✓	 Direct Rain ✗
 $\geq 15^\circ$ ✗		



20<sup>th</sup>  
ANNIVERSARY

## Hibrid inverter méretek – népszerű modellek



S6-EH1P(3-8)K-L  
Plus



S6-EH3P(8-15)K-L



S6-EH3P(3-10)K-H



S6-EH3P(12-20)K-H



S6-EH3P(30-50)K-H

<10ms



## S6-EH3P(8-15)K-L

- 1** **2 MPPT / 4 Inputs**  
20A per string current
- 2** **Up to 290A**  
Maximum charging/discharging
- 3** **Compatible with major global battery brands**
- 4** **Smart Port - for multiple functions**  
Two generator connection types:  
alternating current (AC) connection,  
smart load
- 5** **Remote monitoring**  
For clear understanding and  
analysis
- 6** **Automatic UPS switching**  
<10ms
- 7** **Parallel System**  
Grid-connected or stand-  
alone max. 6. 90kW in  
parallel
- 8** **200% 10s overload**  
Temporary overload

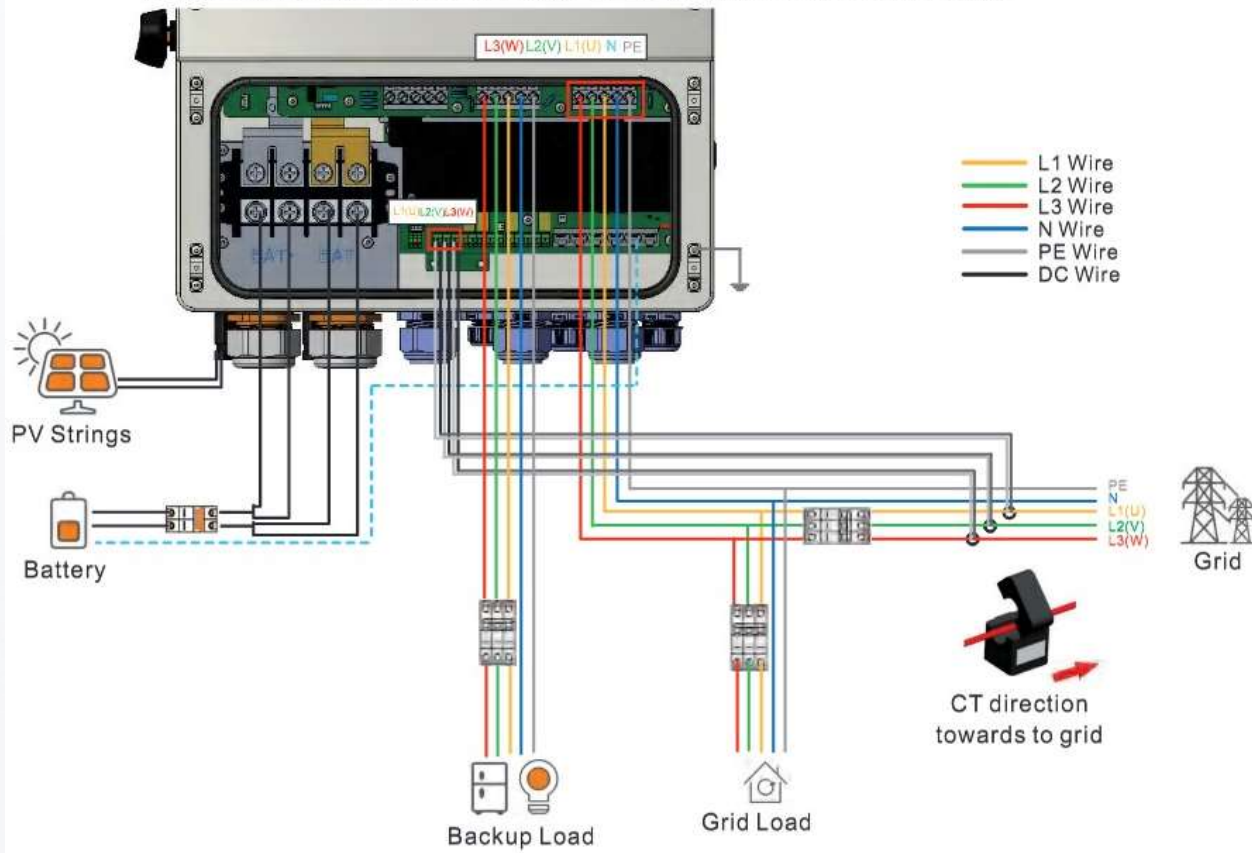




# S6-EH3P(8-15)K-L CT

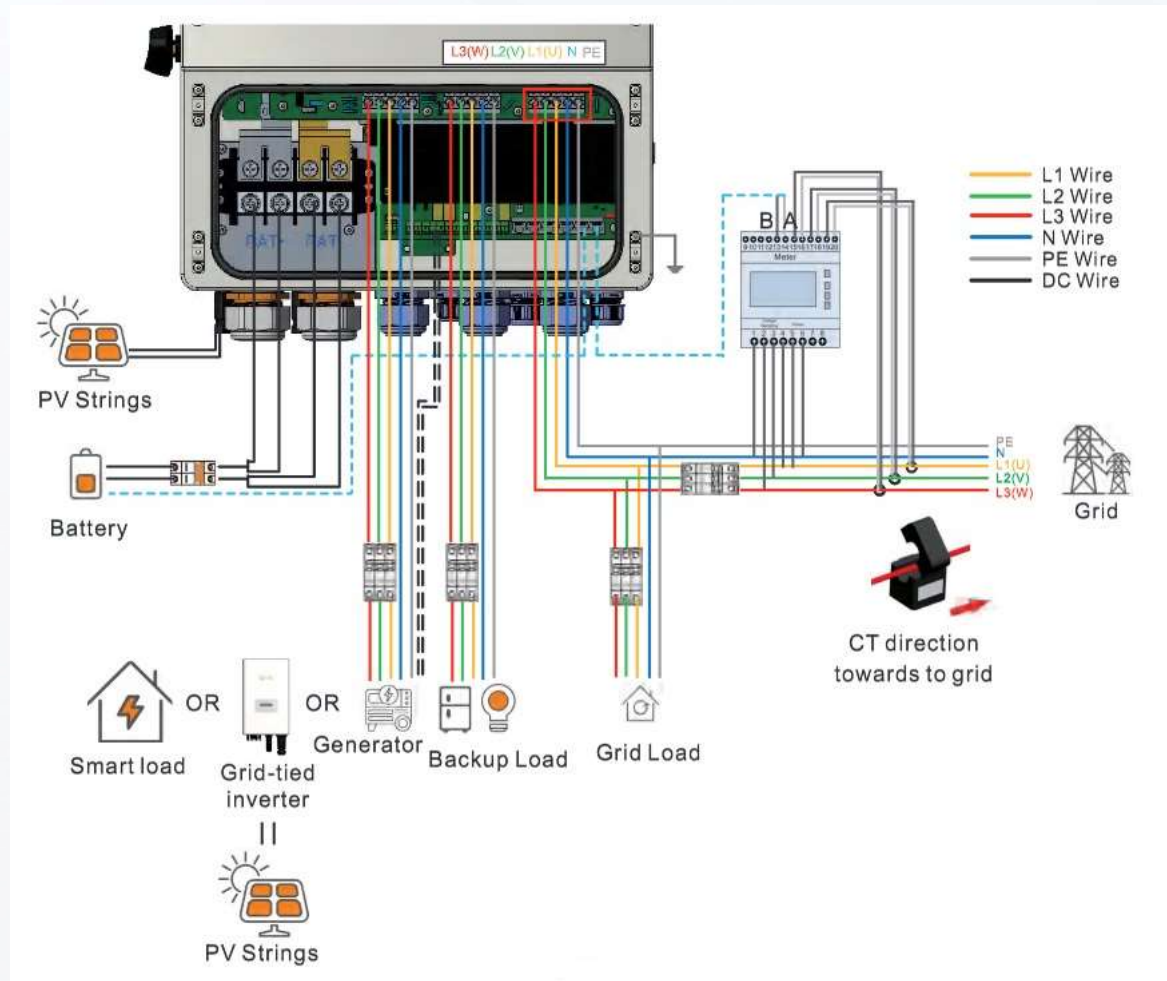
**NOTE:**

1. CT cables are CT-L1/CT-L2/CT-L3 from left to right;
2. GRID cables are grid-L3 (W)/ GridL2(V)/ Grid-L3(U)/ Grid-N/Grid-PE from left to right





# S6-EH3P(8-15)K-L METER



**NOTE:**

Pin definition of the Meter Terminal is following EIA/TIA 568B.

RS485A on Pin 1: Orange/white

RS485B on Pin 2: Orange

Eastron SDM630MCT – Pin 13 is RS485B & Pin 14 is RS485A.





## S6-EH3P(3-10)K-EU

**1** **4 MPPT / 4 strings**  
16A per single string

**2** **Iki 50A**  
Maksimalus įkrovimas/iškrovimas

**3** **Compatible with major global battery brands**

**4** **Pre-wired battery cables, energy meter, and data logger in the box**

**5** **Remote monitoring**  
For clear understanding and analysis

**6** **Automatic UPS switching**  
<10ms

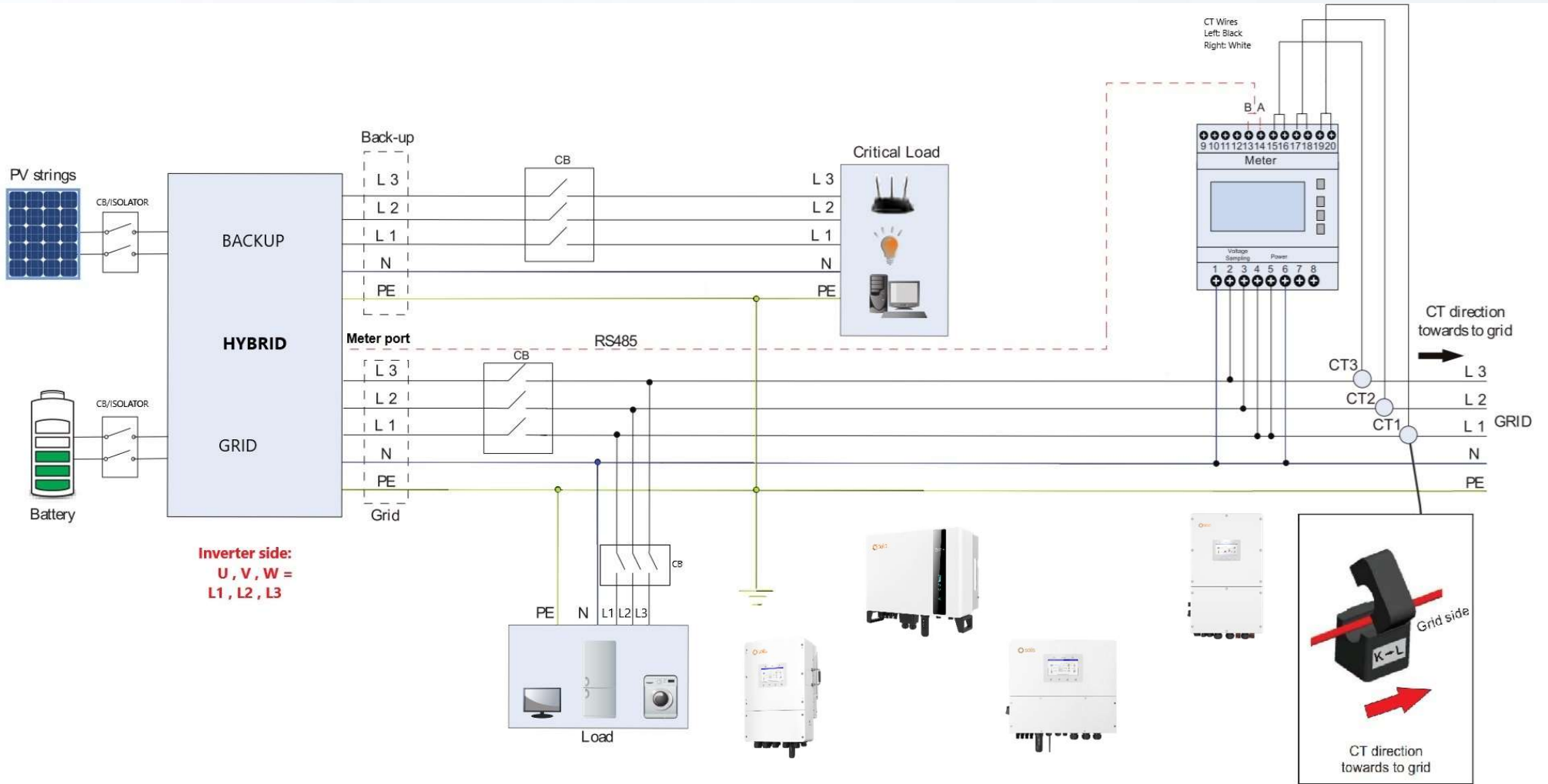
**7** **Parallel System**  
**Max. 6 inverters.**  
Unbalance function not supported in parallel

**8** **100% 10s overload**  
Temporary overload





# S6-EH3P(3-10)K-EU METER





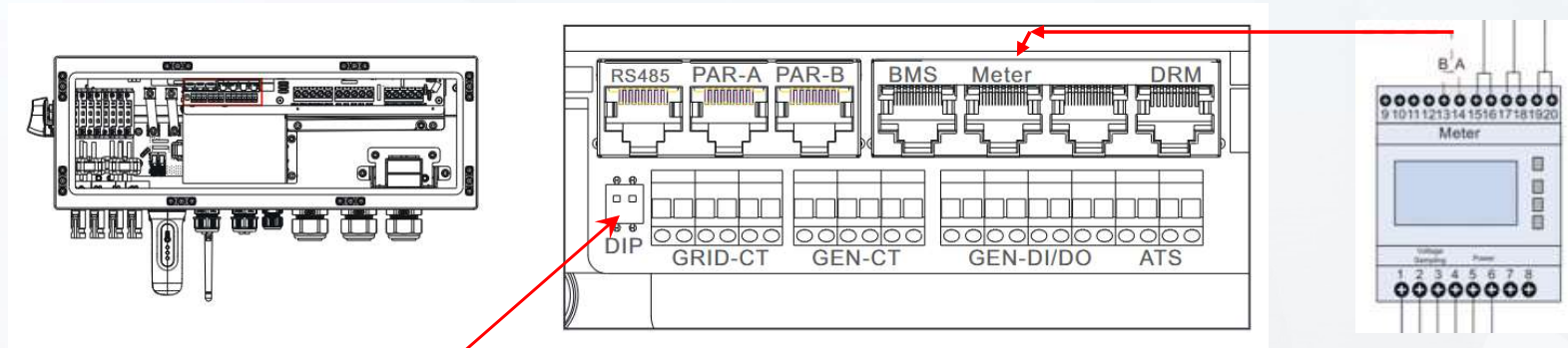
## S6-EH3P(12-20)K-H

- 1 4 MPPT / 4 Inputs**  
20A per string current
- 2 Up to 50A**  
Maximum charging/discharging
- 3 160% long-term solar power plant inputs**  
40 kW solar power plant array size  
32 kW solar power plant inputs used
- 4 Smart Port - for multiple functions**  
Two generator connection types:  
alternating current (AC) connection,  
smart load
- 5 Remote monitoring**  
For clear understanding and analysis
- 6 Automatic UPS switching**  
<10ms
- 7 Parallel System**  
Grid-connected or stand-alone max. 120kW in parallel
- 8 200% 10s overload**  
Temporary overload

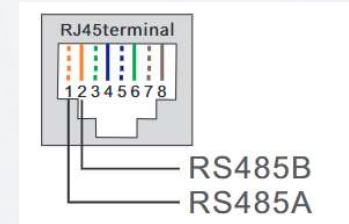
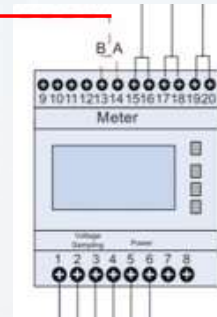




# S6-EH3P(12-20)K-H junction box



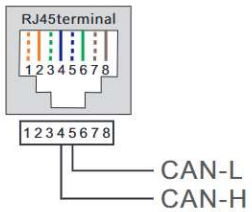
SmartMeter Port „Meter“



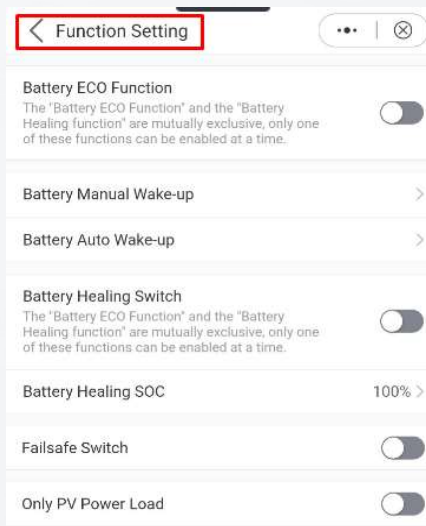
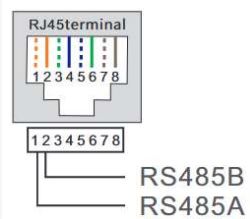
Designed for activating inverter parallel operation

Only solar (PV) energy load – reduced initial investment cost for customers

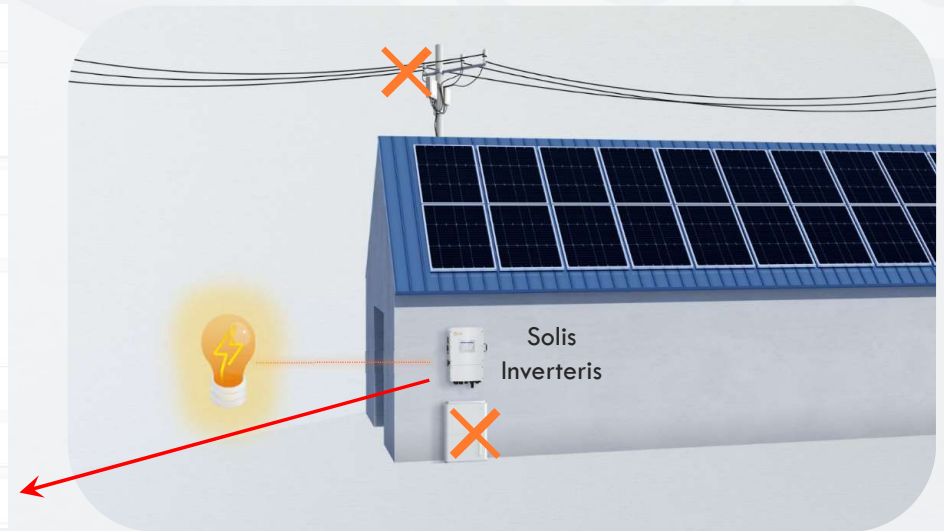
Battery Port BMS



RS485 port RS485

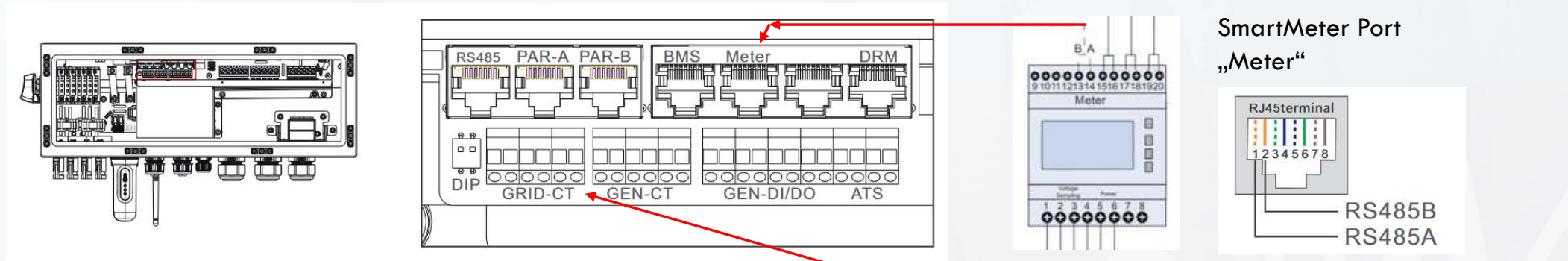


Specifically for BYD check here:  
<https://service.solisinverters.com/a/solutions/articles/44002483286?lang=en>





## S6-EH3P(12-20)K-H junction box



A vevőnek alapvetően két lehetőség közül kell választania:

### CT only – 5m:

A dobozban csak a következők találhatóak: Áramváltó; MODELL: ESCT-TA16 120A/40mA.

### METER+CT 1m:

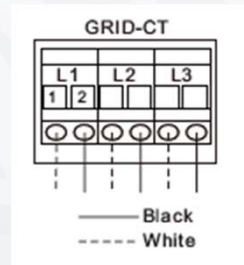
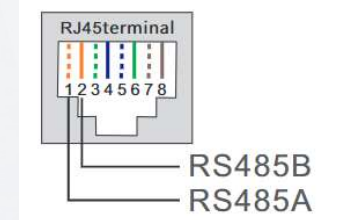
A doboz tartalma: SDM630MCT+3\*ESCT-TA16 (120A/40mA-es áramváltó)

**Ha 3-nál több eszköz van párhuzamosan csatlakoztatva, külön készletet kell választania.** A tartozékok közé tartozik a CT és a mérőműszer.

Separate Kit: 5A Meter+300A/5A CT, MODEL: SDM630MCT V2+ESCT-T50.

**SEMMILYEN ESETBEN SE HOSSZABÍTSA MEG A CT VEZETÉKÉT!**

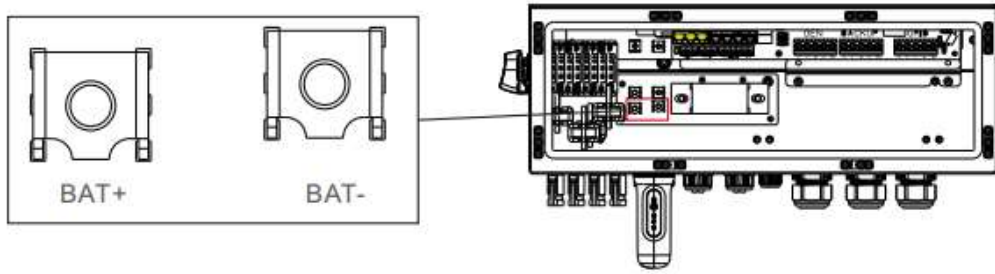
SmartMeter Port  
„Meter“



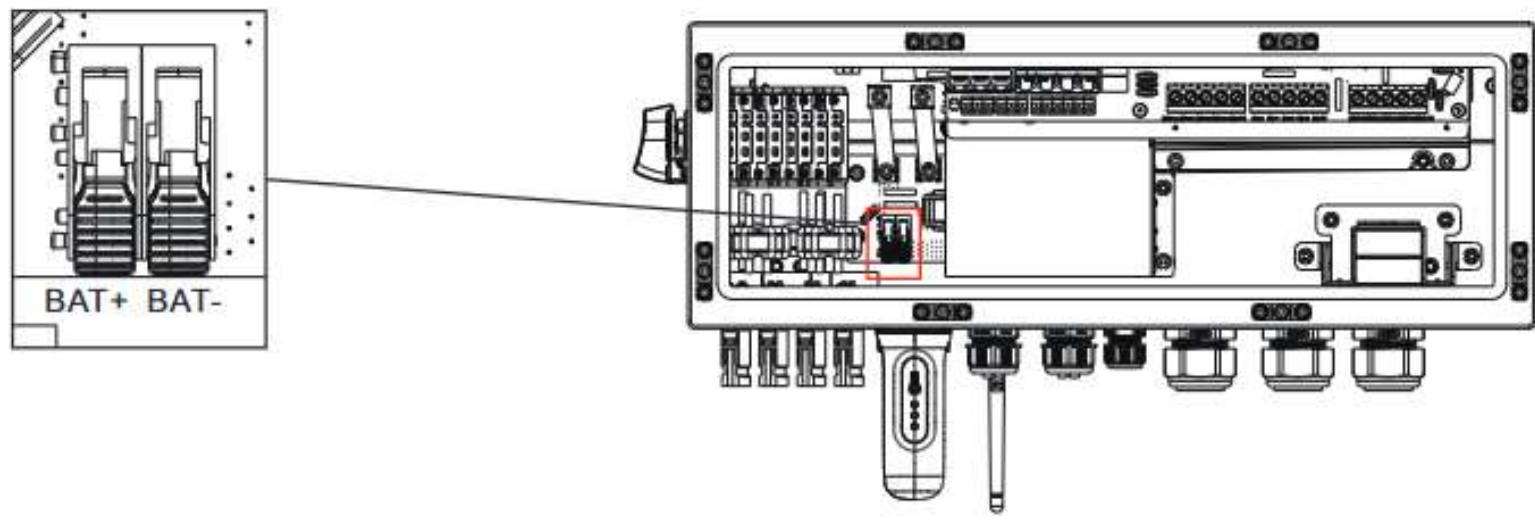
CT-only port



# S6-EH3P(12-20)K-H battery connection

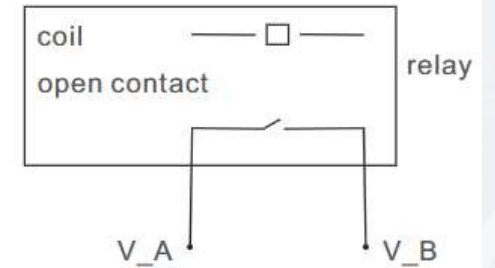
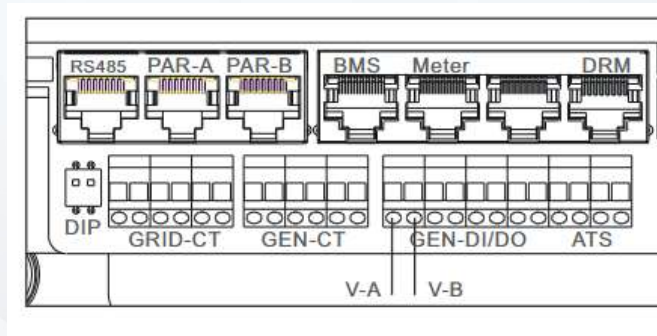
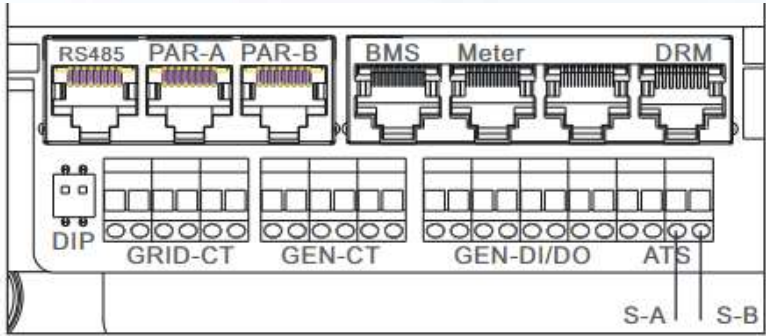


PCB BAT-Volt IN+





# S6-EH3P(12-20)K-H Junction Box



Connect Heat pump	<input checked="" type="checkbox"/>
Manual Mode	Normal >
Schedule Mode	<input checked="" type="checkbox"/>
same every day	<input type="checkbox"/>
<div style="display: flex; justify-content: space-around;"> <span>Mon</span> <span>Tue</span> <span>Wed</span> <span>Thu</span> <span>Fri</span> <span>Sat</span> <span>Sun</span> </div>	
<a href="#">+ Add Time</a>	
Smart Mode	<input checked="" type="checkbox"/>
Dection frequency	10min >
Enable SOC	90% >
Disable SOC	70% >
Enable Power	2.0kW >
Disable Power	-0.5kW >

**Generátor csatlakozás (GEN port + DRY CONTACT) - max 2kW, 230V/8A**  
**Generátoros indításhoz, minimális igénybevételre tervezték**

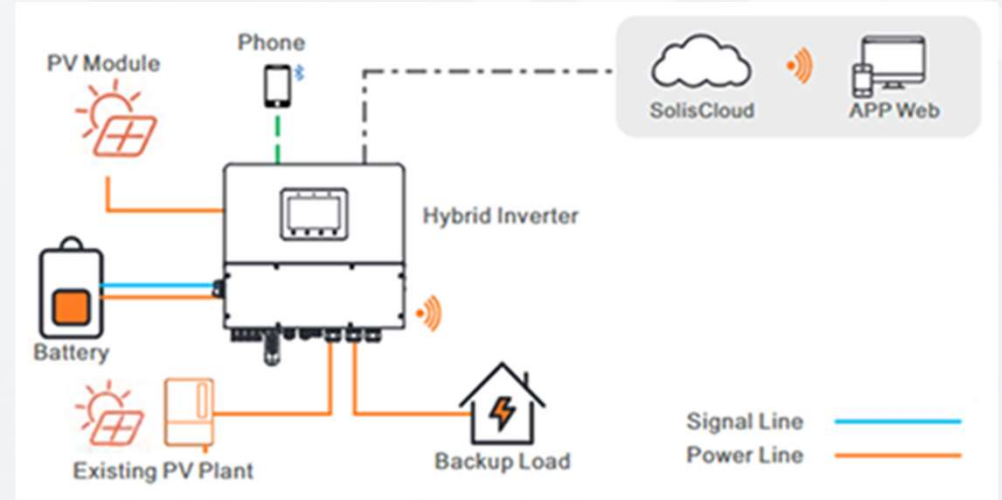
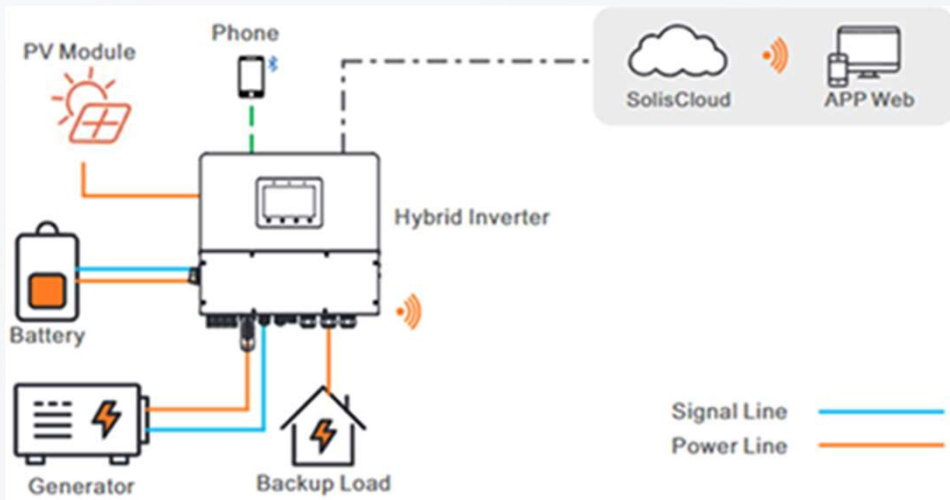
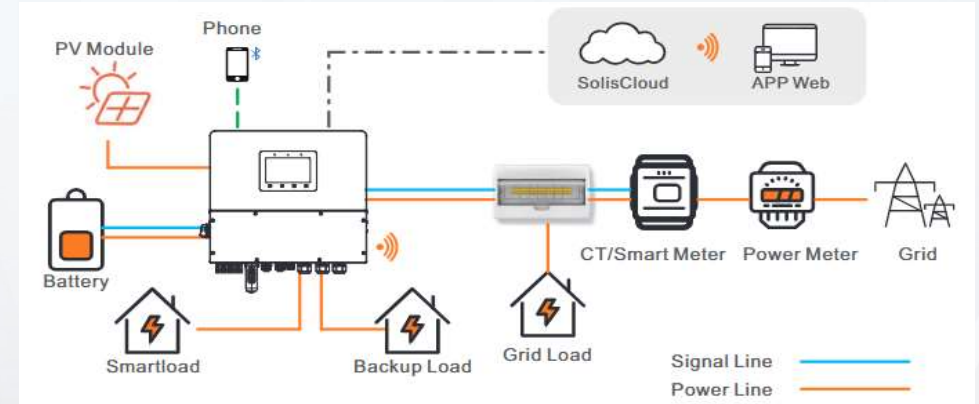
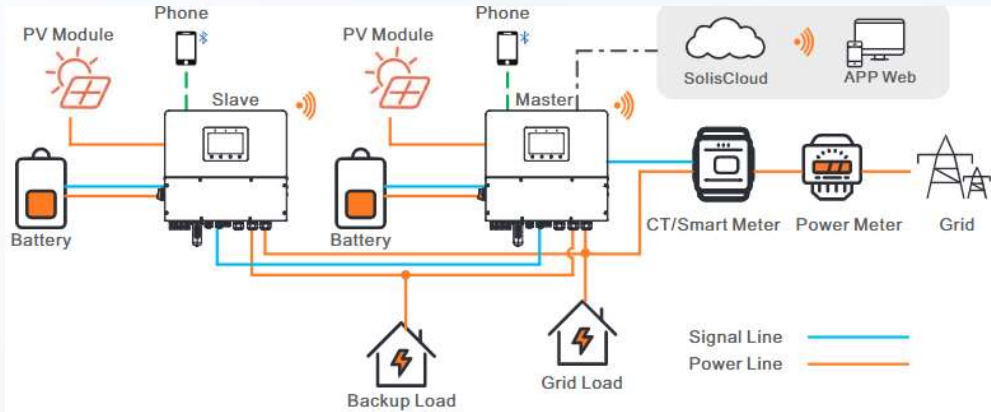
Smart Port	Genset input >
Genset Rated Power	5.0kW >
Gen Charge Power	2.0kW >
Mode	Automatic >
OFF	80% >
ON	20% >



Smart Port	Genset input >
Genset Rated Power	5.0kW >
Gen Charge Power	2.0kW >
Mode	Manual >
Enable	<input type="checkbox"/>

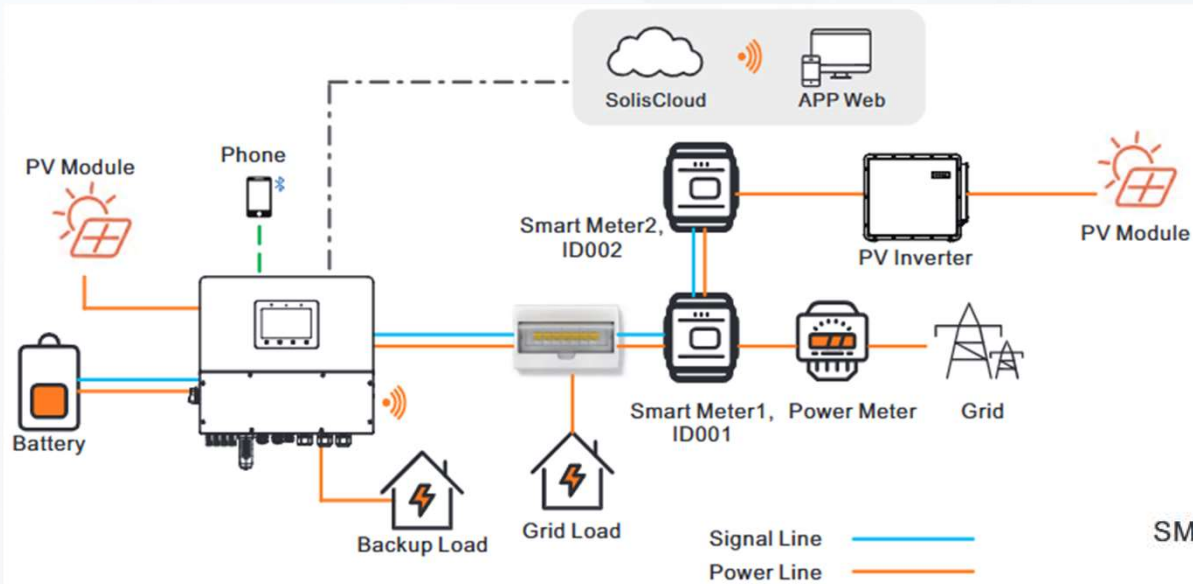


# S6-EH3P(12-20)K-H telepítési opciók



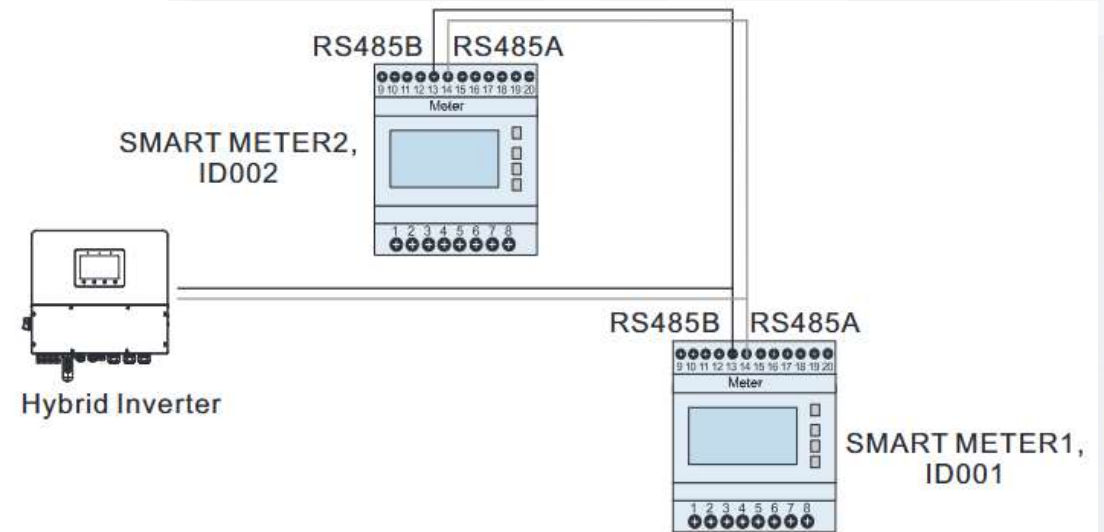
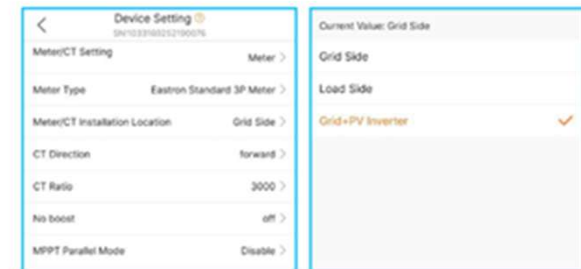


# S6-EH3P(12-20)K-H sematikus ábra AC-csatolt működésre/ monitoringra



## Dual meters setting

Hybrid inverter Setting--Professional Setting(password:1000)--Device setting-- Meter/CT Setting(meter)--Meter Type(meter)--Meter/CT Installation Location(Grid +PV Inverter)





**S6-EH3P(30-50)K-H**

# Solis S6 Advanced Hybrid inverter

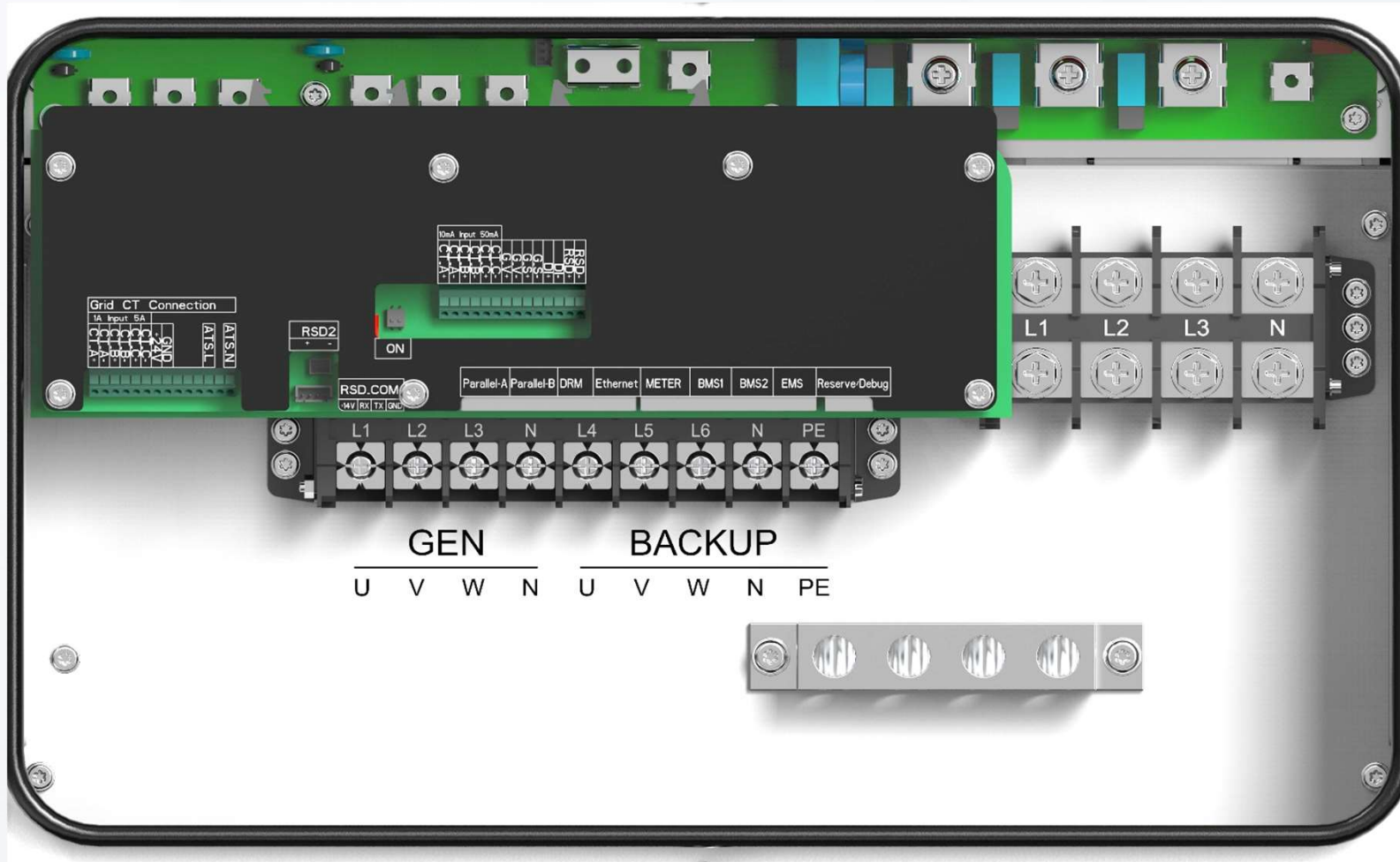
- 1 4 MPPT**  
8 strings up to 20A and up to 96kW of usable PV energy
- 2 140A / 70+70A**  
Maximum charge/discharge
- 3 Compatible with major global battery brands**
- 4 Pre-wired battery cables, energy meter, and data logger in the box**
- 5 Remote monitoring**  
For clear understanding and analysis
- 6 Automatic UPS switching time**  
<10ms
- 7 Parallel System**  
Grid-connected or off-grid. Max. 6 inverters in parallel
- 8 160% 2s overload**  
Temporary overload





# S6-EH3P(30-50)K-H

Junction box





## S6-EH3P(30-50)K-H

CT + meter connection

### Meter and CT configuration:

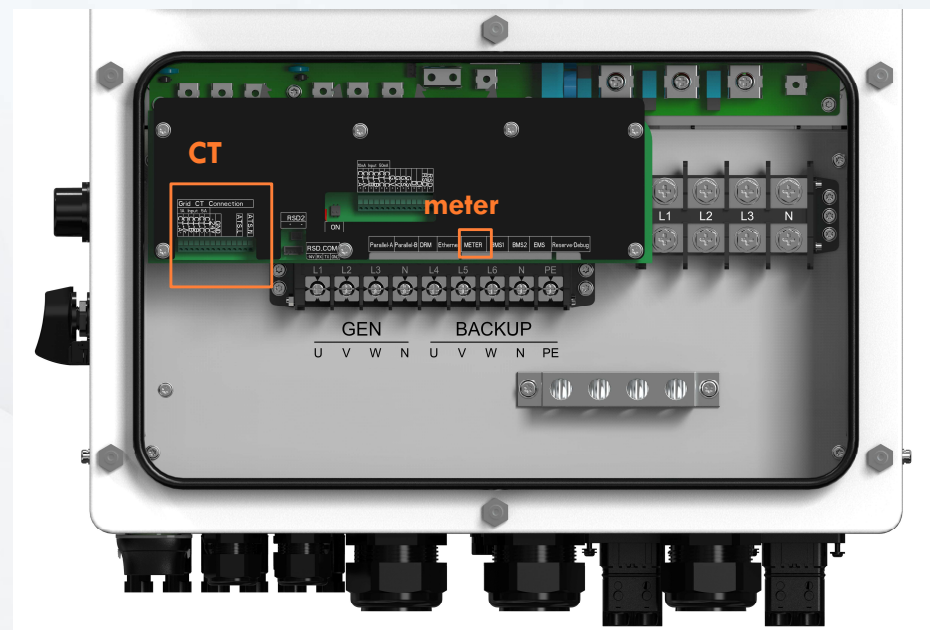
A Solis 2 mérési konfigurációt kínál::

- ① Meter + CT
- ② CT

Meter model: SDM630MCT V2 (Eastron 3ph meter )

CT model: ESCT-T50-300A/5A

CT Cable: Size – 2.3mm<sup>2</sup>, Length - **4m**



Párhuzamos üzemmódban a CT-t és a mérőt a főgép kommunikációs portjaihoz kell csatlakoztatni.

Felhívjuk figyelmét: ha  $\geq 3$  inverter van párhuzamos üzemmódban, a vásárlóknak maguknak kell konfigurálniuk a CT-t (helyi piacon vásárolható meg).

CT-követelmények: xxA / 5A. (A CT szekunder oldali árama 5A, a primer oldali áramot pedig a telephely áramkövetelményei szerint kell kiválasztani.)



## S6-EH3P(30-50)K-H

Az akkumulátor kapacitásának konfigurációs tartománya: 50%-150%, például az 50 kW kompatibilis egy 10 kWh-s és egy 60 kWh-s akkumulátorral.



### Battery connection

Kompatibilis a legnépszerűbb nagyfeszültségű akkumulátorokkal



 solis |  20<sup>th</sup> ANNIVERSARY **S6 Series battery compatibility**

**DYNES**

**CATL**

**SOLUNA**  
POWER DESIGNED FOR NIGHT AND DAY

**DMEGC**

**Uhome**

 **UZ ENERGY**

**ZRGP**

 **PYLONTECH**

**SUNWODA**  
ENERGY

**FEB**

**GSL ENERGY**  
Much More Than Grade A

 **Alpha-ESS**  
smarten your energy

**WECO**

 **BYD**

**Pytes**

 **PHYLION**

**Haier**

 **FORTRESS**  
**POWER**

 **KADOK**

 **LG**  
Life's Good

**PUREDRIVE**  
ENERGY STORAGE

Hasznos tipp: Mindig ellenőrizze a legfrissebb akkumulátor-kompatibilitási listát a Solis weboldalon.

<https://www.solisinverters.com/global/downloadcenter.html>



# S6 Series battery compatibility

Inverter	Type	Brand	Model	HMI Version				
S5-EH1P(3-6)K-L RHI-(3-6)K-48ES-5G RHI-(3-5)K-48ES	Lithium	AOBOET	Uhome-LFP 5.8/7.5/10/12.5kWh/LV		V29			
			Uhome-NCA 6.8kWh/LV	Uhome-LFP 2400/5000				
		BYD	Battery-Box Premium LVS		Battery-Box Premium LVL		V35	
			Battery-Box Pro 2.5-10.0		Battery-Box Pro 13.8		V29	
		Dyess	B3	B4850	B48100	BX48100	B51100	V25
			PowerDepot H2.5/H5.0					
			Powerbox F-2.5/F-5.0/F-7.5/F-10.0					
		EXIDE	LIBM048050				V35	
		FOX	LV5200				V33	
		Freedom	Freedom Wan Lite				V31	
		GSL ENERGY	GSL5000U				V33	
			GSL7000U	GSL10000U				
		GS ENERGY	GBL2.45K3		GBL5.8K3		V35	
		HD ENERGY	3U-4890		CM101607		V35	
		HIGHSTAR	HSD5870				V31	
		JiaWei	HOME e11				V31	
		KODAK	FL5.2				V33	
		LG Energy Solution	RESU3.3	RESU6.5	RESU10	RESU13	V27	
		PUREDRIVE	48V-100Ah				V35	
		PYLONTECH	Force L1(CEI 0-21)		Force L2(CEI 0-21)		V29	
			Phantom-S (CEI0-21)	US2000 (CEI 0-21)	US3000 (CEI 0-21)			
			US2000C (CEI0-21)	US3000C (CEI0-21)	UP5000			
			US2000B	US3000A	US2000 PLUS			
		PAND	Powerfree-S	Powerfree 5-U	Powerfree 12		V37	
		SOLUNA	BATTERY MODULE 4K PACK		Soluna EOS 5K Pack		V31	
		UZ energy (powered by CATL)	Power Lite L051100-A1		L051100-A		V37	
		WECO	4K4PRO		DUAL VOLTAGE 5K3 LV/HV		V32	
		ZETARA POWER	51.2V-100Ah				V33	
S5-EH1P(3-6)K-L RHI-(3-6)K-48ES-5G	Lead carbon	Support						
	Lead-acid	Support						

Inverter	Type	Brand	Model	HMI Version					
RAI-3K-48ES-5G	Lithium	BYD	Battery-Box Premium LVS		Battery-Box Premium LVL		V00		
			Battery-Box Pro 2.5-10.0		Battery-Box Pro 13.8		V05		
		Dyess	B3	B4850	B48100	BX48100	B51100	V08	
			PowerDepot H2.5/H5.0		Powerbox F-2.5/F-5.0/F-7.5/F-10.0				
		FOX	LV5200				V0C		
		HIGHSTAR	HSD5870				V0B		
		JiaWei	HOME e11				V0B		
		KODAK	FL5.2				V0C		
		LG Energy Solution	RESU3.3	RESU6.5	RESU10	RESU13	V09		
		PYLONTECH	Force L1 (CEI 0-21)		Force L2 (CEI 0-21)		V09		
			Phantom-S (CEI0-21)	US2000 (CEI 0-21)	US3000 (CEI 0-21)				
			US2000C (CEI0-21)	US3000C (CEI0-21)	UP5000				
			US2000B	US3000A	US2000 PLUS				
		PUREDRIVE	48V-100Ah				V0C		
		SOLUNA	BATTERY MODULE 4K PACK				V0B		
		UZ energy (powered by CATL)	Power Lite L051100-A1		L051100-A		V11		
		ZRGF	ZR-FC4850		ZR-FC48100		V11		
			ZR-PBX1	ZR-PBPL2.4-40.9%	ZR-PBML2.4-40.9%				
		Lead carbon	Support						
		Lead-acid	Support						
		RHI-3P(5-10)K-HVES-5G	Lithium	AOBOET	Uhome-LFP 2400/5000 Battery		Uhome-LFP 2600 HV		V06
				BYD	Battery-Box Premium HVS		Battery-Box Premium HVM		V0A
				Dyess	PowerRack HV1/HV2/HV3		Tower T7/T10/T14/T17/T21		V06
				FOX	HV2600				V09
				GS ENERGY	GBL2.45K3				V09
				PYLONTECH	H48074 (CEI 0-21)		H48050 (CEI 0-21)		V03
					Force H1 (CEI 0-21)		Force H2 (CEI 0-21)		
				PUREDRIVE	Li-HV				V0C
SOLUNA	BATTERY MODULE 10K PACK HV			BATTERY MODULE 15K PACK HV		V09			
WECO	DUAL VOLTAGE 5K3 LV/HV				V09				

<https://www.ginlong.com/uploads/file/Compatible Battery List us.pdf>



# Az S6 sorozat üzembe helyezésének lépései

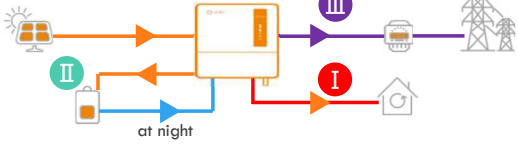
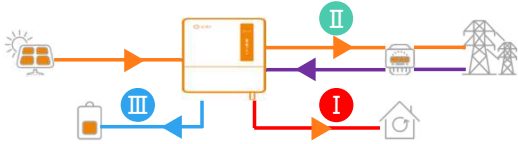
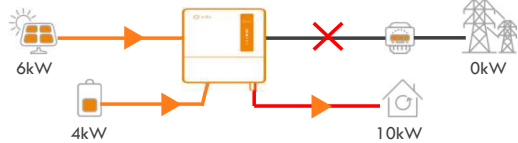
The screenshots illustrate the following steps in the 'Quick Setting' menu:

- Step 1:** Inverter Time setting. The 'Inverter Current Time' is set to 2024-09-19 08:55:19. The 'Follow Phone Time' toggle is turned on. The 'Inverter Time Setting' is also set to 2024-09-19 08:55:19.
- Step 2:** Battery Type selection. Options include Lithium Battery (checked), Lead-acid Battery, 48V Lithium Battery (Without COMM), 51.2V Lithium Battery (Without COMM), No Battery, and Battery Model (Lithium Battery LV(RS485), Lithium battery LV, PYLON\_LV (checked), User define, B\_BOX\_LV BYD, Dyness LV, LG Chem LV).
- Step 3:** CT Setting configuration. Options include CT Setting, Meter Installation Location (Grid side), CT Direction (Forward), and CT Ratio (2000).
- Step 4:** Grid Code and Grid Neutral Connection setup. Grid Code is G59/3 and Grid Neutral Connection is Connected.
- Step 5:** Storage Mode configuration. Options include Self use (checked), Off grid, and Selling first. 'Allow export' is turned on, and 'Max export power' is set to 16500W.

Ha most helyezi üzembe először az invertert, először a Gyorsbeállításokon kell átesnie. A gyorsbeállítás után a rendszer normál módon működhet. Ha további funkciókat kell beállítania, kérjük, lépjen be az alkalmazás beállítási felületére.



# Energy storage modes

Diagram	Energy storage modes	Sequence of Actions	Usage
	Self-use	Usage priority: PV>Load>Battery>Grid Supports TOU settings in this mode.	This regime applies to areas with low feed-in tariffs and high energy costs.
	Selling first	Export priority: PV>Load>Grid>Battery Supports TOU settings in this mode.	This regime applies to areas with high feed-in tariffs.
	Off-grid	Battery, PV>Load	This mode applies to areas that are not connected to the network or where the system is not connected to the network.



# Export Power Management

STORAGE MODE 2024/01/01 12:00:00

Storage mode

Self-use  Allow export

Selling first

Off grid

Batt reserved

Allow grid charging

Max export power

Export power calibration

Grid Peak shaving

Unbalance output mode

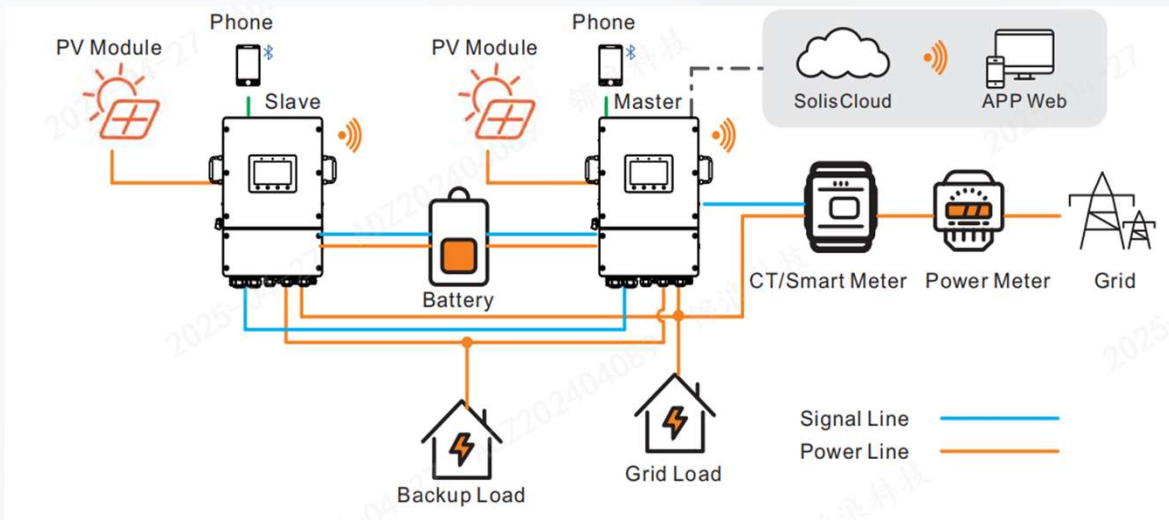
1/2

Allow grid charging	Allow grid charging the battery when it enables. Notice: if "Allow Grid Charging" is turned on, the inverter will use grid power to charge the battery only under two circumstances: The battery drains to the Force Charge SOC. When PV power output can't meet the set current value during the charge periods.
Max export power	Default: 1.1 times of rated power. Notice: if feed-in is not allowed, set Max export power to 0. Limit the maximum power sold to the grid.
Export calibration	Range : -500w-500w, default 20w, settable. To compensate the deviation of CT/Meter in practical application.

A legtöbb esetben az exporthatárérték-kalibráció alapértelmezés szerint „-30 W”. Ez azt jelenti, hogy az import bármikor megtörténhet. A „-” importot, a „+” exportot jelent. Az éjszakai energiaimport elkerülése érdekében a felhasználó az exporthatárérték-kalibrációt 0 W-ra állíthatja.



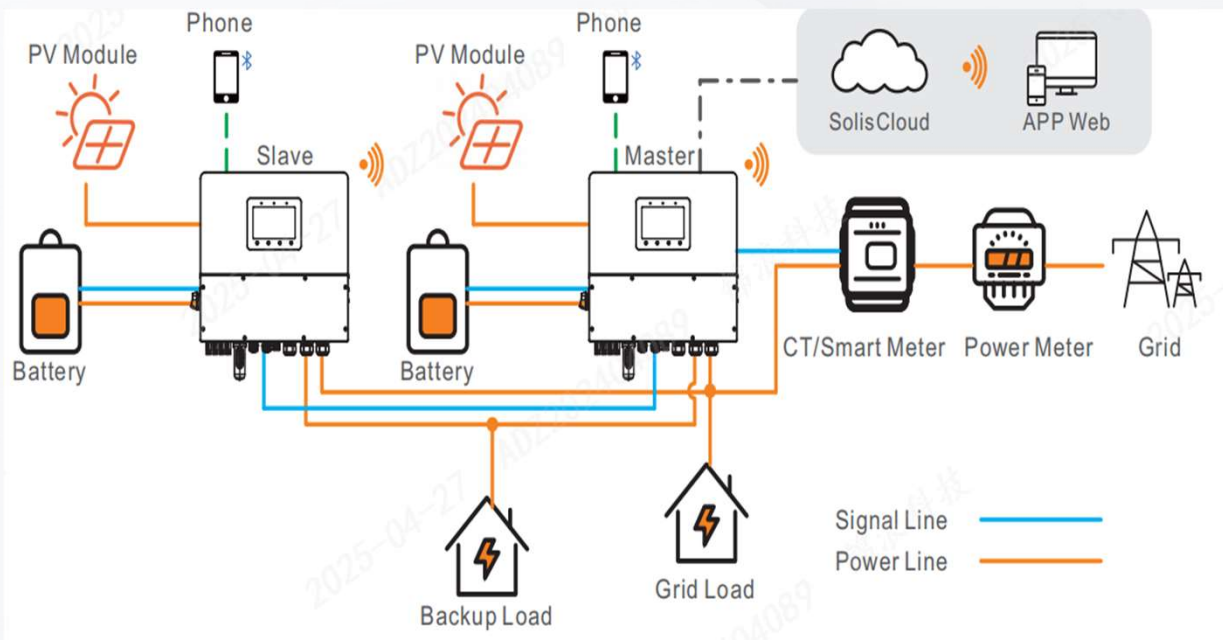
## Paralleling low voltage battery + S6-EH3P(8-15)K-L



- Párhuzamos rendszer esetén maximum 6 párhuzamos csatlakozás támogatott.
- Különböző modellek párhuzamos csatlakoztatása nem támogatott. (Ahogy a 12K és 15K modellek sem csatlakoztathatók párhuzamosan).
- Az AC-Backup port párhuzamosan csatlakoztatható, és az egyfázisú kimeneti teljesítmény a teljes AC teljesítmény fele.
- **Inverterek közös BUS-hoz csatlakoznak, és a BMS csatlakozik a Masterhez.**
- Párhuzamos rendszerben minden inverterhez ajánlott csatlakoztatni az adatgyűjtőt, ellenkező esetben a távoli frissítés nem hajtható végre.
- A két inverter közötti kommunikációs kábel hossza nem haladhatja meg az 5 métert.



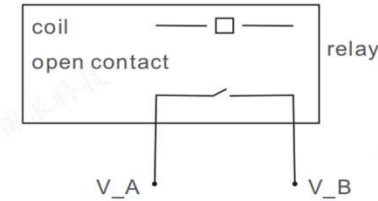
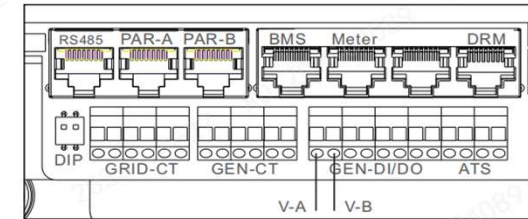
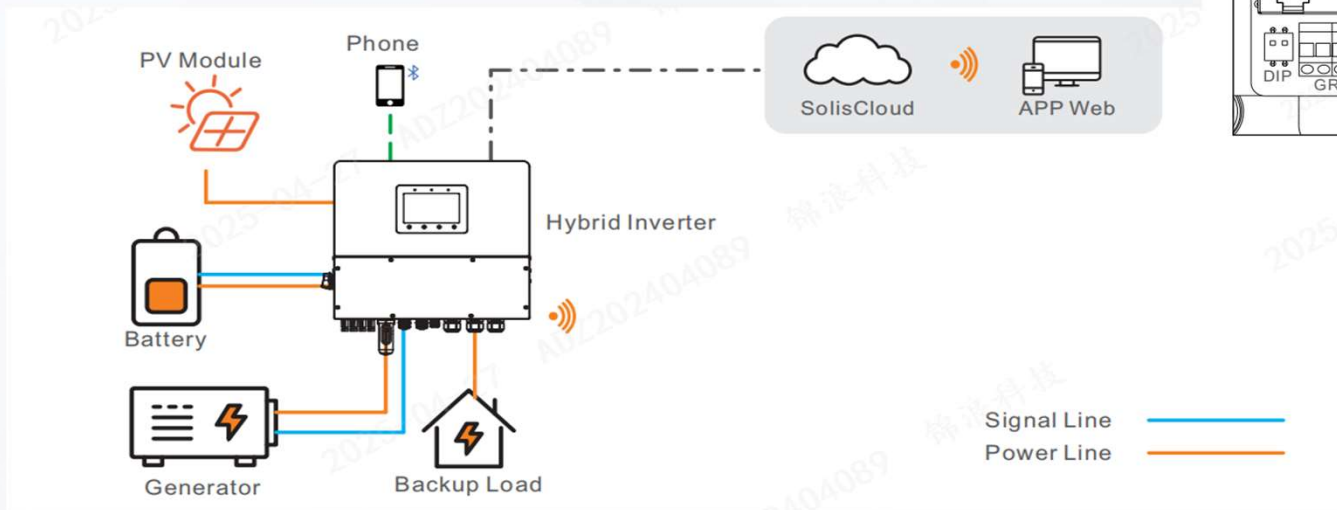
## Paralleling high voltage battery + S6-EH3P(12-20)K



- In parallel-system scenarios, maximum support 6 parallel connections.
- Parallel connection of different models is not supported.(Like 12K and 15K can't be connected in parallel).
- The AC-Backup port can be connected in parallel, and the single-phase max. output power is 50% of the total AC power(20K support 40%).
- **Parallel connection of BAT port is not supported.**
- In parallel-system scenarios, connecting DG via ATS is recommended;
- In the parallel system, each inverter is recommended to plug in the datalogger, otherwise, the remote upgrade cannot be performed.
- The parallel cable between the two inverters should not exceed 5m.



## System with generator Diagram - gen port

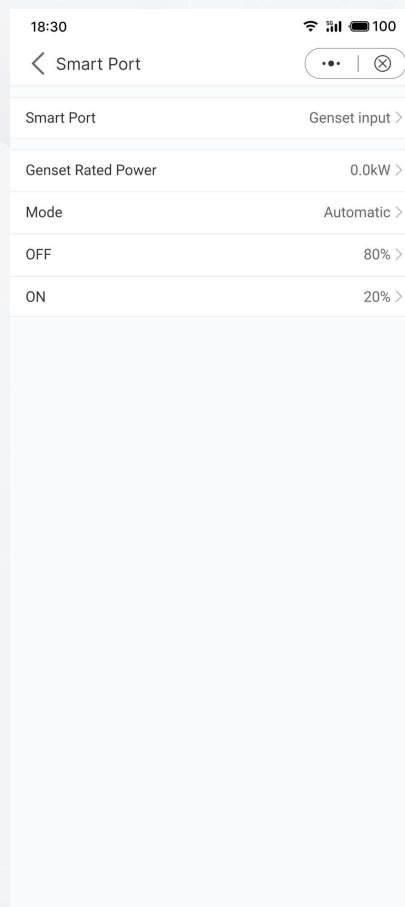
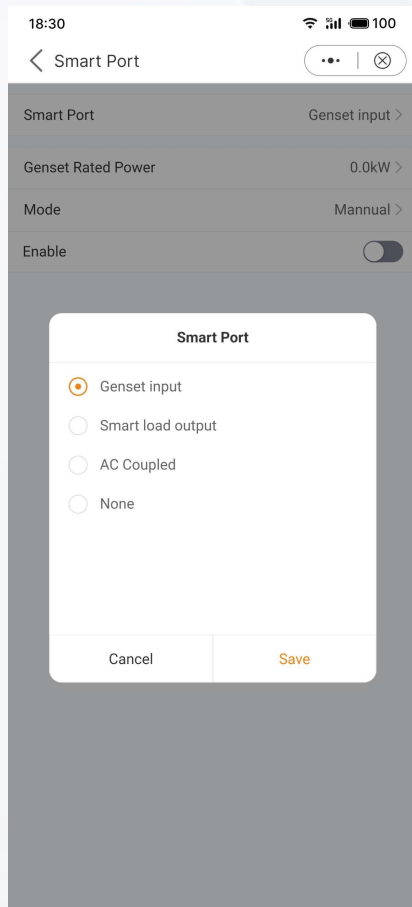


- The G-V terminal is a voltage-free dry contact signal for connecting with generator's NO relay to start up the generator when necessary.
- When generator operation is not needed, Pin1 and Pin2 is in open circuit.
- When generator operation is needed, Pin1 and Pin2 is in short circuit.

- It will only supply power to the backup load.
- When the system is connected to the generator, it cannot be connected to a grid-tied inverter, because of a risk of damaging the generator.
- When the generator connect to the gen port, gen power should be less than or equal to the rate power, only support three phase generator with three phase inverter.
- In parallel system, gen port should be in parallel.



# System with generator Diagram - gen port



Step 1 Select Genset input

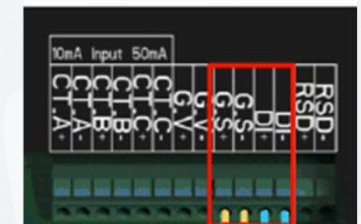
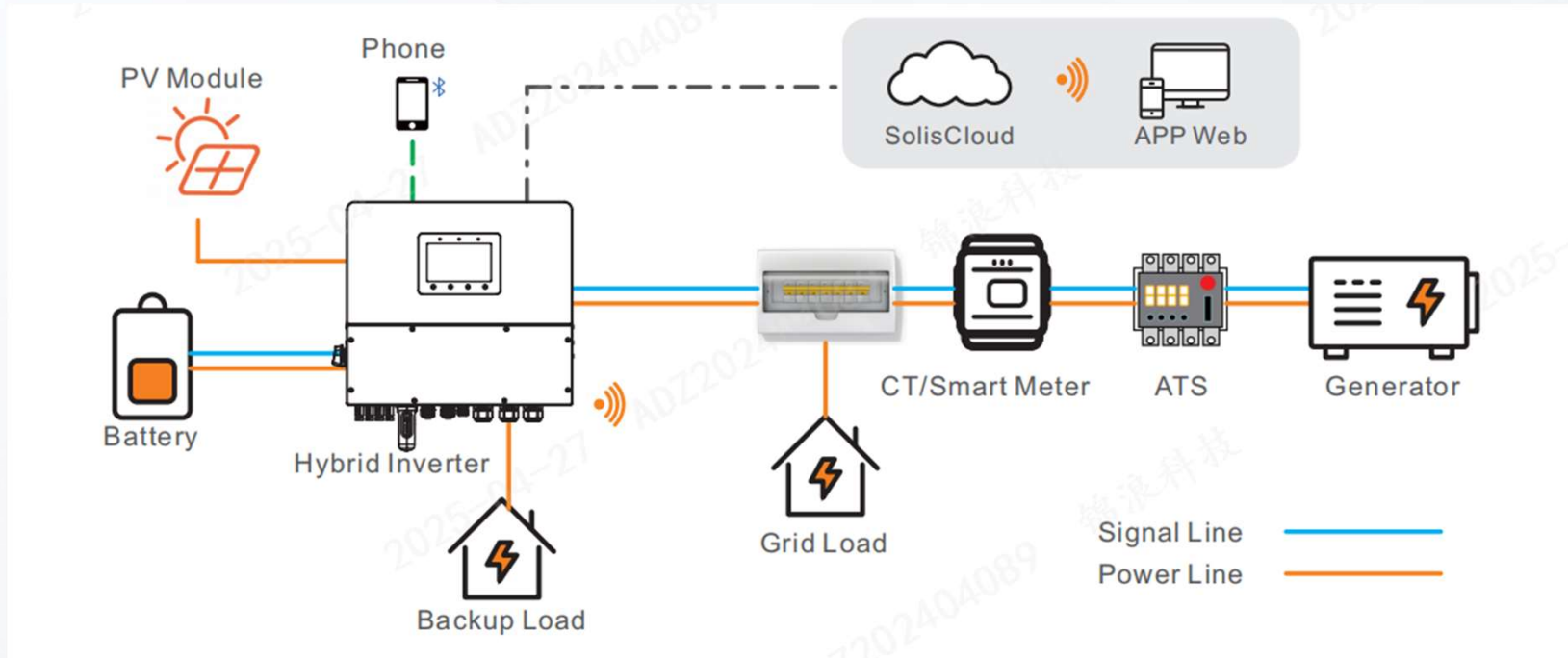
Step 2 Set the Genset rated power. Disable.

Step 3.1 When you want to manually control the start and stop of the generator, enable needs to be selected.

Step 3.2 When you want the generator to automatically start and stop according to the battery SOC, please select the Automatic.  
The generator will start when the battery SOC drops to the ON SOC, and stop when the SOC reaches the OFF value.



## System with generator Diagram – via ATS

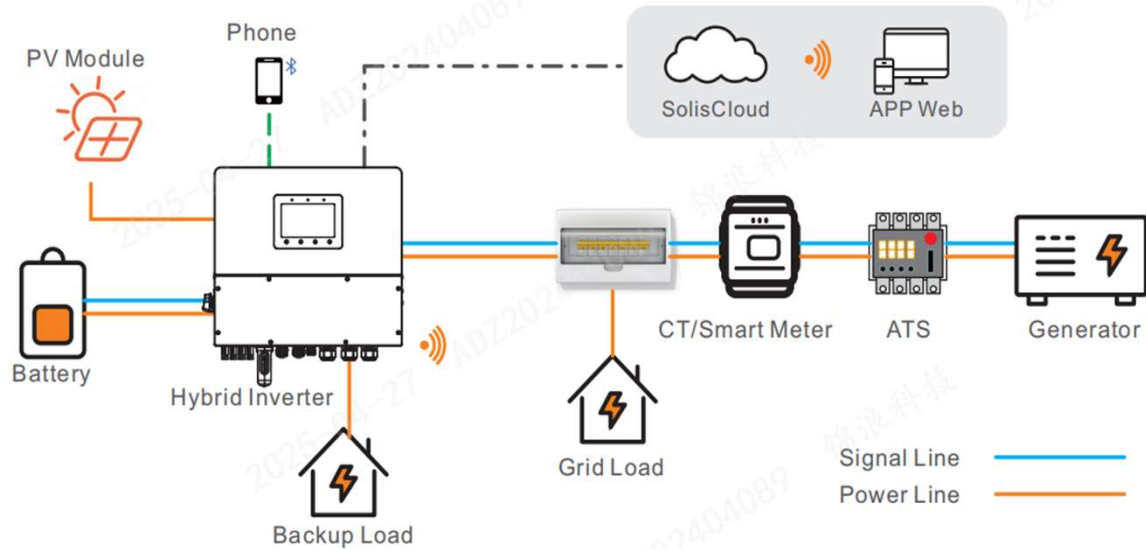


--- Generator signal control wire : G\_S  
--- Generator feedback signal wire : DI

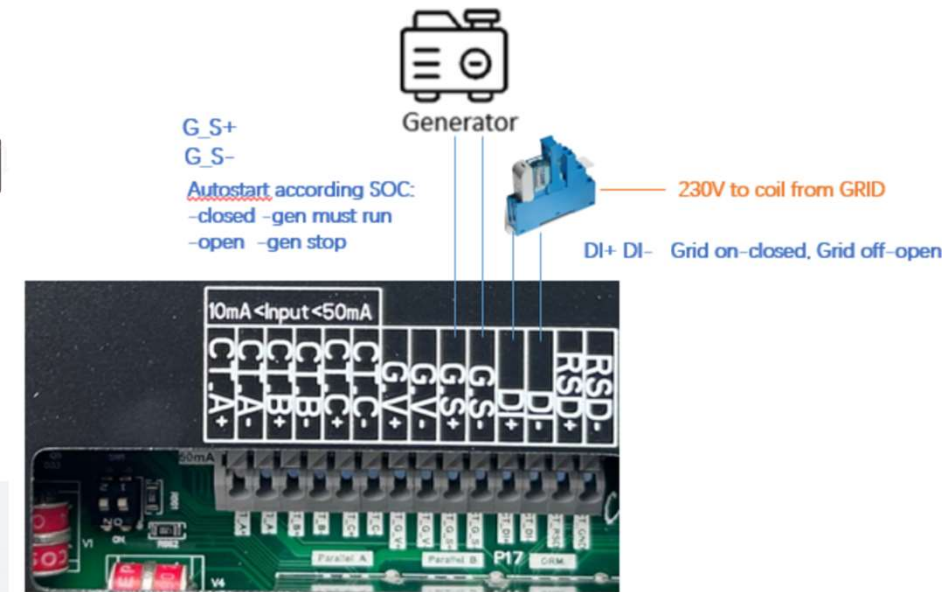
- Ha a generátor a hálózati oldalon egy ATS-en keresztül csatlakozik, akkor áramváltó vagy okosmérő szükséges.



## System with generator Diagram – via ATS



### Generator in GRID with ATS



- Ha a generátor a hálózati oldalon egy ATS-en keresztül csatlakozik, akkor áramváltó vagy okosmérő szükséges.
- A generátor vezérlőkábelével csatlakoztassa az ATS-t a master ARM panel DI+ és DI- portjaihoz..
- Use the generator control signal cable to connect the G-S+ and G-S- ports of the masters ARM board.

Recommended to install additional relay to Grid side and one NO contact to DI+ and DI-.  
If Grid is present contact is closed,  
if Grid is lost, contact is open.

# Solis AI

## new EMS solution

## Solis AI (Fully Automatic & Recommended Mode)

Solis AI is an advanced energy management system that automatically optimizes energy storage and output based on multiple variables. The system uses real-time data and predictive models to continuously adjust the operation of the installation.



### Weather forecast:

The system takes into account the expected solar radiation and adjusts the battery charging strategy accordingly.

### Consumption Analysis:

Solis AI learns the user's consumption patterns and anticipates future consumption needs.

### Negative rates and PV outages:

When electricity prices go negative, Solis AI can limit PV production to prevent unwanted energy injection into the grid — avoiding unnecessary costs.

### Fully Automated:

Once enabled, Solis AI runs automatically — constantly adapting its settings based on real-time data, weather forecasts, and your historical energy patterns.

### Dynamic tariffs:

Based on the Day-Ahead market or other dynamic tariff models, the system can charge at low or negative prices and discharge at high rates.

### Import and export limits:

The system respects set import and export limits to avoid peak loads and stay within grid conditions.

**Note!** SolisAI may need up to 4 weeks to fully learn your household's consumption patterns. During this learning period, the control may not always be fully optimized.



## Solis AI – 4 steps

1.

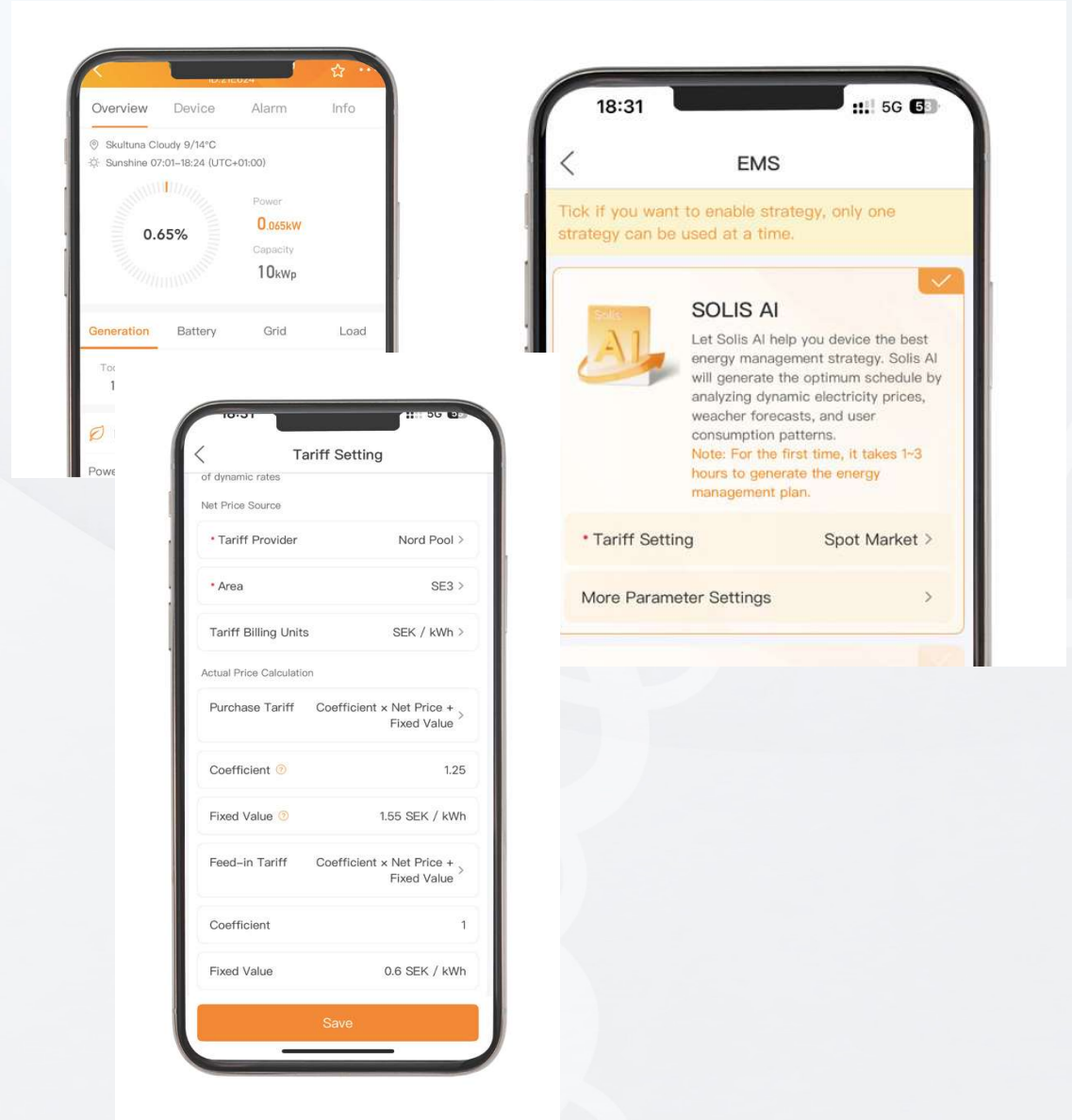
### Open the SolisCloud app

- Go to Plant Overview and tap the 'EMS' button
- Select Solis AI
  - *Users without the latest firmware will receive a message at this stage – follow the in-app instructions to upgrade before continuing*

2.

### Hit 'Tariff Setting'

- The tariff provider & region auto-fill from your location.
- Units: Choose €/MWh or €/kWh.
- (100 €/MWh = 0.10 €/kWh)
  - *Setting this correctly is very important for Solis AI to operate properly*

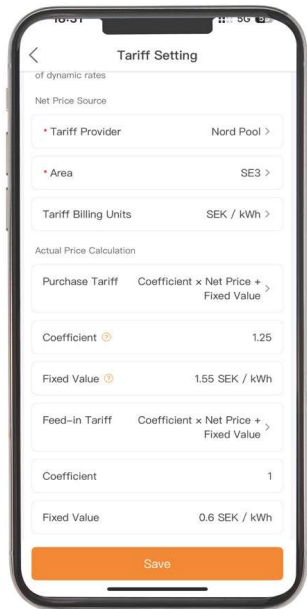




## Solis AI – 4 steps

### 3. Configure Actual Price Calculation

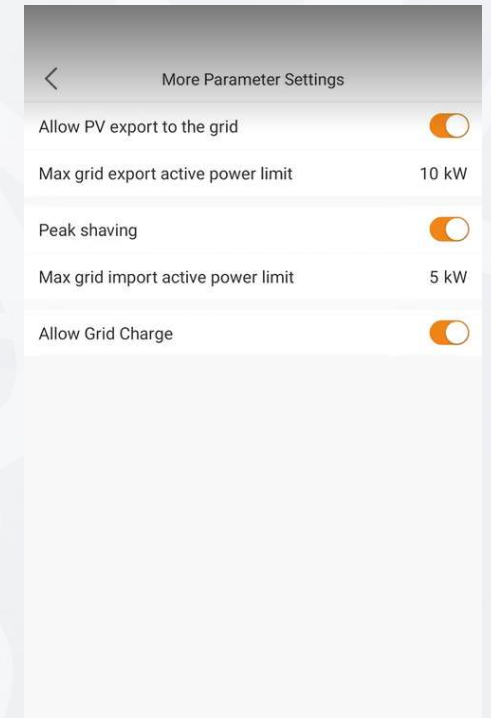
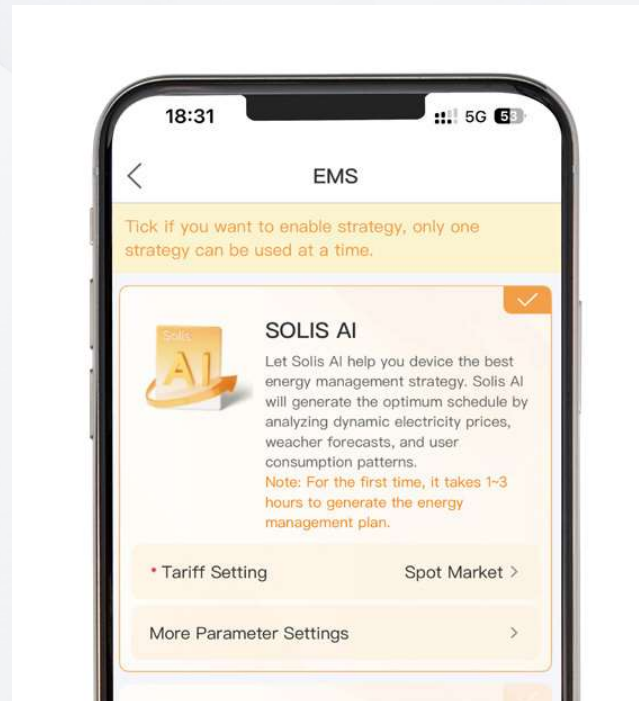
- Fixed Value For static purchase/sales rates
- Formula Adjust with Coefficient + Fixed Value
  - Example: Purchase =  $1 \times EPEX + 150 \text{ €/MWh}$
  - Example: Feed-In =  $1 \times EPEX + 0 \text{ €/MW}$



### 4.

#### Select 'More Parameter Settings'

- Allow PV export to grid (limit optional)
- Enable peak shaving (limit e.g. 5 kW)
- Allow battery charging from grid



## Dynamic Tarif

The tariff provider and region are automatically filled in based on the location of the installation. It is also possible to

adjust the unit of the tariffs.

You can choose between Euro/MWh and Euro/kWh. (100 Euro/MWh = 0.10 Euro/kWh)

### Net Price Source

\* Tariff Provider

Nord Pool



\* Region

BE



Tariff Billing Units

EUR / MWh





## Solis AI - logic

### Actual Price Calculation

With the Actual Price Calculation, you can add an offset to the dynamic prices. This is possible for both purchase and sales rates, and there are two ways to apply it: using a formula or a fixed value.

#### Fixed Value

The fixed value is intended for users who work with a fixed rate, for both sales and purchases.

#### Formula

When using a formula, you will see components such as Coefficient and Fixed Value:

- Coefficient: This allows you to add a percentage-based offset to the dynamic price. An offset represents additional costs on top of the dynamic price, such as transportation costs or VAT.
- Example: if the coefficient is changed from the default 1 to 1.1, instead of using the dynamic price, 110% of the dynamic price will be applied.
- Net Price: This is the effective dynamic price, for example, the EPEX price.
- Fixed Value: This is a fixed amount that can be added to the dynamic price.

*Example: For Belgium and Netherlands, this is usually around €120/MWh or €0.12/kWh for purchase, and €0/MWh for injection. e.g.: Coefficient = 1 Price = 150 Euro/MWh*

*Formula Example:*

Purchase Tarif:  $1 \times \text{EPEX price} + 150 \text{ euros/MWh}$  - In this case, we will always use the EPEX

The screenshot shows a configuration window titled "Actual Price Calculation". It contains two sections: "Purchase Tariff" and "Feed-in Tariff". Each section has a dropdown menu set to "Coefficient x Net Price + Fixed Value". Below each dropdown are two input fields: "Coefficient" and "Price". For the Purchase Tariff, the Coefficient is 1 and the Price is 150 EUR / MWh. For the Feed-in Tariff, the Coefficient is 1 and the Price is 0 EUR / MWh.

Section	Formula	Coefficient	Price	Unit
Purchase Tariff	Coefficient x Net Price + Fixed Value	1	150	EUR / MWh
Feed-in Tariff	Coefficient x Net Price + Fixed Value	1	0	EUR / MWh



## Self-Use (semi-automatic)

In **Self-Use** mode, the system operates semi-automatically:

- The battery is charged during the cheapest hours.
- Your dependence on the grid is reduced.

### Self-Use

Solar and energy storage systems are mainly used for self-use, reducing dependence on the grid and dynamically regulating the system according to TOU tariffs. For smarter scheduling of charging, discharging and self-use, please use Solis AI

\* Please set up the tariff plan

#### Spot Market

Configure your Time-Of-Use tariff accurately, so that the system can better help you ride the waves of dynamic rates

Vaststelling tarief >

#### Energy source when charging battery

PV + Grid  PV only

\* Charge at lowest tariff hours

Ingang  h

#### Allow PV export to the grid

Ja  Nee

\* Max grid export active power limit

10  kW

#### Peak shaving

Ja  Nee

Advanced Setting ^

* Max Discharge Power	<input type="text" value="20"/> kW	* Target SOC for Discharging	<input type="text" value="11"/> %
* Max Charge Power	<input type="text" value="20"/> kW	* Target SOC for charging	<input type="text" value="100"/> %

Preview Plan >



## Revenue Maximization (semi-automatic)

Also known as **Peak-Valley Arbitrage**. The system charges and discharges based on tariff thresholds to **maximise profit**.

- **Charge** when the price is lower than a set value or percentage.
- **Discharge** when the price is higher than a set value or percentage.
- **Between thresholds** Operates in Self-Use or Stand-By mode.

### Example:

By configuring the settings as shown in this example, the system works as follows:

**Below €100/MWh:** The battery charges from the grid, with a maximum consumption of 8 kW, determined by the set import limit.

**Between 100 - 250 €/MWh:** The system switches to self-use and optimizes local energy use.

**Above €250/MWh:** If there is still energy in the battery, the system injects maximum back into the grid to benefit from the high rates.

**At negative rates:** The injection is automatically limited so that no energy is returned to the grid.

These smart settings allow the system to respond dynamically to price fluctuations, ensuring maximum savings and optimal energy management.

The screenshot shows the 'Revenue Maximization' settings in an EMS interface. The title is 'Revenue Maximization' with a sub-header 'Maximise the profitability of your system by charging and discharging your batteries according to the price of electricity, ensuring you buy low and sell high!'. Below this, there is a section for 'Dynamic Tariff' with a note to 'Configure your Time-Of-Use tariff accurately, so that the system can better help you ride the waves of dynamic rates'. The 'Tariff Setting' section includes: 'Export when tariff is higher than ...' with a dropdown set to 'Fixed price' and a value of '250 EUR / MWh'; 'Charge batteries when tariff is less than ...' with a dropdown set to 'Fixed price' and a value of '100 EUR / MWh'. There are radio buttons for 'Self-use' (selected) and 'Standby'. The 'Advanced Setting' section includes: 'Allow PV export to the grid' (enabled), 'Max grid export active power limit' (5 kW); 'Peak shaving' (enabled), 'Max grid import active power limit' (8 kW); 'Allows charging from mains' (enabled); 'Max battery discharge power' (10 kW), 'Target SOC for Discharging' (11%); 'Max battery charge power' (10 kW), 'Target SOC for charging' (100%). A 'Preview Plan' button is at the bottom.



## Timed Plans (manual only)

The Timed plans can be set in SolisCloud.

- Set charge and discharge times or standby
- Enable/Disable per time slot and per day
- Determine the charging or discharging capacity
- PV Shutdown
- Enable/disable DO (SGR contact)

### Timetable

**Add Plan**

Period 1

* Start Time	* End Time	Action
Select	Select	Charge

Battery Charge Power: Input kW

Battery Charge Cut-off SOC: 100 %

Allow grid to charge battery:  Allow grid to charge battery

PV Power Generation:

DO:

Repeat:  Sun  Mon  Tue  Wed  Thu  Fri  Sat

+ Add Period

### SEM

**SOLIS AI**  
Let Solis AI help you decide the best power supply strategy.

**Peak-Valley Arbitrage**  
Intelligently control the charging and discharging of devices according to the tariff in your region.

**Timed Plans**  
Allow equipment to execute according to the timed plan

[Manually set the battery charge/discharge plan](#) [Demand control plan](#)

More Settings <

System Export Power Limit  
Switching

System Import Power Limit  
Switching

[Preview Plans](#)



## Third-Party Modbus control (EMS)

EMS companies can reach us and sign NDA document upfront to obtain Modbus Tables for controlling our inverters via their EMS. Solis does not provide Modbus Tables with control registers to end-users.

S6 series inverters have RS485 / EMS port available for third-party control. Inverters can also be controlled via API or Modbus TCP with **S2-WL-ST logger**.

**Please request Firmware Update for enabling TCP/IP.**



# New devices upcoming!

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80-125kW

## Solis Three-Phase High Voltage Energy Storage Inverters

S6-EH3P(80-125)K10-NV-YD-H





## S6-EH3P(80-125)K10-NV-YD-H “BEAST”

1

### 10 MPPT / 20 strings

21A single string current

2

### 200A/100+100A

Max charge/discharge current

3

### Compatible with major global battery brands

4

Supports unbalanced output power up  
to 41.6 kW per phase

5

Supports 2 times higher PV input,  
high DC/AC ratio

6

### Automatic UPS switching

<10ms

7

### Parallel System

On-grid or off-grid. Up to 6  
units in parallel

8

### 200% 10s overload

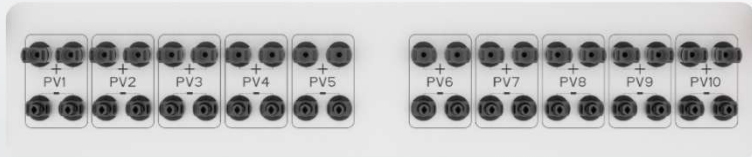
Temporary overload



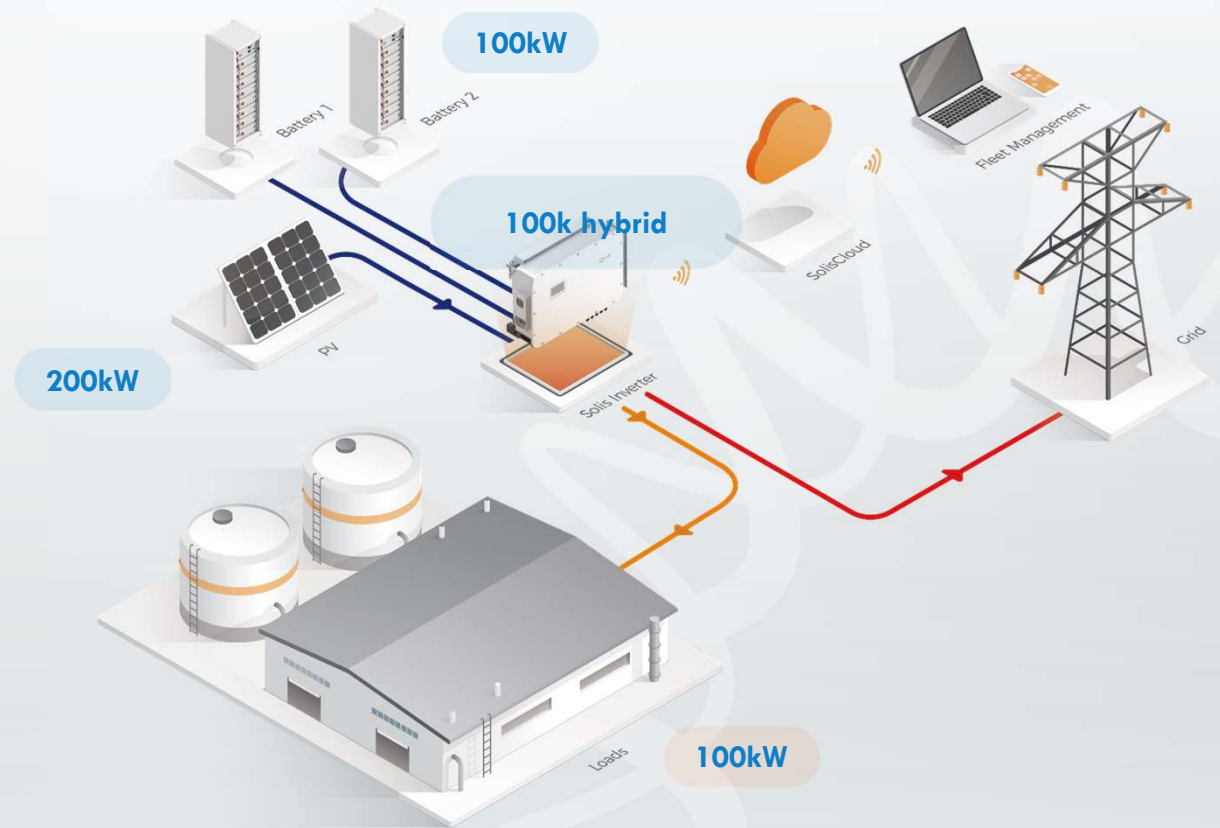


# S6-EH3P(80-125)K10-NV-YD-H

**10 MPPT** Support 20 Strings input.



Support **2 times** PV input, high DC/AC ratio,  
take the 100K hybrid as the example,  
it means it support 100kW power to battery and  
100kW to load at the same time.





# S6-EH3P(80-125)K10-NV-YD-H

## Wider voltage and higher current for battery Compatibility



Battery current : **100A+100A**

Battery voltage: **300~950V**

Battery capacity	Battery connection	System rated voltage	System voltage range	Solis EH3P 125K 300~950V	Brand A 100K 630~1000V	Brand B 100K 600/680-1000V	Brand C 100K 420~850V
102kWh	2P160S (100Ah)	512V	448 ~ 576V	√	×	×	√
113kWh	2P176S (100Ah)	563V	493 ~ 634V	√	×	×	√
123kWh	2P192S (100Ah)	614V	538 ~ 691V	√	×	×	√
100kWh	1P112S (280Ah)	358V	314 ~ 403V	√	×	×	×
115kWh	1P128S (280Ah)	410V	358 ~ 461V	√	×	×	×
129kWh	1P144S (280Ah)	461V	403 ~ 518V	√	×	×	×
108kWh	1P120S (280Ah)	384V	336 ~ 432V	√	×	×	×
125kWh	1P140S (280Ah)	448V	392 ~ 504V	√	×	×	×
215kWh	1P240S (280Ah)	768V	672 ~ 864V	√	√	√	×
233kWh	1P260S (280Ah)	832V	728 ~ 936V	√	√	√	×
241kWh	1P240S (314Ah)	768V	672 ~ 864V	√	√	√	×
261kWh	1P260S (314Ah)	832V	728 ~ 936V	√	√	√	×



# SolisStorage C&I Energy Storage System —PrimePower Series

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## Solis **4** Unique Advantages

### 1 Long life time

- Battery cell in TOP level from CATL
- Extremely long life cycles, over than 10.000 times
- High consistency of battery cells for long-term operation

### 2 Ultimate Safety

- Multiple Layer Protection From Cell to Cabinet
- 12 Level Fire Safety Treatments
- 24 Hours Active Insulation/Leakage Detection
- Full Scale Battery Pack Temperature Monitoring



**S1-109EC3P50K04-NV-YD-H**

### 3 Support Multi-scenario

- Support multiple working mode. easily adapted to 13 application scenarios

### 4 Free-Maintenance

- Unique Patented for battery Pack (IP67) natural Cooling with Fan-less Design
- Hybrid inverter Separation installation design, Reduce the failure risk associated with heat accumulation
- Free maintenance for flammable gas sensor in 10 years
- Supports remote OTA with SolisCloud

## Long-term use

Selected Top1 manufacturer CATL for cell supply



## Long cell life

**10000** cycles compared to **7000** cycles

An additional **40%** cycles compared to existing 280Ah/314Ah cell products

## Guaranteed security

Multi-level protection from the cell to the cabinet

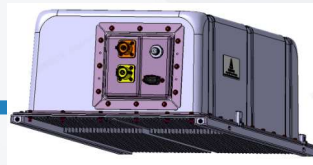
### Cell



#### Cell Level Protection

- Over voltage
- Under voltage
- Short Circuit
- Overload
- Pressure release valve

### Pack



#### BMS real time monitoring, Pack Level Protection

- Over voltage
- Under voltage
- Short Circuit
- Thermal runaway

### Cabinet



#### Preventive Protection

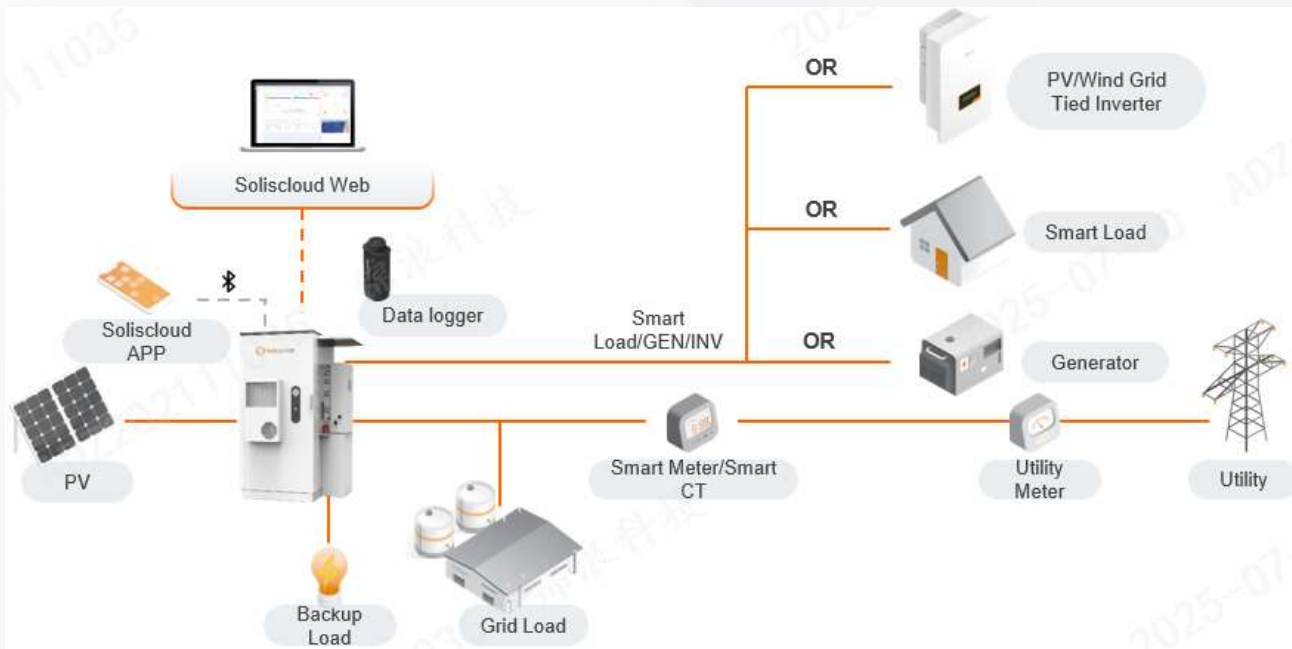
- Temperature/Moisture/Smoke detection system
- Real time insulation/leakage detection

#### Post Incident Protection

- Top level fire safety treatments
- Class F240, 4 hour fire resistant (Maintain structure integrity)

Support Multi-Scenario

Support multiple working mode. easily adapted to 13 application scenarios

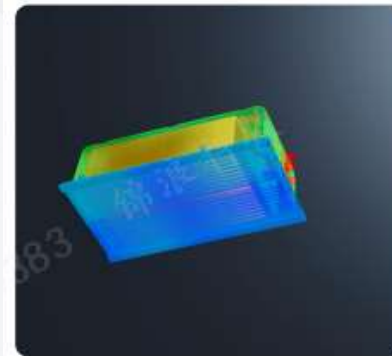
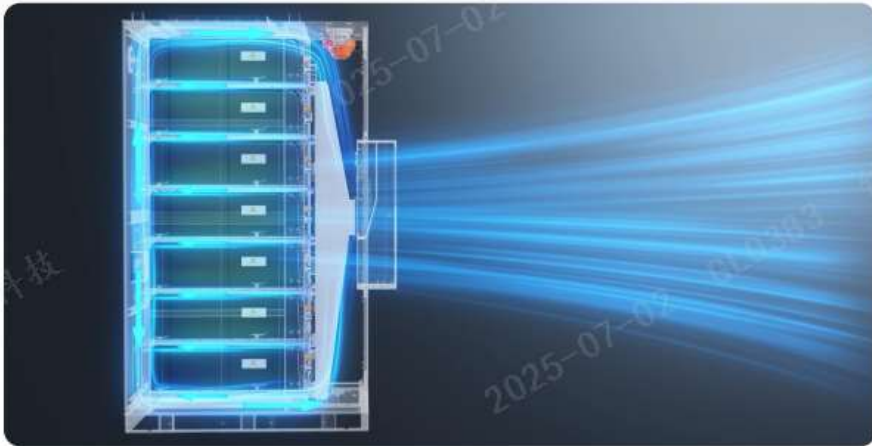


Stable Grid Application	Unstable Grid Application
Self-Use	Uninterrupted Power Supply Guarantee
Selling First	Storage Upgrade For PV Utilization
Zero Export To Grid	Smart Load Management
System Peak Shaving	Battery Reserve For Backup Extension
Electricity Trade Market	Micro grid Under Off Grid
Time of Use with fixed period	
Dynamic Tariff Arbitrage	
Retrofit Existing PV Plant	

PrimePower suitable for various scenarios such as large residential areas, hotel、 Supermarkets, farms, and small factories. It integrates functions including power generation, power conversion, energy storage, and utilization.

## Free-Maintenance

### Unique Patented for battery Pack (IP67) natural Cooling with Fan-less Design



- **High IP Degree:** Pack IP67, Cabinet IP55, Inverter IP66
- **High Anti Corrosion Level:** C4 (C5 Optional)
- **No Liquid Cooling:** No need periodically replenish the cooling liquids
- **Patented natural Cooling Pack Design:** Pack level heat equalizing plate, no need pack level fan cooling. Cabinet built in air-conditioner can equally cool every battery pack

## Scalable Capability

**Support max 10 pcs in parallel mode on AC side, expand system inverter capacity up to 500kW**

**Support max 6 Cabinets in parallel mode on DC side, expand battery capacity up to 6.54MWh**



Up to 10 PrimePower connected in parallel mode on AC side



Up to 6 battery cabinets in parallel under single 50k inverter



# HASZNOS INFORMÁCIÓK



Knowledge base:

<https://solis-service.freshdesk.com/support/solutions>

After Sales Ticketing system

<https://solis-service.solisinverters.com/en/support/tickets/new>

Installation and instructional videos

<https://2ly.link/1xaMH> - <https://2ly.link/1xaMK>

Certificates and user manuals

<https://www.solisinverters.com/uk/downloadcenter.html>

Design Tool

<http://design.soliscloud.com/login>



**Solis Inverters**  
Knowledge base



**Solis Europe**  
YouTube Channel



**Solis Europe**  
Ticketing Service



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