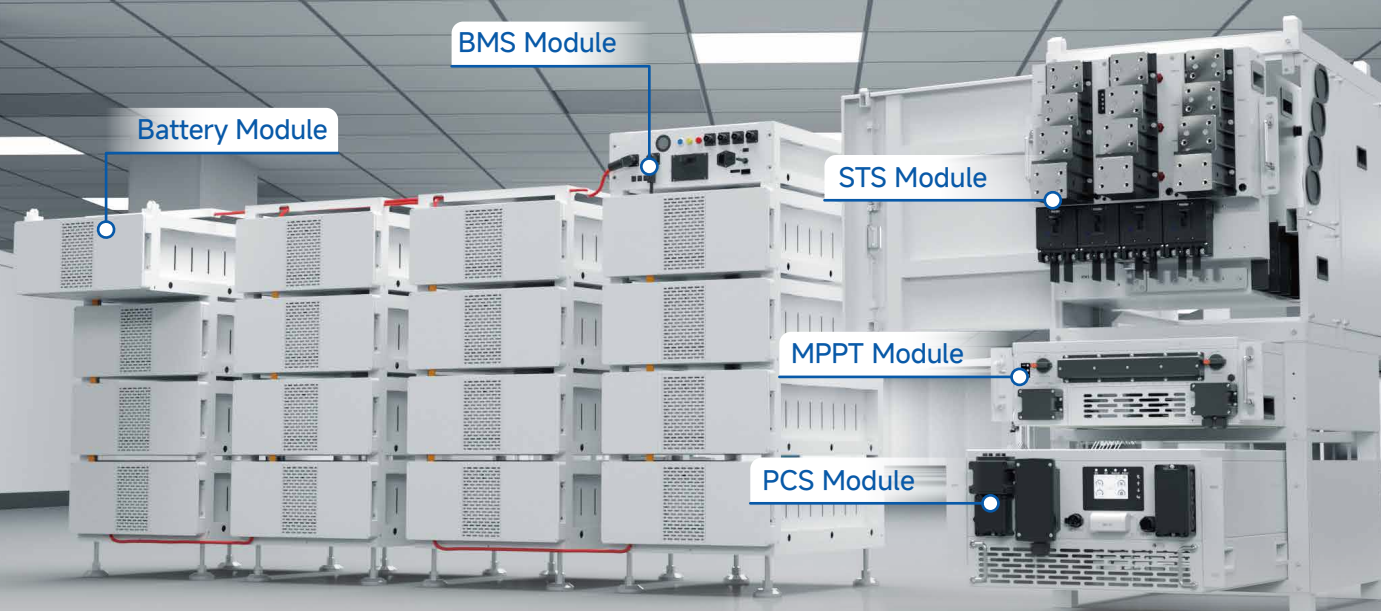


100/125kW-2.5MW C&I ESS SOLUTION

PCS with Integrated EMS, Supporting Flexible
Integration with MPPT & STS Modules



Power Continuity

- **UPS-Level Switching:**
< 10 ms seamless on-grid/off-grid switching via STS.
- **Strong Overload Capability:**
Supports 2 × peak power output for 12s in off-grid mode, ensuring stable operation of critical loads.



Smart Battery Management

- **Long Backup Duration:**
Supports up to 32 hours of continuous backup power.
- **Intelligent Balancing:**
Independent BMS optimizes charge/discharge distribution, extending overall battery lifespan.



Smart Energy Management

- **Integrated EMS:**
Supports zero-export, TOU optimization, peak shaving and demand management.
- **Flexible Control:**
Flexible Control: Local touchscreen control and remote monitoring via Deye Cloud.



Efficient PV Integration

- **Multi-Tracker MPPT Design:**
Each MPPT module supports 8 MPPT trackers, with up to 40 A per tracker.
- **High PV Capacity:**
Up to 200 kWp PV capacity per MPPT module.



System Scalability

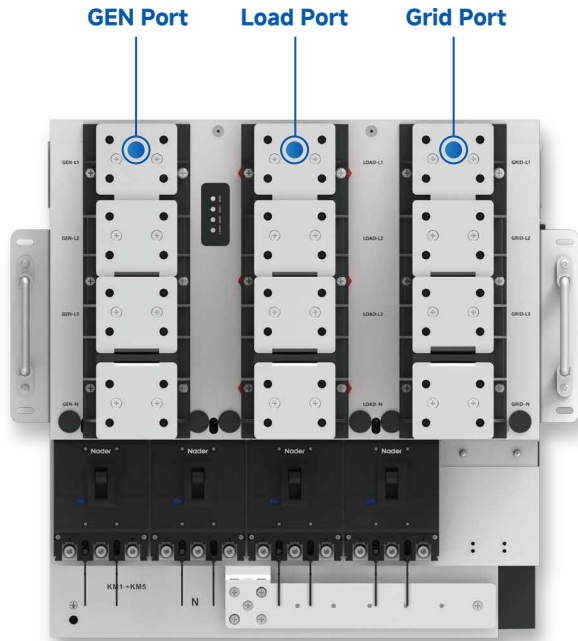
- **Flexible Expansion:**
100/125kW PCS units enable system scalability up to 2.5 MW.
- **Large Energy Storage:**
Up to 257 kWh per battery cluster, supporting up to 16 clusters per PCS.



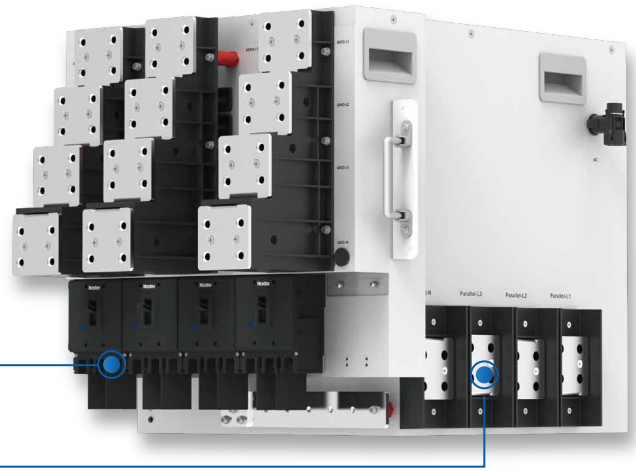
Reliability & Protection

- **IP65 Design:**
IP65-rated PCS and MPPT modules for reliable operation in demanding environments.
- **Advanced Battery Safety:**
LiFePO₄ cells with integrated aerosol fire suppression for enhanced protection.

STS Module



- Three independent power paths (diesel / load / grid), with each path supporting 500 kW.
- <10 ms on-grid/off-grid switching*.
- 5×100 kW or 4×125 kW PCS units per STS module, up to 5 STS modules in parallel.



PCS Connection Point

STS AC Parallel Port

MPPT Module & PCS Module

MPPT Module (8 MPPT Trackers)

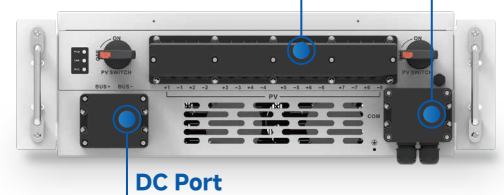
- 8 MPPT Trackers, up to 40A per tracker.
- Up to 200 kWp PV capacity per MPPT module.

PCS Module (100kW/125kW)

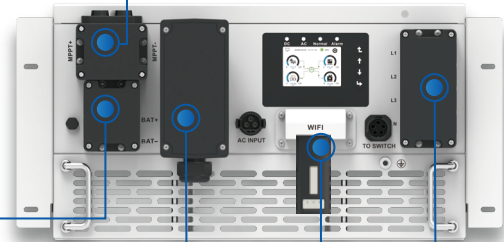
- 175A/200A** charge and discharge current.
- Maximum efficiency of **98.5%**.
- System rated power up to **2.5MW**.
- Supports instantaneous peak power up to 200% of rated power.
- Integrates zero-export and time-of-use control functions.
- Built-in EMS for intelligent energy management and optimized system operation.

PV Input
8 MPPT

CAN/RS485



DC Port



Battery Port

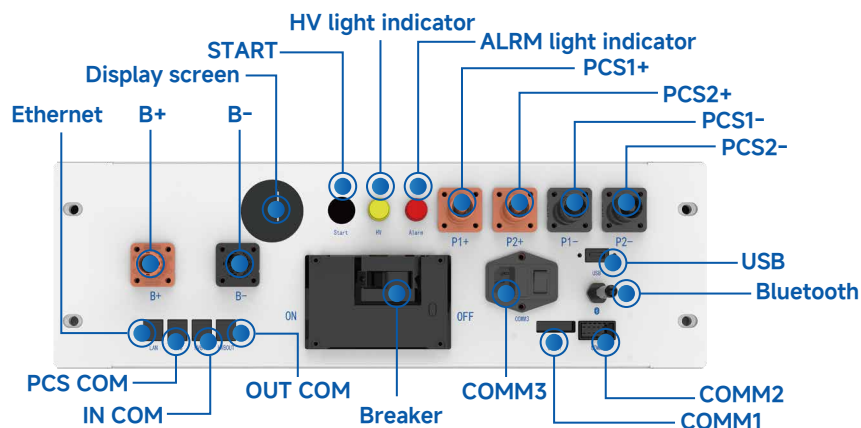
CT/Meter/BMS/
MPPT/Parallel

Data Logger

AC Output

* For stable off-grid operation, the continuous off-grid load should not exceed 70% of the PCS rated power.

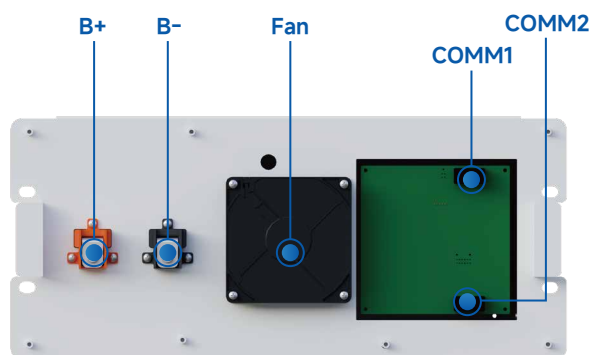
Model	BOS-B-PDU-2-A
Operating Voltage	200~1000Vdc
Nominal Charge/Discharge Current	180A
Operating Temperature	-20~60°C
Ingress Protection	IP20
AC Input Rating	220±10%VAC/2A
Details	526×788.6×167.2(W×D×H),32kg



- ◎ Ethernet:Features not yet developed.
- ◎ PCS COM:PCS COM battery communication terminal: used to output battery information to the inverter.
- ◎ IN COM:Connection position with previous BOS-B-PDU-2 communication OUT COM .
- ◎ OUT COM:Connection position with next BOS-B-PDU-2 communication IN COM.
- ◎ Breaker:It is used to manually control the connection between the battery rack and external devices.

- ◎ COMM3:The product must be connected to the auxiliary power input AC200~240V-3A-50~60Hz when used.
- ◎ COMM1:Emergency power-off triggered the interface. RS485-Enabled.
- ◎ COMM2:Communicative connection with the first battery module; and providing 12VDC power for the first battery module.
- ◎ Bluetooth:The mobile APP connects to the data acquisition rod of the energy storage system.
- ◎ B+:Battery common positive connection position (orange).
- ◎ B-:Battery common negative connection position (black).
- Display screen:Display SOC and fault codes.
- START:A start switch of 12VDC power inside the high-voltage control box.
- ◎ HV light indicator:High-voltage hazard indicator (yellow).
- ALRM light indicator:Battery system fault alarm indicator (red).
- ◎ PCS1+:First PCS positive connection position (orange).
- ◎ PCS2+:Second PCS positive terminal connection position (orange).
- ◎ PCS1-:First PCS negative connection position (black).
- ◎ PCS2-:Second PCS negative connection position (black).
- ◎ USB:BMS upgrade port and storage expansion port.

Model	BOS-B-Pack16-A3
Nominal Capacity	314Ah
Nominal Energy	16.08kWh
Nominal Voltage	51.2Vdc
Max Charge/Discharge Current	180A
Ingress Protection	IP20
Operating Temperature(Charge)	0~55°C
Operating Temperature(Discharge)	-20~55°C
Storage Temperature	0~35°C
Details	526×795.9×274.2(W×D×H),126kg



- ◎ B+ : Battery module positive pole (orange)
- ◎ B- : Battery module negative pole (black)
- ◎ Fan : Ventilation and heat dissipation.
- ◎ COMM1: Connection position of battery module communication and power supply input
- ◎ COMM2: Connection position of battery module communication and power supply output

Model	BOS-B-AP-A
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This Accessories Package is designed for use with the 125kW PCS, and primarily includes the following cables:

Positive PowerCable: 1AWG_1000mm*1, 1AWG_2500mm*1, 1AWG_3000mm*1

Negative Power Cable: 1AWG_240mm*1, 1AWG_3000mm*1

PE Cable: 10AWG_600mm*1

MPPT Module		SUN-MPPT-L01-AU-AM8
PV String Input Data		
Max. PV access power(kW)		200
Max. PV Input Power(kW)		160
Max. PV Input Voltage(V)		800
Start-up Voltage(V)		200
MPPT voltage range(V)		180-750
Full Load MPPT Voltage Range(V)		450-750
Rated PV Input voltage(V)		600
Max. Input Short Circuit Current (A)		60+60+60+60+60+60+60+60
Max. Operating PV Input Current(A)		40+40+40+40+40+40+40+40
No. of MPP Trackers		8
DC Output Data		
DC Output Voltage Range(V)		630-1000
Max. DC Output Current(A)		200
Efficiency		
Max. Efficiency		> 99%
MPPT Efficiency		> 99.9%
Equipment Protection		
DC input reverse protection		YES
DC ARC protection		Optional
Anti-PID(Potential Induced Degradation)		Optional
DC Input Switch		YES
Surge Protection Level		TYPE II
General Data		
Operating Temperature Range (°C)		-40°C to 60°C
Permissible Ambient Humidity		0~95%
Permissible Altitude (m)		4000m
Ingress Protection(IP) Rating		IP65
Over Voltage Category		OVC II
Cabinet Size (W*H*D) [mm]		543*198*700
Weight [kg]		41.75
Type Of Cooling		Intelligent air cooling
Safety EMC/Standard		IEC/EN 62109-1
Features		
DC port/AC port		OT terminal
Display		LED
Communication Interface		CAN/RS485
STS Module		SUN-ST500L
Grid/PCS Side Data		
Rated AC Input/Output Active Power (kW)		500
Rated AC Input/Output Current (A)		725
Rated Input/Output Voltage(V)		230/400,240/415
Grid Connection Form		3L/N/PE
Rated Input/Output Grid Frequency		50Hz
Load Side Data		
Rated Output Active Power (kW)		500
Rated Output Current (A)		725
Rated Output Voltage(V)		230/400,240/415
Grid Connection Form		3L/N/PE
Rated Output Grid Frequency		50Hz
GEN Side Data		
Rated AC Input Active Power (kW)		500
Rated AC Input Current (A)		725
Rated Input Voltage(V)		230/400,240/415
Grid Connection Form		3L/N/PE
Rated Input Grid Frequency		50Hz
General Data		
Off grid switching time		<10ms
Operating Temperature Range		-25°C to 60°C
Permissible Ambient Humidity		0~95%
Permissible Altitude		4000m
Ingress Protection(IP) Rating		IP20
Over Voltage category		OVC III
Warranty		10 Years
Cabinet size (W*H*D) [mm]		543*575*671
Weight[kg]		108
Warranty		10 years
Type Of Cooling		natural cooling
Safety EMC/Standard		IEC/EN 61439-1/-2
Features		
DC port/AC port		OT terminal
Communication Interface		CAN/RS485

PCS Model	SUN-100K-PCS01HP3-AU		SUN-125K-PCS01HP3-AU	
Battery Data				
Battery Type	Lithium-ion			
Battery Voltage Range(V)	630-1000			
Max.Charging Current(A)	175		200	
Max.Discharging Current(A)	175		200	
Charging Strategy for Li-ion Battery	Self-adaption to BMS			
Number of battery input	1			
DC Input Data				
DC Input Voltage Range(V)	630-1000			
Max. DC Input Current(A)	200			
**Max. PV Input Power(kW)	160			
**Max. PV Input Voltage(V)	800			
**Start-up Voltage(V)	200			
**MPPT voltage range(V)	180-750			
**Max. Input Short Circuit Current (A)	60+60+60+60+60+60+60+60			
**Max. Operating PV Input Current(A)	40+40+40+40+40+40+40+40			
AC Input/Output Data				
Rated AC Input/Output Active Power (W)	100000		125000	
Max. AC Input/Output Active Power (W)	100000		125000	
Rated/Max. AC Input/Output Apparent Power (VA)	100000		125000	
Rated AC Input/Output Current (A)	145.0		181.2	
Max. AC Input/Output Current (A)	145.0		181.2	
Max. Output Fault Current	350			
Max. Output Overcurrent Protection	450			
Rated Input/Output Voltage/Range(V)	230/400V,240/415V		0.85Un-1.1Un	
Grid Connection Form	3L+N+PE			
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz			
Power Factor Adjustment Range	-1~+1			
Total Current Harmonic Distortion THDi	<3%			
DC Injection Current	<0.5%In			
*Auxiliary Power Input/Output Voltage	L/N 230/240Va.c.			
*Auxiliary Power Input/Output Rated Current	0.2Aa.c.			
*Auxiliary Power Input/Output Frequency	50Hz			
*Auxiliary Power Input/Output Rated Apparent Power	50VA			
*Auxiliary Power Power Factor	1			
Efficiency				
Max. Efficiency	98.5%			
Euro Efficiency	97.8%			
*Load Side Data				
Rated Output Active Power(W)	100000		125000	
Rated/Max. Continuous Apparent Output Power(VA)	100000		125000	
Rated Output Current(A)	145		181.2	
Rated Output Voltage(V)	230/400;240/415V			
Grid Connection Form	3L/N/PE			
Rated Output Grid Frequency	50Hz			
*GEN Side Data				
Rated AC Input Active Power(W)	100000		125000	
Rated/Max. Continuous Apparent Input Power(VA)	100000		125000	
Rated AC Input Current(A)	145		181.2	
Rated Input Voltage(V)	230/400;240/415V			
Grid Connection Form	3L/N/PE			
Rated Input Grid Frequency	50Hz			
Equipment Protection				
Integrated	AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection,Insulation Impedance detection, Anti-islanding protection(Active Frequency shift), Residual Current Detection			
Surge Protection Level	TYPE II(DC), TYPE II(AC)			
Interface				
LCD/LED display	LCD			
Communication Interface	WIFI, RS485, CAN, Meter			
General Data				
Operating Temperature Range	-40℃-60℃, > 45℃ Derating			
Permissible Ambient Humidity	0~95%			
Permissible Altitude	4000m			
Noise	< 75dB			
Ingress Protection(IP) Rating	IP 65***			
Inverter Topology	Non-Isolated			
Over Voltage category	OVC II(DC),OVC III(AC)			
Cabinet size (W*H*D) [mm]	543*310*775 (Excluding connectors and brackets)			
Weight[kq]	70.35***			

*: SUN-ST500L.

** : SUN-MPPT-L01-AU-AM8.

***: IP20 rated for all-in-one system (MPPT+PCS+STS).

****Weight[kg]: The total weight of PCS+MPPT+STS+mounting bracket is 303.82kg.The system framework size (excluding support components) is 1490mm × 656mm ×934mm (W*H*D).

Warranty	10 years
Type Of Cooling	Intelligent air cooling
Grid Regulation	AS/NZS 4777.2
Safety EMC/Standard	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477-1



Model	BOS-B Pro-A3
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Main Parameter

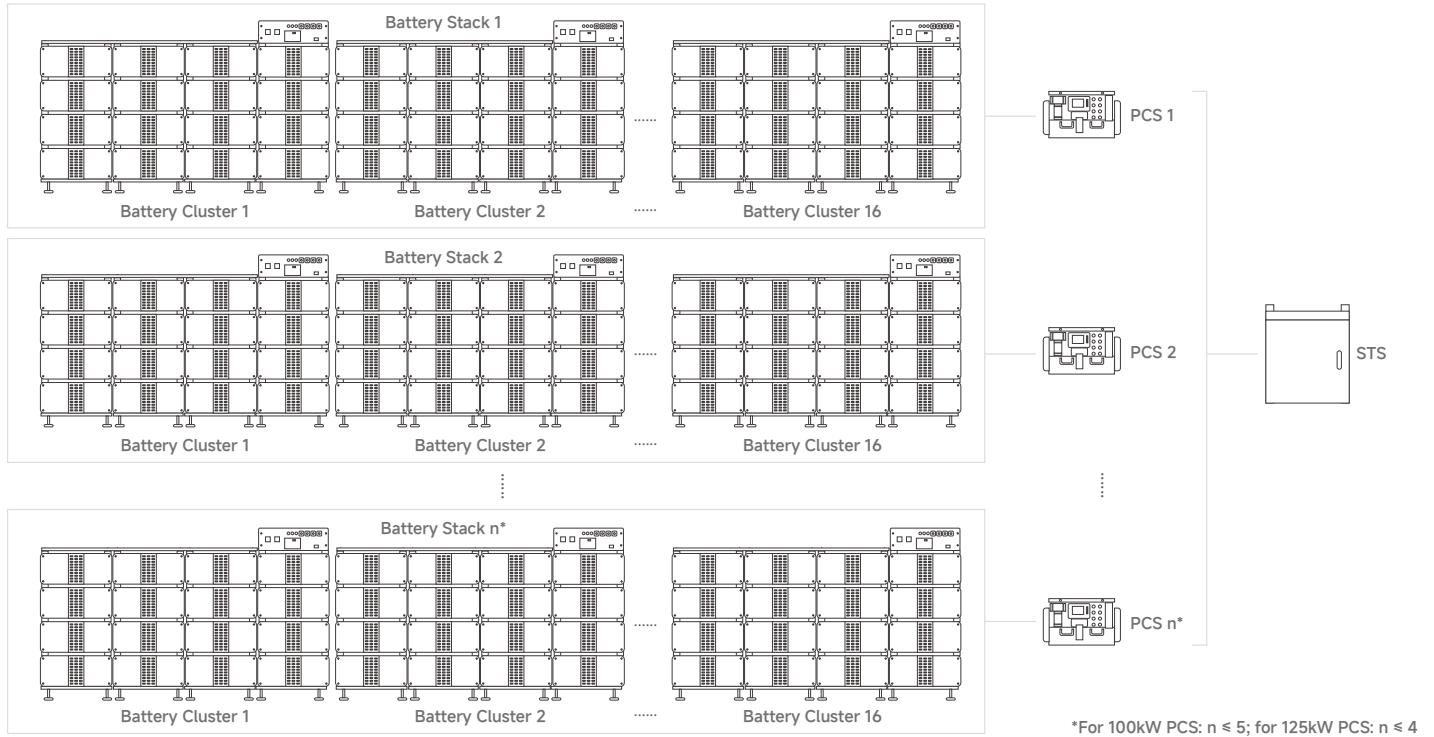
Battery Module Energy (kWh)	16.08
Battery Module Nominal Voltage (V)	51.2
Battery Module Capacity (Ah)	314
Module Weight Approximate (kg)	126
Battery Module Qty In Series (Optional)	5~16
Matching Mode	PCS PCS + MPPT
	14~16 units for PCS on-grid applications, 15~16 units for PCS off-grid applications
Max.System Nominal Voltage (V)	819.2
Max.System Energy (kWh)	257.23
Max.System Usable Energy (kWh)	231.51
Max.Charge/Discharge Current (A)	180

Other Parameter

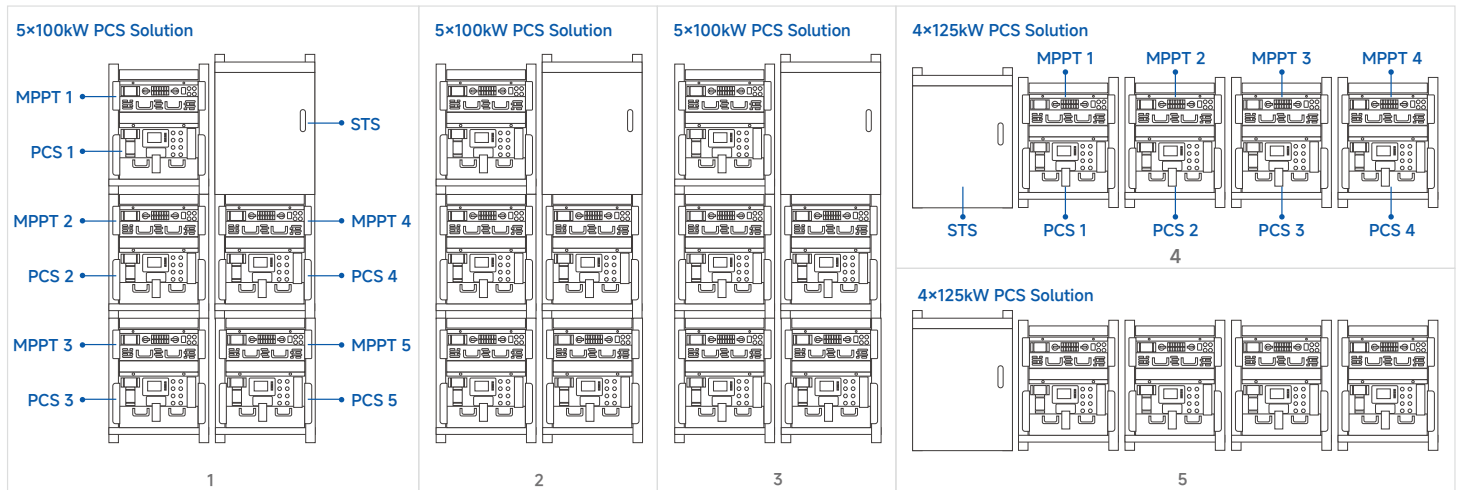
Operating Temperature (°C)	Charge : 0 ~ 55 Discharge : -20 ~ 55
Storage Temperature (°C)	0 ~ 35
Thermal Management	Smart fan cooling
LCD Display	SOC / Fault Code
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm
Communication Port	TCP / RS485 / CAN
Communication With BMS	CAN
Humidity	5% ~ 85%
Altitude	≤3000m
IP Rating of Enclosure	IP20
System Dimension (W × H × D, mm)	2150 × 1305 × 800
System Weight Approximate (kg)	2240
Installation Location	Rack Mounted
Recommend Depth of Discharge	90%
Cycle Life	25±2°C, 0.5C / 0.5C, EOL70%≥6000
Warranty Period	10 years
Certification	CE / IEC62619 / IEC62040 / UN38.3

Typical Application Scenarios

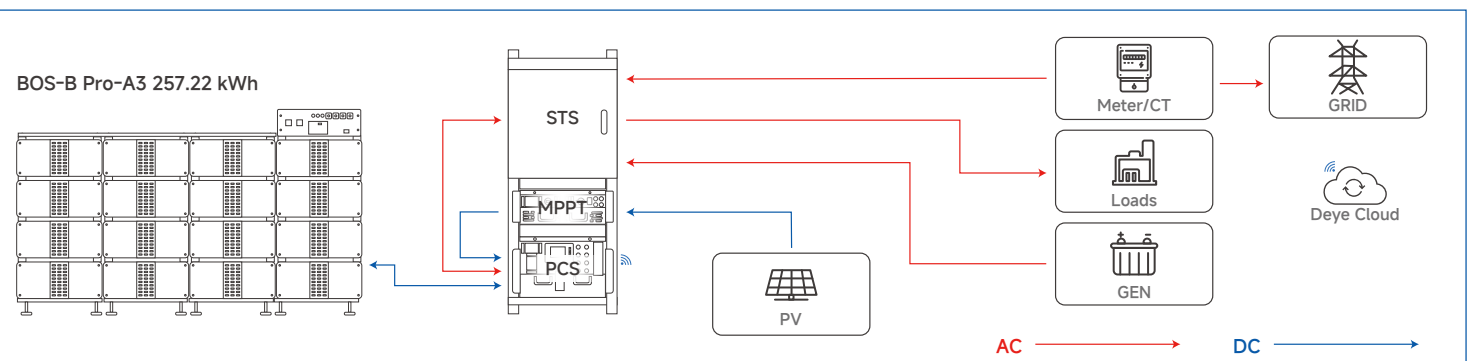
One PCS can support up to 16 racks of batteries in parallel



One STS module can connect to five 100kW PCS modules or four 125kW PCS modules for parallel operation



Five STS modules can provide parallel support for twenty-five 100kW PCS modules or twenty 125kW PCS modules, forming a 2.5MW system.

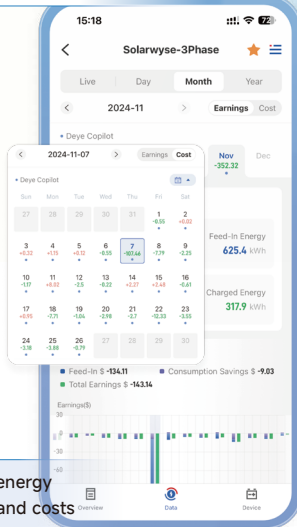


Deye Cloud

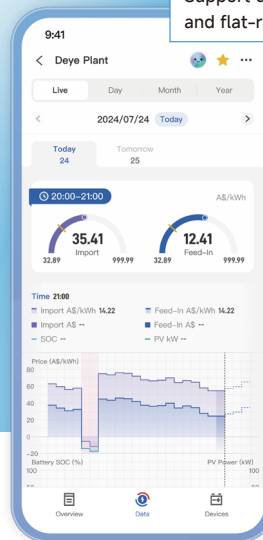
All-in-one Energy & Device Management Platform

-  Unlock significant savings
-  Individual Add-on for dynamic tariff
-  Intelligent charging/discharging strategies
-  Tailored solution to deye devices
-  Real-time equipment monitoring
-  Best energy scheduling solutions by Deye Copilot algorithm
-  24/7 AI Assistant support

Switch flexibly between autonomous and manual control

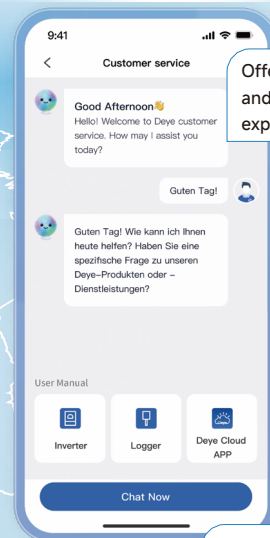


Display energy savings and costs



Support dynamic tariff and flat-rate

AI Assistant



Offer response suggestions and personalized support experience

Support over 30 languages

Analyze dynamic pricing, predict power load and PV generation to optimize energy dispatch and minimize electricity costs

Smarten Up Your Home Energy

Download Deye Cloud APP to join us!

Embrace a seamless, effortless energy experience that's both eco-friendly and budget-friendly with our intelligent assistant



APP & Web

Manage your energy effortlessly



Cloud-edge Collaboration

Faster and more efficient



Accelerated Connection

Optimized for speed and performance



Localized Data Centers

Ensure data sovereignty and compliance in EU & US



Deye Copilot

AI-powered energy analysis and control



AI Assistant

24/7 support, fast, efficient, in your language