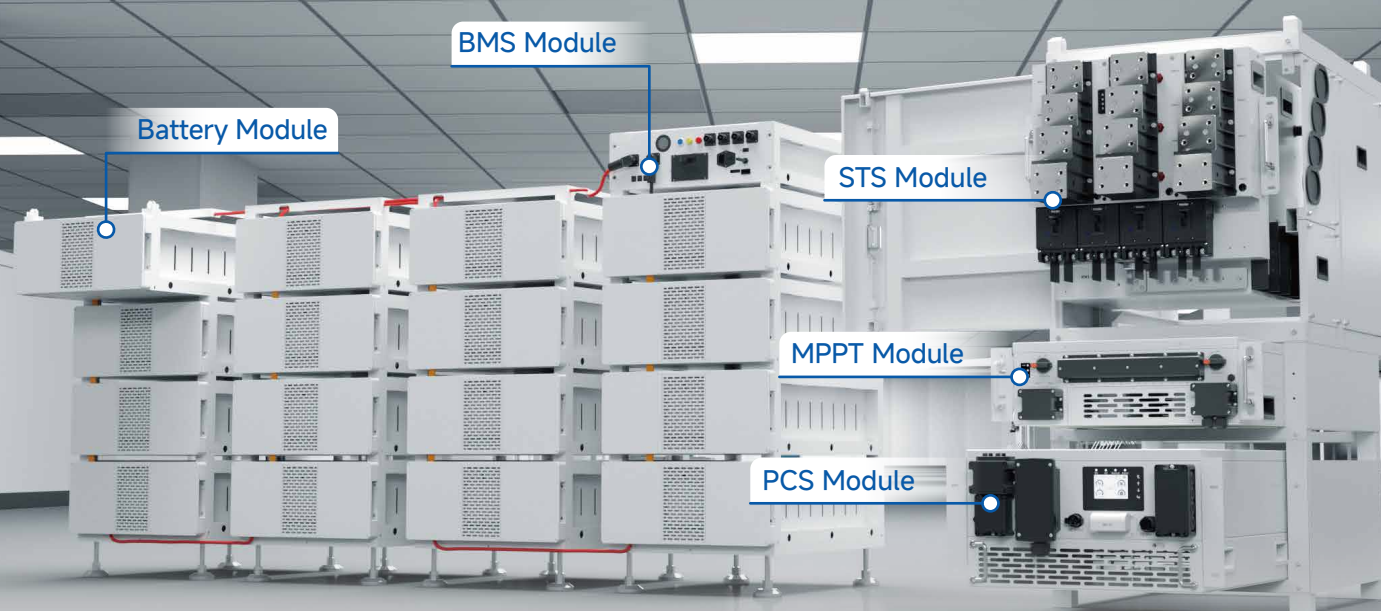


100/125kW-2.5MW C&I ESS SOLUTION

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

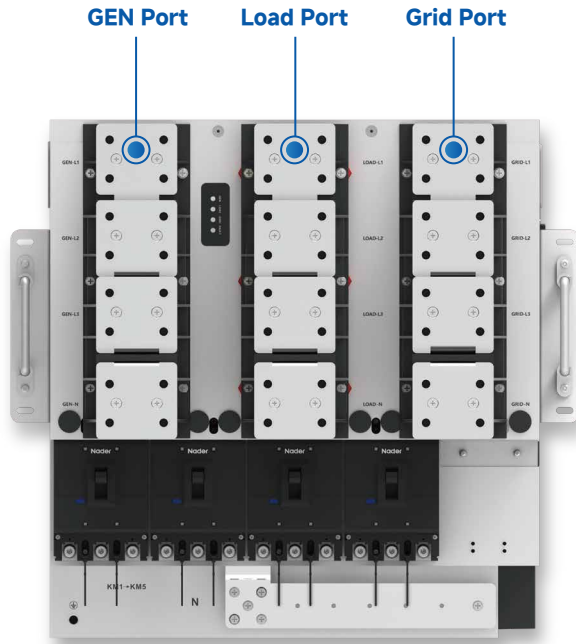
- **Flexible Expansion:**
100/125kW PCS units enable system scalability up to 2.5 MW.
- **Large Energy Storage:**
Up to 257 kWh per battery cluster, supporting up to 16 clusters per PCS.



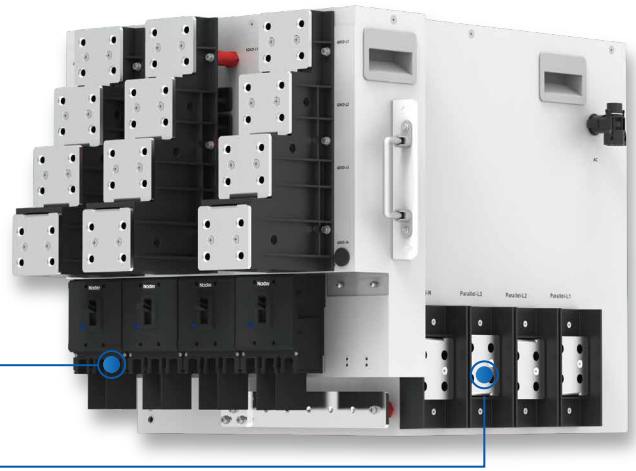
Reliability & Protection

- **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)

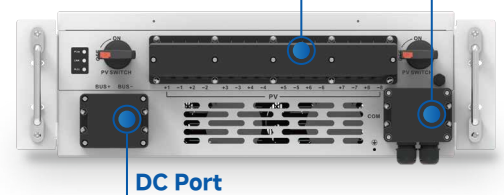
- 8 MPPT Trackers, up to 40A per tracker.
- Up to 200 kWp PV capacity per MPPT module.

PCS Module (100kW/125kW)

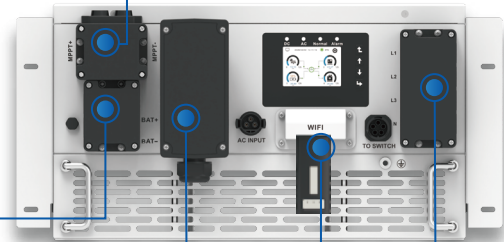
- 175A/200A** charge and discharge current.
- Maximum efficiency of **98.5%**.
- System rated power up to **2.5MW**.
- Supports instantaneous peak power up to 200% of rated power.
- Integrates zero-export and time-of-use control functions.
- Built-in EMS for intelligent energy management and optimized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

PV Input
8 MPPT

CAN/RS485



DC Port



Battery Port

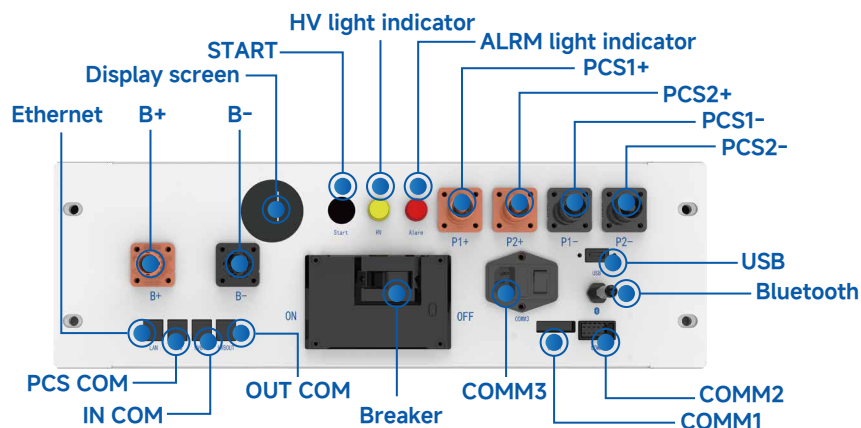
CT/Meter/BMS/
MPPT/Parallel

Data Logger

AC Output

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

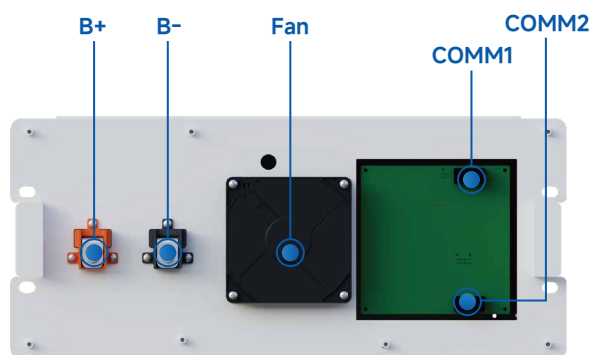
Model	BOS-B-PDU-2-A
Operating Voltage	200~1000Vdc
Nominal Charge/Discharge Current	180A
Operating Temperature	-20~60°C
Ingress Protection	IP20
AC Input Rating	220±10%VAC/2A
Details	526×788.6×167.2(W×D×H),32kg



- ◎ 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
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
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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

AC Input/Output Data

Rated AC Input/Output Active Power (W)	100000	125000
Max. AC Input/Output Active Power (W)	100000	125000
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	

Efficiency

Max. Efficiency	98.5%
Euro Efficiency	97.8%

Equipment Protection

Integrated	AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection,Insulation Impedance detection, Anti-islanding protection, 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

Max. operating frequency (Hz)	200M
Operating Temperature Range	-40°C~60°C, > 45°C 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[kg]	81.86
Warranty	Standard 5 years, extendable warranty
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	
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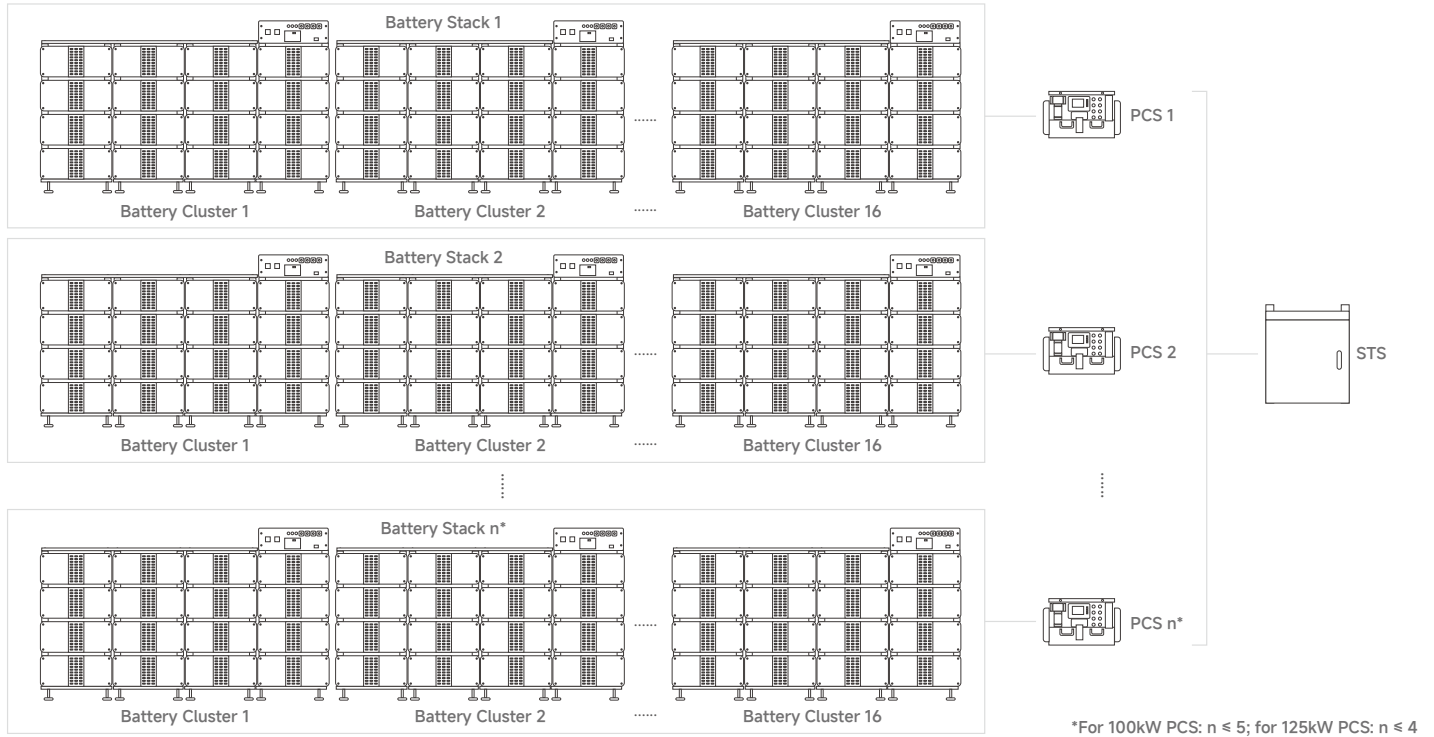
Battery Module Energy (kWh)		16.08
Battery Module Nominal Voltage (V)		51.2
Battery Module Capacity (Ah)		314
Module Weight Approximate (kg)		126
Battery Module Qty In Series (Optional)		5~16
Matching Mode	PCS	14~16 units for PCS on-grid applications, 15~16 units for PCS off-grid applications
	PCS + MPPT	16 units (on/off-grid) for MPPT Open-Circuit Voltage ≤800V;15 units (on/off-grid) for MPPT Open-Circuit Voltage ≤ 750V 14 units (on-grid) for MPPT Open-Circuit Voltage ≤ 700V
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	
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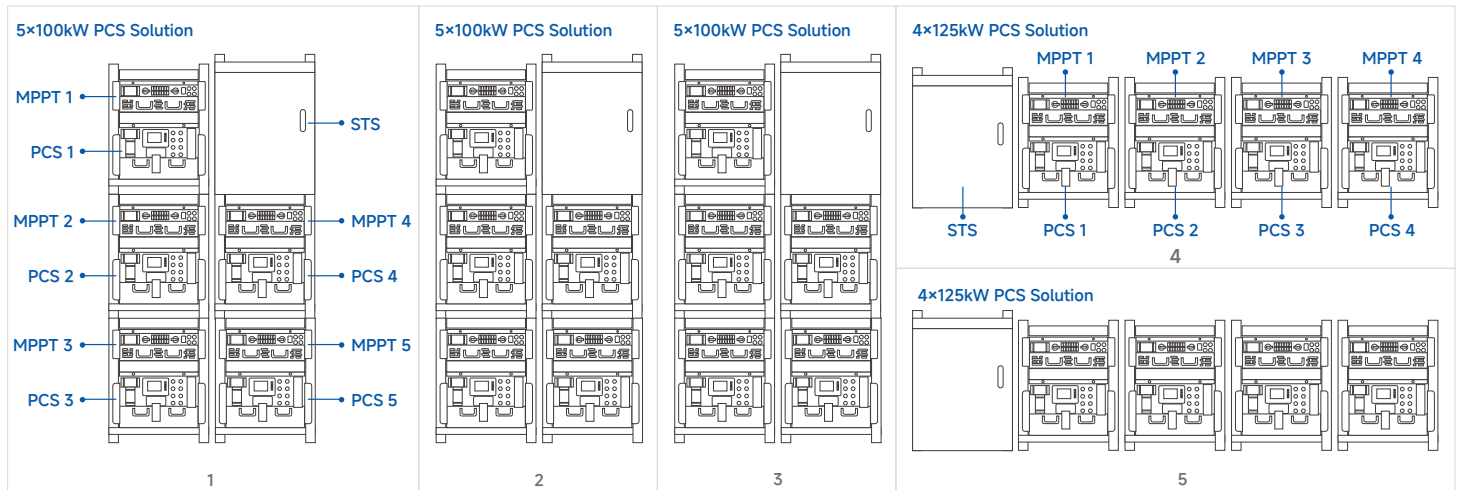
Operating Temperature (°C)	Charge : 0 ~ 55 Discharge : -20 ~ 55
Storage Temperature (°C)	0 ~ 35
Thermal Management	Smart fan cooling
LCD Display	SOC / Fault Code
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm
Communication Port	TCP / RS485 / CAN
Communication With 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

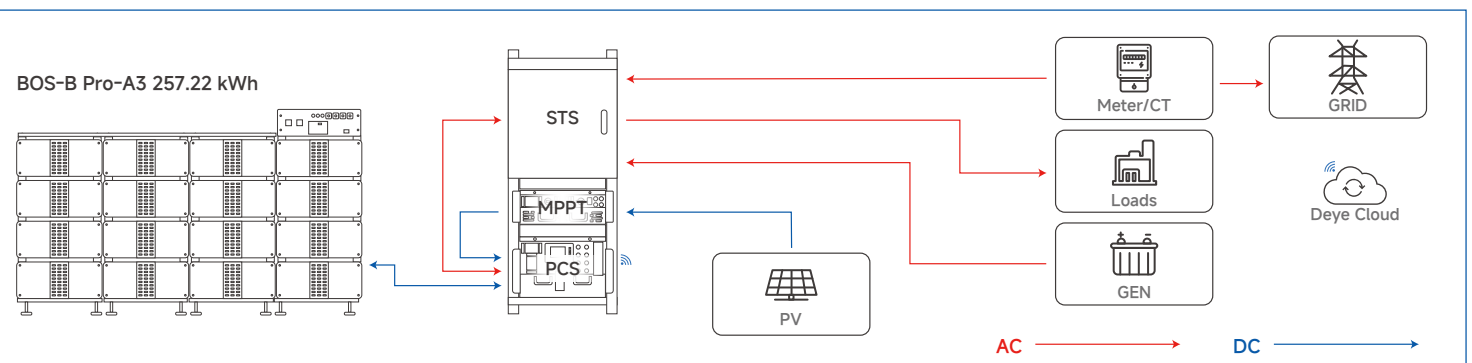
One PCS can support up to 16 racks of batteries in parallel



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.

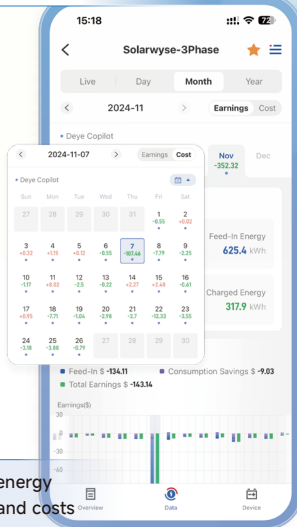


Deye Cloud

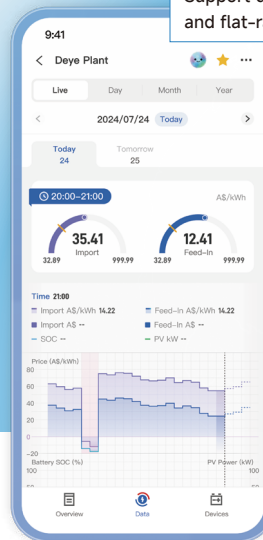
All-in-one Energy & Device Management Platform

-  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