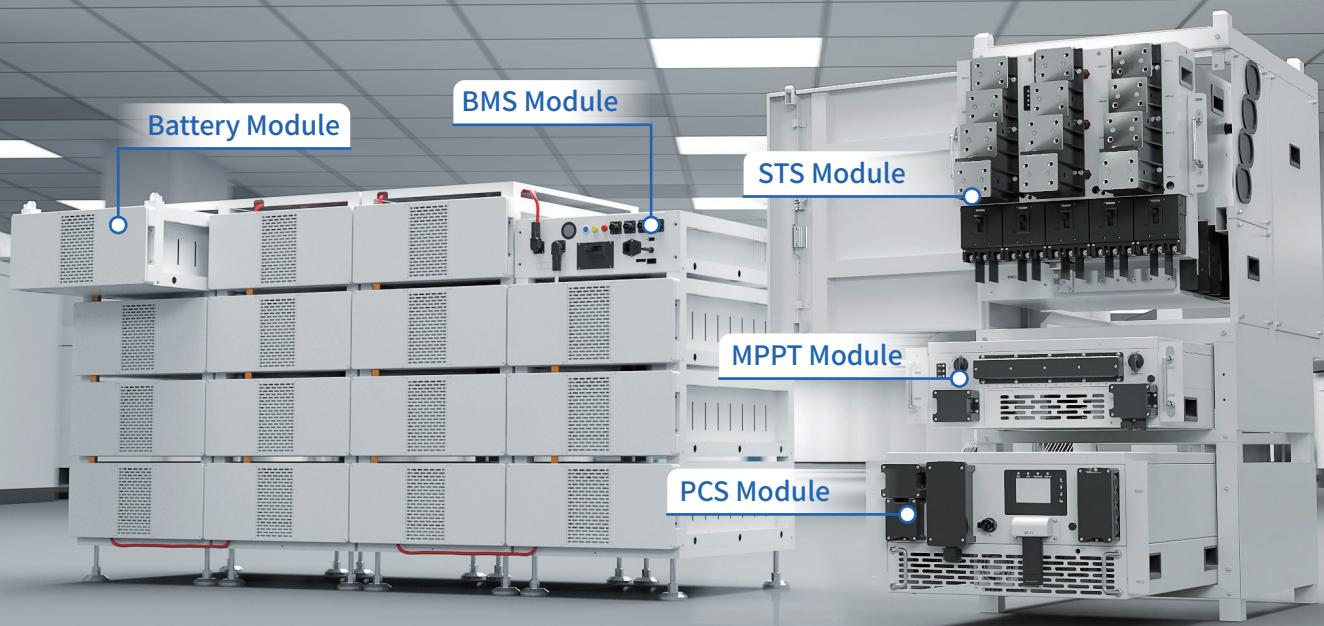


# 100KW-2.5MW C&I ESS SOLUTION

PCS+MPPT+STS  
「BOS-B Pro-A3 Battery」



## Fast & Reliable Switching

- **Seamless Switching :**  
STS module can switch between on-grid, off-grid, and diesel modes in <20ms.
- **Independent High-Power Paths :**  
Diesel, load, and grid connections support 500kW.



## Efficient PV Integration

- **Wide MPPT Range :**  
800V PV system with 180-750V MPPT range.
- **High PV Input :**  
Maximum 200kWp PV module connection with 8 MPPT channels, 40A per MPPT.



## Advanced Energy Storage

- **Extended Backup :**  
Up to 32 hours of backup with 16 racks per PCS.
- **Smart Balancing:**  
Independent BMS ensures optimal charge distribution and extends battery life.



## Rugged & Reliable

- **IP65 Protection :**  
PCS and MPPT modules feature IP65-rated protection.
- **Peak Power Support :**  
PCS supports and peak power up to 170%.
- **LFP battery:**  
BOS-B Pro-A3's robust design enhances the system's reliability.



## Intelligent Control

- **Integrated EMS :**  
Supports zero-export and time-of-use charging/discharging.
- **Easy Management:**  
Color touchscreen for local or remote cloud adjustments.

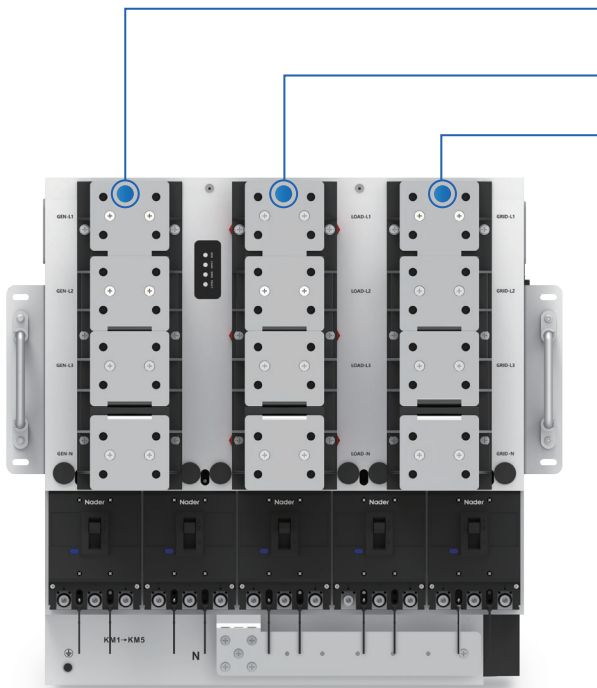


## High Performance & Scalability

- **Powerful Capacity :**  
PCS offers 100kW/125kW, expandable up to 2.5MW.
- **Large Energy Storage:**  
BOS-B Pro-A3 battery delivers 241.15kWh per cluster, supporting up to 15 packs per PCS.
- **High Efficiency :**  
PCS reaches 98.5% efficiency, MPPT exceeds 99%.

**STS Module**

Smoothly switch between on-grid, off-grid, and diesel generator modes with a switching time of less than 20ms. Each diesel, load, and grid connection is independent, with each path supporting 500kW. One STS module can connect to five 100kW PCS modules or four 125kW PCS modules.



- GEN Port
- Load Port
- Grid Port

**STS Module (500kW)**

- ⊙ Switching capacity of **500kW**.
- ⊙ Enables smooth switching between on-grid, off-grid, and diesel generator modes.
- ⊙ Switching time of less than **20ms**.



- PCS Connection Point
- STS AC Parallel Port

**MPPT Module & PCS Module**

**MPPT Module (8 MPP Trackers)**

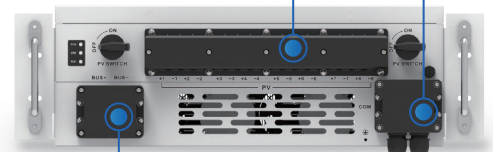
- ⊙ Maximum 200kWp PV module connection with 8 MPPT channels, **40A** per MPPT.

**PCS Module (100kW/125kW)**

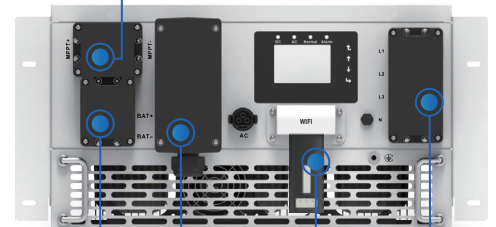
- ⊙ **175A/200A** charge and discharge current.
- ⊙ Maximum efficiency of **98.5%**.
- ⊙ System rated power up to **2.5MW**.
- ⊙ Supports instantaneous peak power up to 170% of rated power.
- ⊙ Integrates zero-export and time-of-use control functions.
- ⊙ Eliminating the need for additional EMS.

PV Input  
8 MPPT

CAN/RS485



DC Port



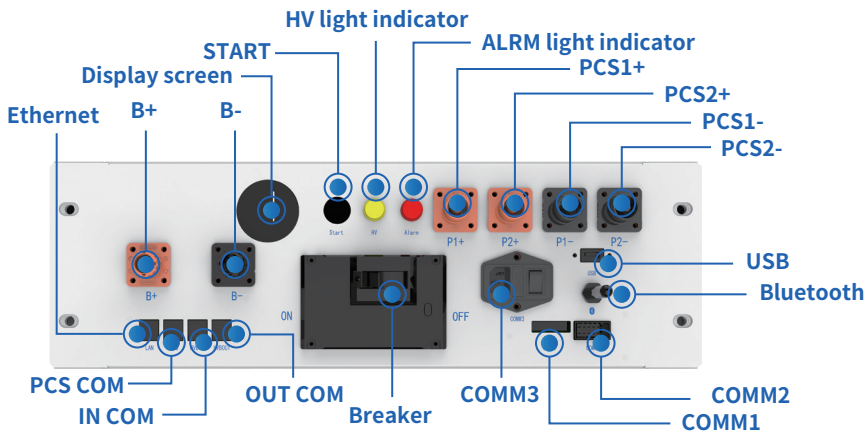
Battery Port

CT/Meter/BMS/  
MPPT/Parallel

Data Logger

AC Output

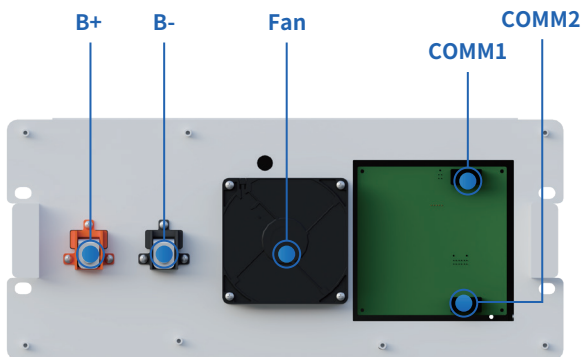
Model	BOS-B-PDU-2-A
Operating Voltage	200~1000Vdc
Nominal Charge/Discharge Current	180A
Operating Temperature	-20~60°C
Ingress Protection	IP20
AC Input Rating	220±10%VAC/2A
Details	788.6×526×167.2(W×H×D),32kg



- ⊙ 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
Nominal 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	795.9×526×274.2(W×H×D),123kg



- ⊙ 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

MPPT Module		SUN-MPPT-L01-EU-AM8
<b>PV String Input Data</b>		
Max. PV Input Power (kW)		200
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. Operating PV Input Current (A)		40+40+40+40+40+40+40+40
Max. Input Short-Circuit Current (A)		60+60+60+60+60+60+60+60
No. of MPP Trackers		8
<b>Efficiency</b>		
Max. Efficiency		>99%
MPPT Efficiency		>99.9%
<b>Equipment Protection</b>		
DC input reverse protection		YES
DC ARC protection		Optional
Anti-PID(Potential Induced Degradation)		Optional
DC Switch		YES
Surge Protection Level		TYPE II
<b>General Data</b>		
Ingress Protection(IP) Rating		IP65
Over Voltage Category		OVC II
Cabinet Size[W×H×D] (mm)		543x198x700
Weight (kg)		41.75
Type Of Cooling		Intelligent air cooling
Safety EMC/Standard		IEC/EN 62109-1
<b>DC Output Data</b>		
DC Output Voltage Range(V)		630-1000
Max. DC Output Current(A)		200
STS Module		SUN-ST5500L
<b>Grid/PCS Side Data</b>		
Rated AC Input/Output Active Power (kW)		500
Rated AC Input/Output Current (A)		758/725
Rated Input/Output Voltage(V)		220/380, 230/400 (three phase)
Grid Connection Form		3L/N/PE
Rated Input/Output Grid Frequency		50Hz/60Hz
<b>Load Side Data</b>		
Rated Output Active Power (kW)		500
Rated Output Current (A)		758/725
Rated Output Voltage(V)		220/380, 230/400 (three phase)
Grid Connection Form		3L/N/PE
Rated Output Grid Frequency		50Hz/60Hz
<b>GEN Side Data</b>		
Rated AC Input Active Power (kW)		500
Rated AC Input Current (A)		758/725
Rated Input Voltage(V)		220/380, 230/400 (three phase)
Grid Connection Form		3L/N/PE
Rated Input Grid Frequency		50Hz/60Hz
<b>General Data</b>		
Off grid switching time		<20ms
Ingress Protection(IP) Rating		IP20
Over Voltage category		OVC III

Cabinet Size[W×H×D] (mm)	543x575x671
Weight (kg)	108
Type Of Cooling	Natural Cooling
Safety EMC/Standard	IEC/EN 61439-1/-2

PCS Model	SUN-100K-PCS01HP3	SUN-125K-PCS01HP3
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Battery Data		
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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		
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DC Input Voltage Range(V)	630-1000	630-1000
Max. DC Input Current(A)	200	200

AC Input/Output Data		
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Rated AC Input/Output Active Power (kW)	100	125
Max. AC Input/Output Apparent Power (kVA)	110	125
Rated AC Input/Output Current (A)	151.6/145	189.4/181.2
Max. AC Input/Output Current (A)	166.7/159.5	189.4/181.2
Rated Input/Output Voltage/Range(V)	220/380, 230/400 0.85Un-1.1Un	
Grid Connection Form	3L+N+PE	
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/55Hz-65Hz	
Power Factor Adjustment Range	-1~1	
Total Current Harmonic Distortion THDi	<3% (of nominal power)	
DC Injection Current	<0.5% In	

Efficiency		
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Max. Efficiency	98.5%	
Euro Efficiency	97.8%	
MPPT Efficiency	>99%	

Equipment Protection		
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Integrated	AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection, Anti-islanding Protection, Insulation Impedance Detection, Residual Current Detection	
Surge Protection Level	TYPE II(DC), TYPE II(AC)	

Interface		
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LCD/LED display	LCD	
Communication Interface	WIFI, RS485, CAN, Meter	

General Data		
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Operating Temperature Range(°C)	-40°C-60°C, >45°C Derating	
Permissible Ambient Humidity	0-95%	
Permissible Altitude	4000m	
Noise	<75dB	
Ingress Protection(IP) Rating	IP 65(PCS Module)	
Cabinet Size[W×H×D] (mm)	543x310x775	
Weight (kg)	70.35	
Inverter Topology	Non-Isolated	
Over Voltage Category	OVC II(DC), OVC III(AC)	
Type of Cooling	Intelligent Air Cooling	

Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy	
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Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105	
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Safety/EMC Standard	IEC/EN 62477-1	
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<b>Model</b>	<b>BOS-B Pro-A3</b>
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<b>Main Parameter</b>	
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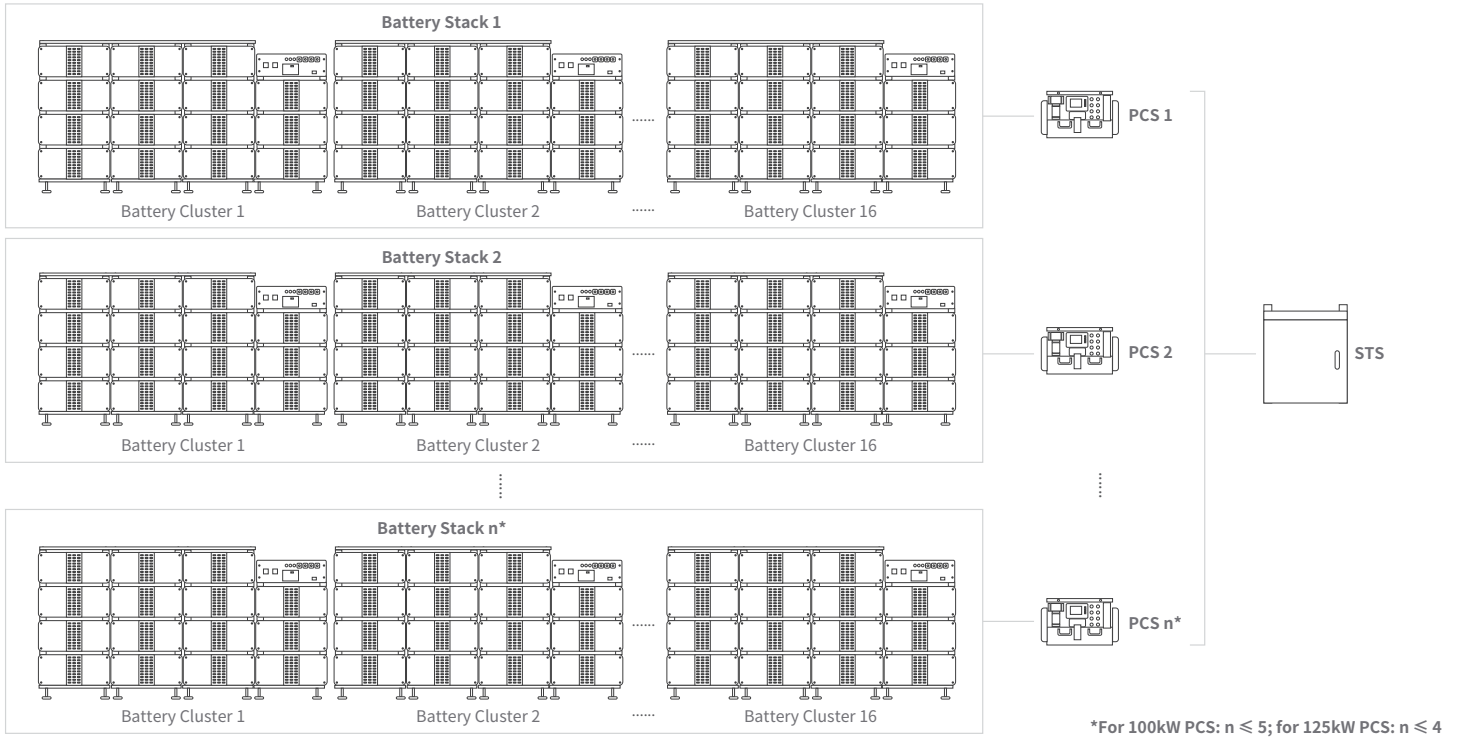
Battery Module Energy ( kWh )		16.08
Battery Module Nominal Voltage ( V )		51.2
Battery Module Capacity ( Ah )		314
Module Weight Approximate ( kg )		123
Battery Module Qty In Series ( Optional )		15
Scalability	14~15 For Deye PCS	5~15 For Deye Hybrid Inverter
System Nominal Voltage ( V )		768
System Energy ( kWh )		241.15
System Usable Energy ( kWh )		217.04
Charge/Discharge Current ( A )	Recommend	157
	Max	180

<b>Other Parameter</b>	
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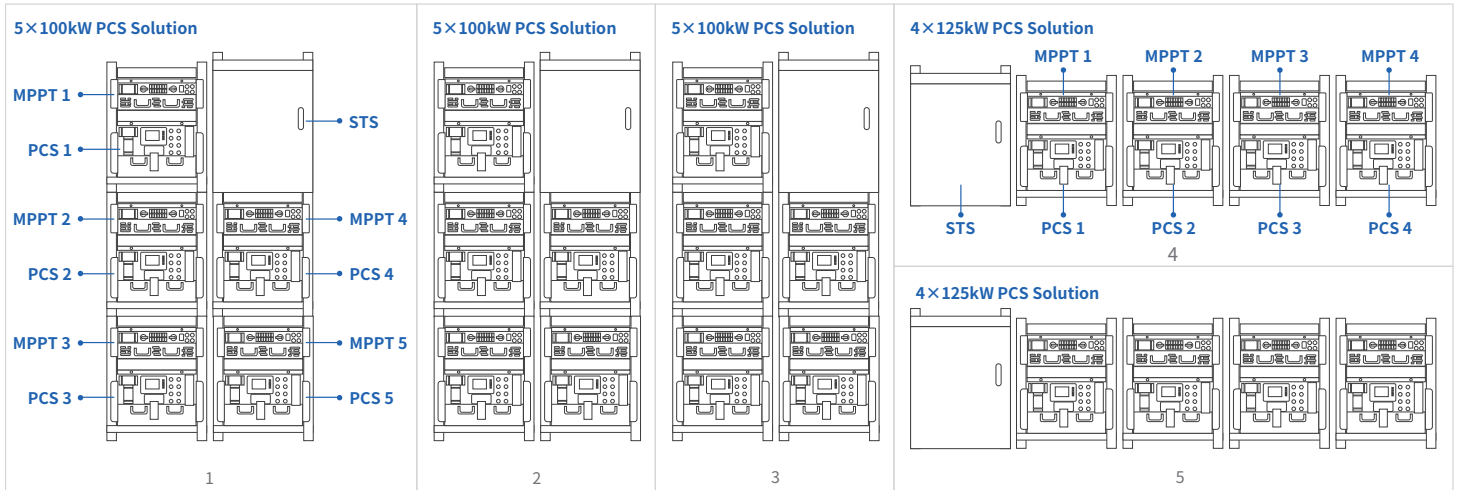
Operating Temperature ( °C )		Charge : 0 ~ 55 Discharge : -20 ~ 55
Storage Temperature ( °C )		0 ~ 35
Thermal Management		Smart fan cooling
LCD Display		SOC / Fault Code
Status Indicator		Yellow : Battery High Voltage Power On Red : Battery System Alarm
Communication Port		TCP / RS485 / CAN
Communication With BMS		CAN
Humidity		5% ~ 85%
Altitude		≤3000m
IP Rating of Enclosure		IP20
Noise ( dB )		TBD
System Dimension ( W × H × D, mm )		2150 × 1136 × 800
System Weight Approximate ( kg )		1850
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

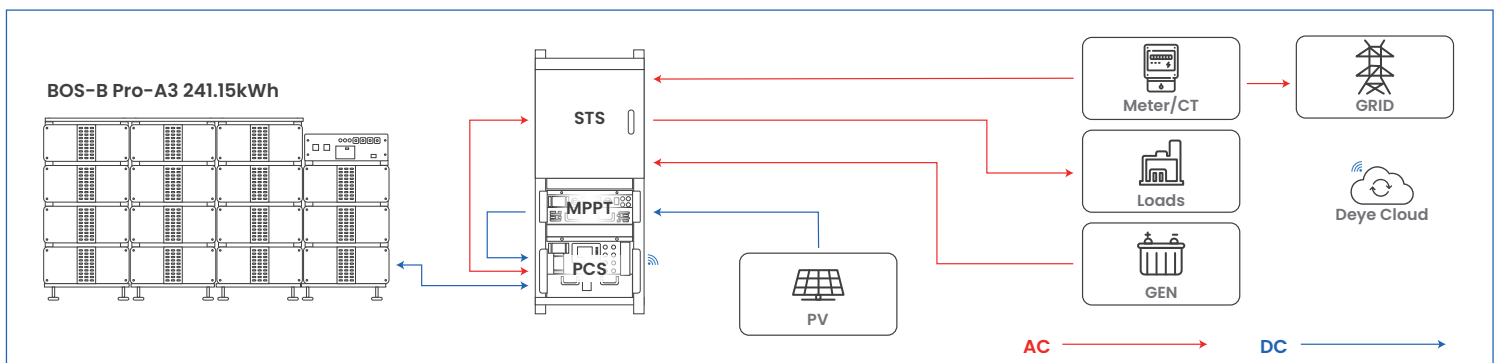
### One PCS can support up to 16 racks of batteries in parallel



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



### Up to five STS modules can be paralleled to form a 2.5MW system

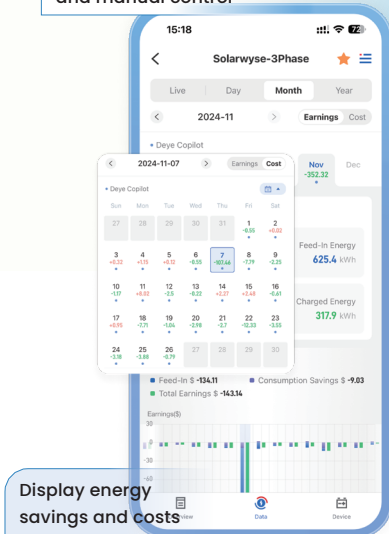


# Deye Cloud

## 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
- 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