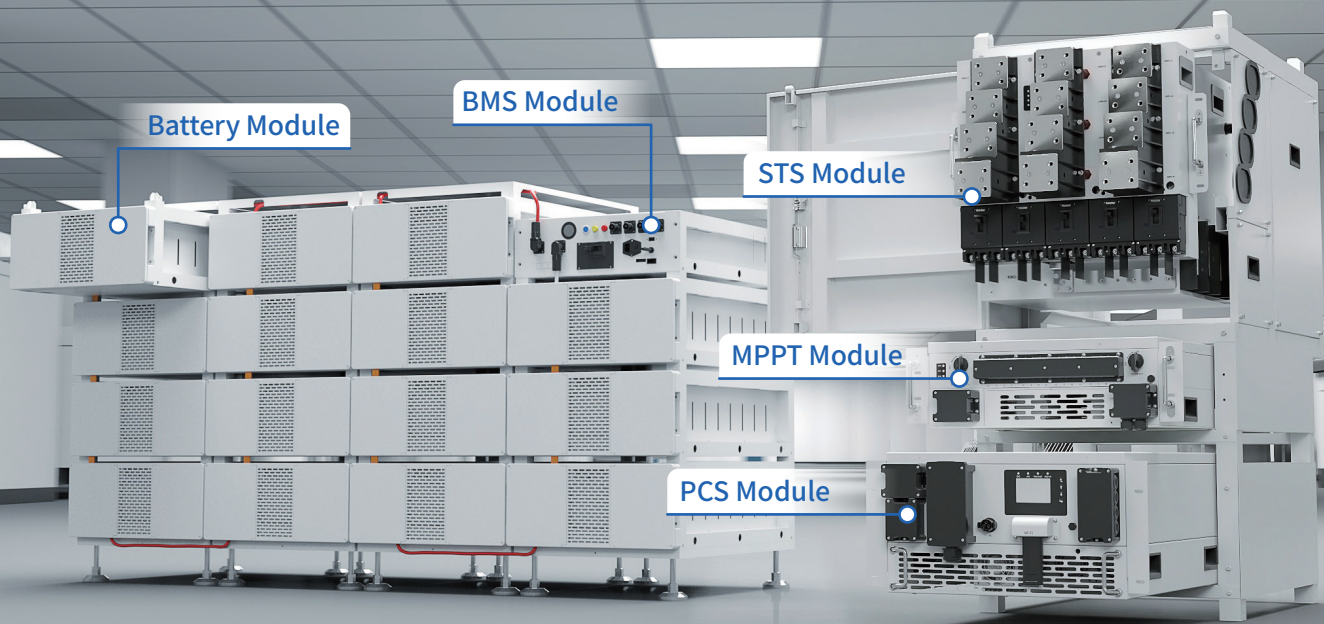


100KW-2.5MW C&I ESS SOLUTION

100/125kW PCS+200kW MPPT+500kW STS
「241kWh 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.



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.



Intelligent Control

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



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.



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.

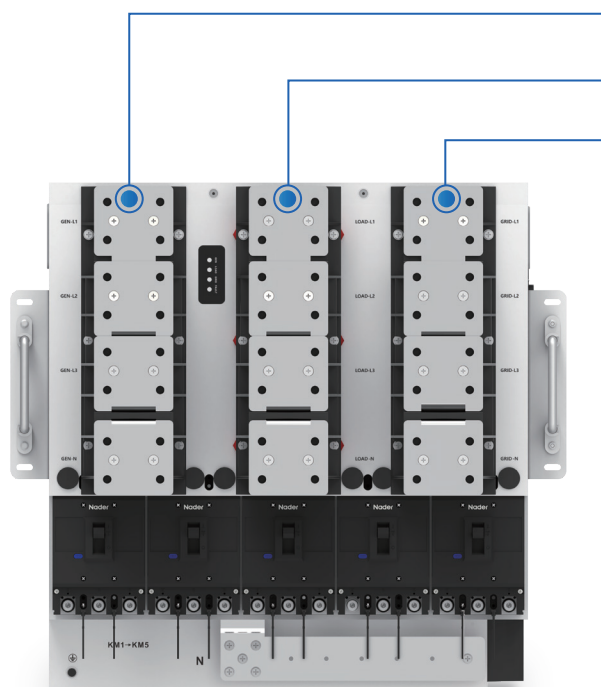


High Performance & Scalability

- **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 MPPT Trackers)

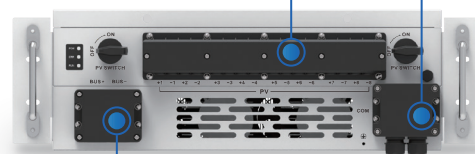
- ◎ Maximum 200kWp PV module connection with 8 MPPT channels, **40A** per MPPT.

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



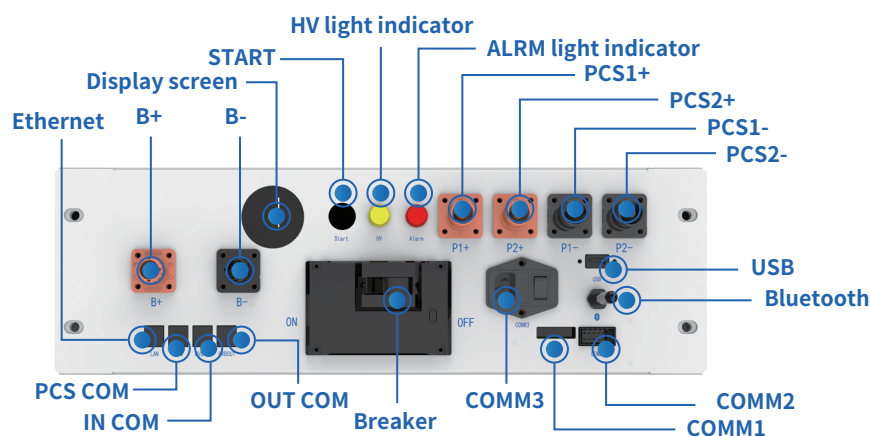
Battery Port

CT/Meter/BMS/
MPPT/Parallel

Data Logger

AC Output

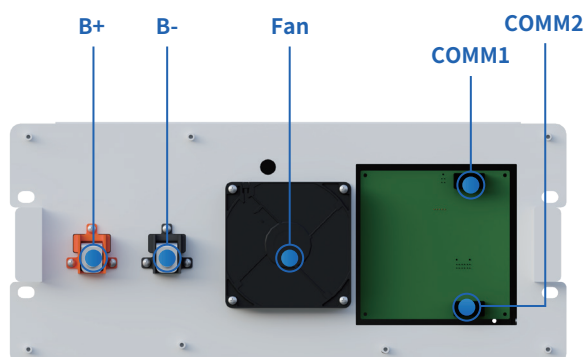
Model	BOS-B-PDU-2-A
Operating Voltage	200~1000Vdc
Nominal Charge/Discharge Current	180A
Operating Temperature	-20~60°C
Ingress Protection	IP20
AC Input Rating	220±10%VAC/2A
Details	788.6×526×167.2(W×H×D),32kg



- ◎ 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
PV String Input Data		
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
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 Switch		YES
Surge Protection Level		TYPE II
General Data		
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
DC Output Data		
DC Output Voltage Range(V)		630-1000
Max. DC Output Current(A)		200
STS Module		SUN-ST500L
Grid/PCS Side Data		
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
Load Side Data		
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
GEN Side Data		
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
General Data		
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
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	630-1000
Max. DC Input Current(A)	200	200
AC Input/Output Data		
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		
Max. Efficiency	98.5%	
Euro Efficiency	97.8%	
MPPT Efficiency	>99%	
Equipment Protection		
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		
LCD/LED display	LCD	
Communication Interface	WIFI, RS485, CAN, Meter	
General Data		
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	
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	
Safety/EMC Standard	IEC/EN 62477-1	



Model	BOS-B Pro-A3
Main Parameter	
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	14-16 units for PCS on-grid applications 15-16 units for PCS off-grid applications 5-15 units for hybrid inverter systems
System Nominal Voltage (V)	768
System Energy (kWh)	241.15
System Usable Energy (kWh)	217.04
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
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

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



5×100kW PCS Solution

MPPT 1

PCS 1

STS

MPPT 2

PCS 2

MPPT 4

PCS 4

MPPT 3

PCS 3

MPPT 5

PCS 5

1

5×100kW PCS Solution

2

5×100kW PCS Solution

3

4×125kW PCS Solution

MPPT 1

MPPT 2

MPPT 3

MPPT 4

STS

PCS 1

PCS 2

PCS 3

PCS 4

4

4×125kW PCS Solution

5

The diagram illustrates the system architecture for the BOS-B Pro-A3 241.15kWh. It shows the following components and their interconnections:

- Battery Pack:** A large rack of battery modules on the left.
- STS (Static Transfer Switch):** A central unit that manages power flow between the battery pack and the AC bus.
- MPPT (Maximum Power Point Tracking):** A unit that interfaces with the PV (Photovoltaic) array and the battery pack.
- PCS (Power Conversion System):** A unit that converts DC power from the battery pack to AC power for the loads.
- PV (Photovoltaic):** A solar panel array that provides DC power to the MPPT.
- Meter/CT (Meter/Current Transformer):** A unit that monitors the system's energy flow and connects to the GRID.
- Loads:** AC-powered devices that consume energy from the system.
- GEN (Generator):** An AC-powered device that can provide backup power to the system.
- GRID:** The main power source for the system.
- Deye Cloud:** A cloud-based monitoring and control system that communicates with the system via a wireless connection.

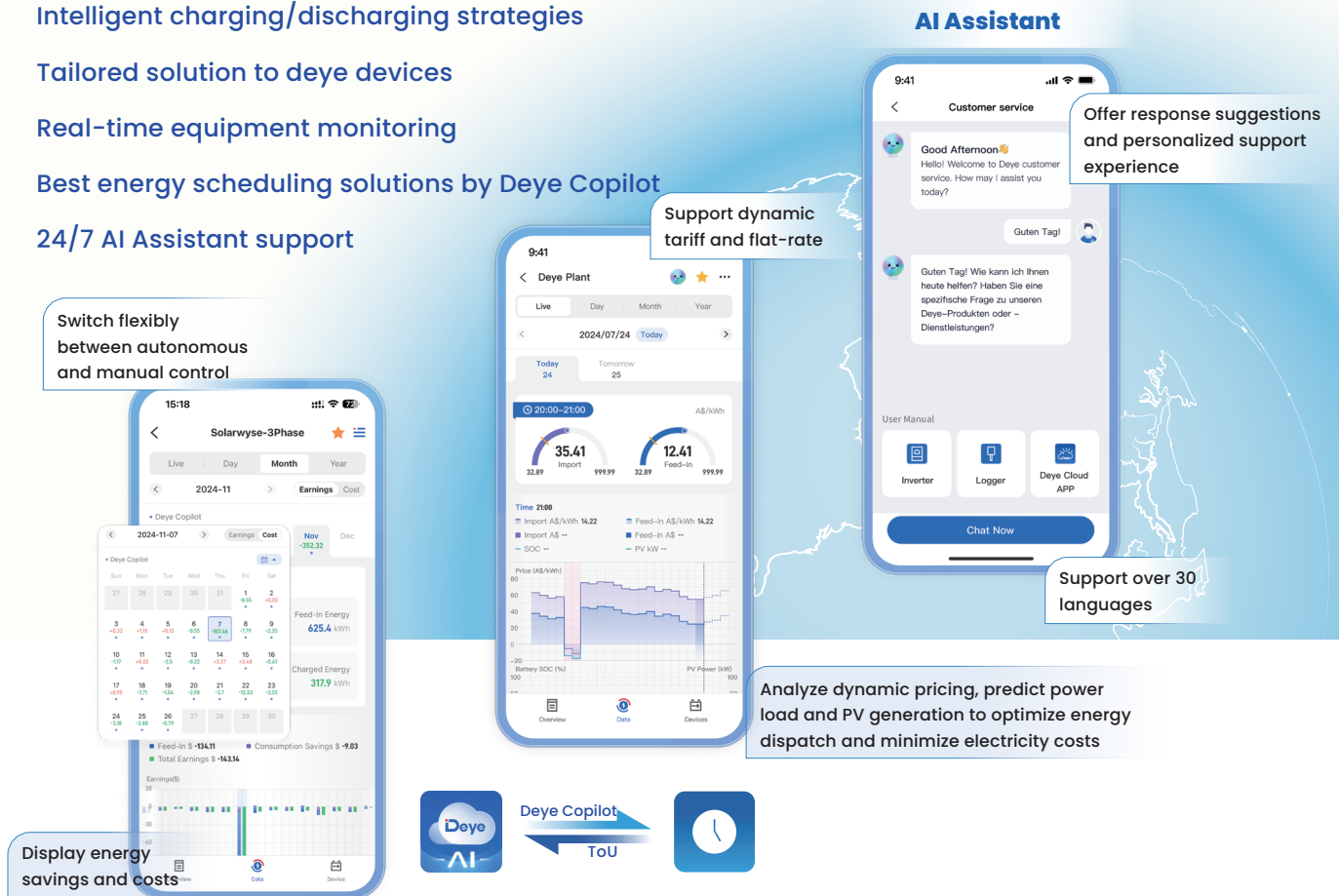
The diagram uses color-coded arrows to indicate the direction of power flow:

- Red Arrows (AC):** Indicate AC power flow between the STS, Meter/CT, Loads, GEN, and the GRID.
- Blue Arrows (DC):** Indicate DC power flow between the Battery Pack, MPPT, PCS, and the PV array.

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



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