



Small-Scale C&I Energy Storage Solution

SUN-50K-SG01HP3-EU-BM4 / SUN-80K-SG02HP3-EU-EM6

SUN-100K-PCSL01HP3

BOS-A

SUN-50K-SG01HP3-EU-BM4 / SUN-80K-SG02HP3-EU-EM6

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Practicality & Universal Compatibility

 - 100% unbalanced output
 - AC couple to retrofit existing solar system
 - Dual Independent battery circuit
- 

Versatile & High-Performance

 - TOU function, Six time periods for battery charging/discharging
 - Diesel generator-ready, VSG application
- 

Reliability & Scalability

 - Max. 10 pcs parallel for on-grid and off-grid operation
 - Seamless switching between on-grid and off-grid modes in less than 10ms

BOS-A

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Intelligent Control

Over-discharge/charge/current and temp protection
- 

Superior Output

Support up to 160A current output
- 

Flexible Expansion

Support 7-21 packs in series
Inverter 50~100kW, Battery 54~161kWh
- 

10-Year Warranty

Safest LFP battery & Intelligent BMS
- 

3U Rack Design

Connectable to two inverter DC interfaces
- 

Battery Protection

Auto-managed charge/discharge & Cell voltage balancing

Small-Scale C&I Energy Storage Solution

Model	SUN-50K-SG01HP3-EU-BM4			
Battery Input Data				
Battery Type	Lithium-ion			
Battery Voltage Range (V)	160-800			
Max. Charging Current (A)	50+50			
Max. Discharging Current (A)	50+50			
Charging Strategy for Li-ion Battery	Self-adaption to BMS			
Number of Battery Input	2			
PV String Input Data				
Max. PV Access Power (W)	100000			
Max. PV Input Power (W)	80000			
Max. PV Input Voltage (V)	1000			
Start-up Voltage (V)	180			
MPPT Voltage Range (V)	150-850			
Rated PV Input Voltage (V)	600			
Max. Operating PV Input Current (A)	36+36+36+36			
Max. Input Short-Circuit Current (A)	55+55+55+55			
No. of MPP Trackers/ No. of Strings MPP Tracker	4/2+2+2+2			
AC Input/Output Data				
Rated AC Input/Output Active Power(W)	50000			
Max. AC Input/Output Apparent Power(VA)	55000			
Rated AC Input/Output Current (A)	75.8/72.5			
Max. AC Input/Output Current (A)	83.4/79.8			
Max. Continuous AC Passthrough (grid to load) (A)	200			
Peak Power (off-grid) (W)	1.5 times of rated power, 10s			
Power Factor Adjustment Range	0.8 leading to 0.8 lagging			
Rated Input/Output Voltage/Range (V)	220/380V 230/400V 0.85Un-1.1Un			
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55 , 60/55-65			
Grid Connection Form	3L+N+PE			
Total Current Harmonic Distortion THDi	<3% (of nominal power)			
DC Injection Current	<0.5% In			
Efficiency				
Max. Efficiency	97.60%			
Euro Efficiency	97.0%			
MPPT Efficiency	>99%			
Equipment Protection				
Integrated	DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection			
Surge Protection Level	TYPE II(DC), TYPE II(AC)			
Interface				
LCD/LED Display	LCD+LED			
Communication Interface	RS485/RS232/CAN			
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)			
General Data				
Operating Temperature Range(°C)	-40 to +60°C, >45°C Derating			
Permissible Ambient Humidity	0-100%			
Permissible Altitude	2000m			
Noise (dB)	≤65			
Ingress Protection (IP) Rating	IP 65			
Inverter Topology	Non-Isolated			
Over Voltage Category	OVC II(DC), OVC III(AC)			
Cabinet Size (WxHxD mm)	527×894×294 (Excluding Connectors and Brackets)			
Weight (kg)	80			
Type of Cooling	Intelligent Air Cooling			
Warranty	Standard 5 years, extended warranty			
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 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			

Small-Scale C&I Energy Storage Solution

Model	SUN-60K-SG02HP3 -EU-EM6	SUN-70K-SG02HP3 -EU-EM6	SUN-75K-SG02HP3 -EU-EM6	SUN-80K-SG02HP3 -EU-EM6
Battery Input Data				
Battery Type	Lithium-ion			
Battery Voltage Range (V)	160-1000			
Max. Charging Current (A)	80+80			
Max. Discharging Current (A)	80+80			
Charging Strategy for Li-ion Battery	Self-adaption to BMS			
Number of Battery Input	2			
PV String Input Data				
Max. PV Access Power (W)	120000	140000	150000	160000
Max. PV Input Power (W)	96000	112000	120000	128000
Max. PV Input Voltage (V)	1000			
Start-up Voltage (V)	180			
MPPT Voltage Range (V)	150-850			
Rated PV Input Voltage (V)	650			
Max. Operating PV Input Current (A)	36+36+36+36+36+36			
Max. Input Short-Circuit Current (A)	54+54+54+54+54+54			
No. of MPP Trackers/ No. of Strings MPP Tracker	6/2+2+2+2+2			
AC Input/Output Data				
Rated AC Input/Output Active Power(W)	60000	70000	75000	80000
Max. AC Input/Output Apparent Power(VA)	66000	77000	82500	88000
Rated AC Input/Output Current (A)	91/87	106.1/101.5	113.7/108.7	121.3/116
Max. AC Input/Output Current (A)	100/95.7	116.7/111.6	125/119.6	133.4/127.6
Max. Continuous AC Passthrough (grid to load) (A)	200			
Peak Power (off-grid) (W)	1.5 times of rated power, 10s			
Power Factor Adjustment Range	0.8 leading to 0.8 lagging			
Rated Input/Output Voltage/Range (V)	220/380V, 230/400V 0.85Un-1.1Un			
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55 60/55-65			
Grid Connection Form	3L+N+PE			
Total Current Harmonic Distortion THDi	<3% (of nominal power)			
DC Injection Current	<0.5% In			
Efficiency				
Max. Efficiency	98.70%			
Euro Efficiency	98.10%			
MPPT Efficiency	>99%			
Equipment Protection				
Integrated	DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection			
Surge Protection Level	TYPE II(DC), TYPE II(AC)			
Interface				
LCD/LED Display	LCD+LED			
Communication Interface	RS485/RS232/CAN			
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)			
General Data				
Operating Temperature Range(°C)	-40 to +60°C, >45 °C Derating			
Permissible Ambient Humidity	0-100%			
Permissible Altitude	3000m			
Noise(dB)	≤65			
Ingress Protection (IP) Rating	IP 65			
Inverter Topology	Non-Isolated			
Over Voltage Category	OVC II(DC), OVC III(AC)			
Cabinet Size (WxHxD mm)	606×927×314 (Excluding Connectors and Brackets)			
Weight (kg)	105			
Type of Cooling	Smart cooling			
Warranty	Standard 5 years, extended warranty			
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 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			

Small-Scale C&I Energy Storage Solution

MPPT Module

SUN-MPPT-L01-EU-AM8

PV String Input Data

Max. PV Input Power (kW)	200
Max. PV Input Voltage (V)	1000
Start-up Voltage (V)	200
MPPT Voltage Range (V)	180-850
Full Load MPPT Voltage Range (V)	450-850
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

Small-Scale C&I Energy Storage Solution

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

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

Small-Scale C&I Energy Storage Solution



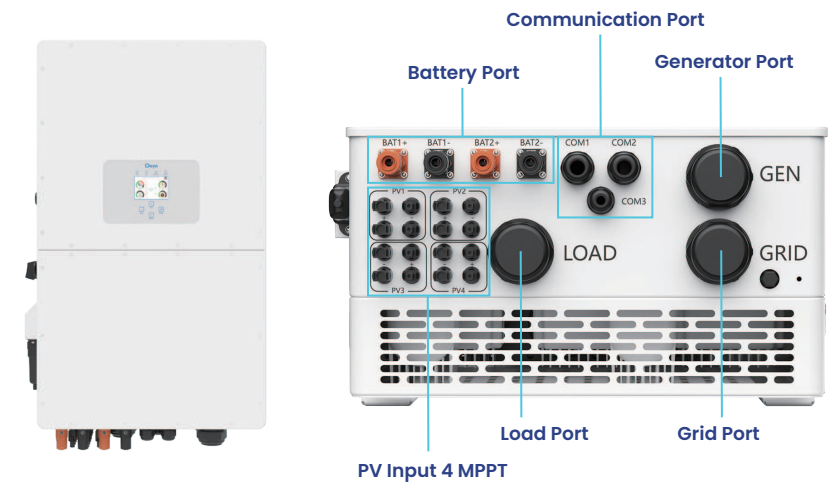
Model		BOS-A		
Main Parameters				
Cell Chemistry		LiFePO ₄		
Module Energy (kWh)		7.68		
Module Nominal Voltage (V)		38.4		
Module Capacity (Ah)		200		
Module Dimension (W × D × H, mm)		601.5 × 520 × 135		
Module Weight Approximate (kg)		70		
Battery Module Qty In Series (Optional)		7	13	21
System Nominal Voltage (V)		268.8	499.2	806.4
System Operating Voltage (V)		235.2 ~ 306.6	436.8 ~ 569.4	705.6 ~ 919.8
System Energy (kWh)		53.76	99.84	161.28
System Usable Energy (kWh) ¹		48.38	89.85	145.15
Charge / Discharge ²		100		
Current (A)		160		
Working Temperature (°C)		Charge : 0 ~ 55 / Discharge : -20 ~ 55		
Status Indicator		Yellow : Battery High Voltage Power On Red : Battery System Alarm		
Communication Port		CAN2.0		
Humidity		5% ~ 85%RH		
Altitude		≤3000m		
IP Rating of Enclosure		IP20		
Dimension (W × D × H, mm)		610 × 610 × 1900	610 × 610 × 2350	(610 × 610 × 1900) × 2
Weight Approximate (kg)		558	985	1586
Installation Location		Rack-Mounted		
Storage Temperature (°C)		0 ~ 35		
Recommend Depth of Discharge		90%		
Cycle Life		≥6000 (25±2°C, 0.5C / 0.5C, EOL70%)		
Warranty ³		10 years		
Certification		CE / IEC 62619 / IEC 62040 / UN38.3 / VDE-2510		

1. DC Usable Energy, test conditions : 90%DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
2. The current is affected by temperature and SOC.
3. The warranty is due whichever reached first of warranty period or life cycle power.

Small-Scale C&I Energy Storage Solution

Model

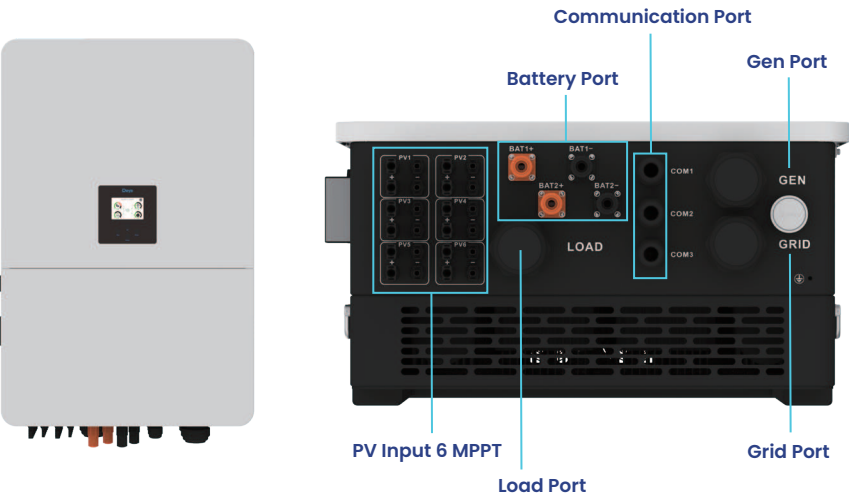
SUN-50K-SG01HP3-EU-BM4



- ◎ Battery Port: Dual independent battery circuit port, supporting multiple brand battery connetion and battery voltage range 160-800V.
- ◎ Communication Port: Serve as communicate with battery and data exchange between inverter and extra devices.
- ◎ Load Port: Offer AC power to connected loads.
- ◎ Grid Port: Connect to utility grid, for bidirectional power transfer: importing from and exporting to the grid.
- ◎ Generator Port: Connect to diesel generator for backup power supply during outages, also can connect with existing solar inverter for AC Coupling.
- ◎ PV Input: Connect to PV panels with 4 MPPTs.

Model

SUN-80K-SG02HP3-EU-EM6

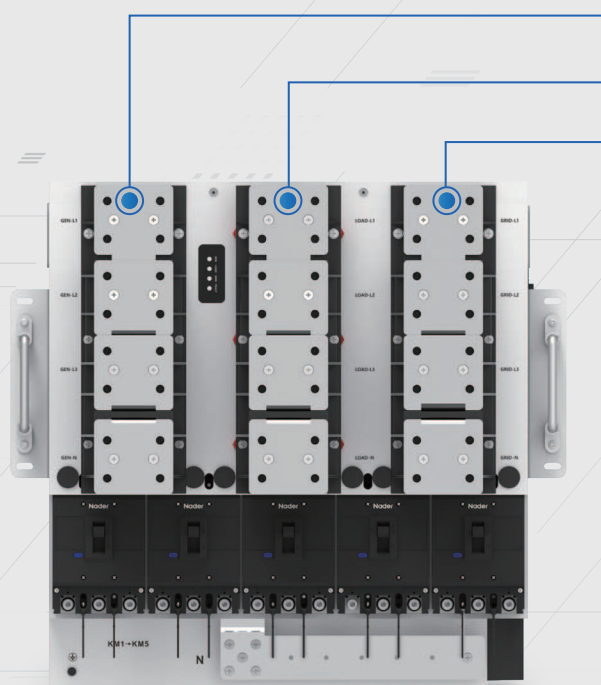


- ◎ Battery Port: Dual independent battery circuit port, supporting multiple brand battery connetion and battery voltage range 160-1000V.
- ◎ Communication Port: Serve as communicate with battery and data exchange between inverter and extra devices.
- ◎ Load Port: Offer AC power to connected loads.
- ◎ Grid Port: Connect to utility grid, for bidirectional power transfer: importing from and exporting to the grid.
- ◎ Generator Port: Connect to diesel generator for backup power supply during outages, also can connect with existing solar inverter for AC Coupling.
- ◎ PV Input: Connect to PV panels with 6 MPPTs.

Small-Scale C&I Energy Storage Solution

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)

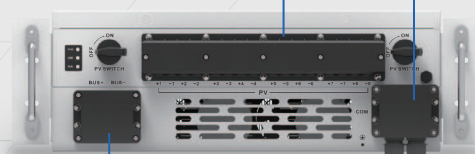
- ◎ Maximum 200kWp PV module connection with 8 MPPT channels, **40A** per MPPT.

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

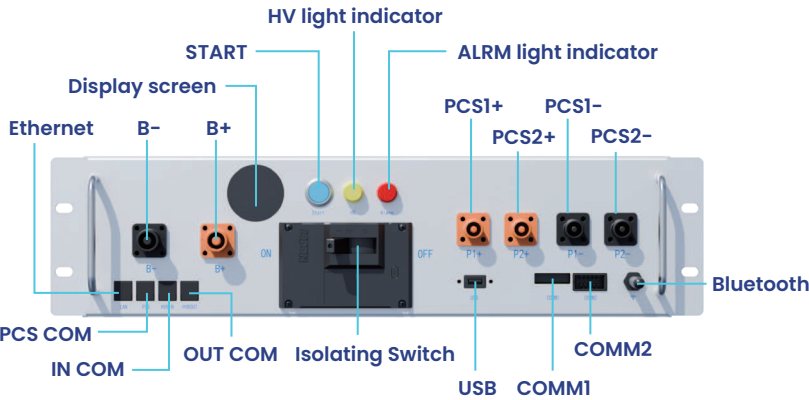
CT/Meter/BMS/
MPPT/Parallel

Data Logger

AC Output

Small-Scale C&I Energy Storage Solution

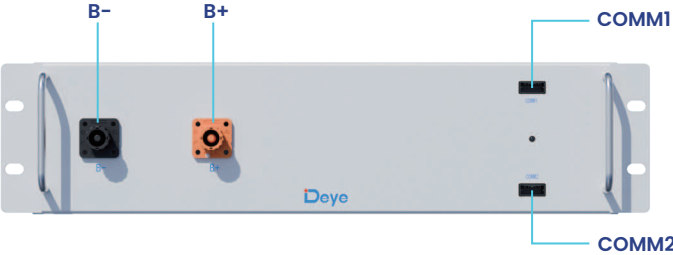
Model	BOS-A-PDU-2
Operating Voltage	200~1000Vdc
Max.Charge/Discharge Current	160A
Operating Temperature	-20~65℃
Ingress Protection	IP20
DC Input Rating	12±2%V/4.15A
Details	632×572×142.2(W×H×D),21kg



- ⊙ 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-A-PDU-4 communication input.
- ⊙ OUT COM:Connection position with next BOS-A-PDU-4 communication output.

- ⊙ Isolating Switch:It is used to manually control the connection between the battery rack and external devices.
- ⊙ USB:BMS upgrade port and storage expansion port.
- ⊙ COMM1:Connection position of external 12VDC power supply.
- ⊙ COMM2:Used for communication and providing power.
- ⊙ Bluetooth:The mobile APP connects to the data acquisition rod of the energy storage system.
- ⊙ B+:Battery common positive connection position (red).
- ⊙ 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).

Model		BOS-A-Pack7.68	
Nominal Capacity	200Ah	Ingress Protection	IP20
Nominal Energy	7.68kWh	Operating Temperature(Charge)	0~55℃
Nominal Voltage	38.4Vdc	Operating Temperature(Discharge)	-20~55℃
Nominal Charge/Discharge Current	160A	Storage Temperature	0~35℃
Details	632×576×135.2(W×H×D),66kg		



- ⊙ B-:Battery module negative pole (black).
- ⊙ B+:Battery module positive pole (orange).
- ⊙ COMM1:Used for communication and providing power.
- ⊙ COMM2:Used for communication and providing power.

Small-Scale C&I Energy Storage Solution

Model

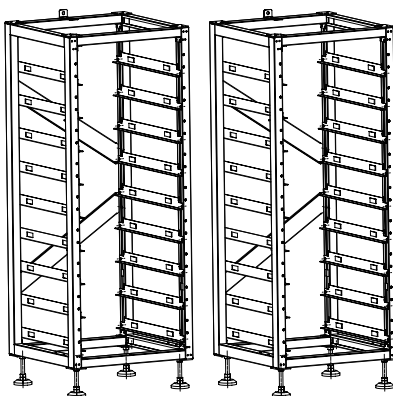
BOS-A

BOS-A-Rack9 *2

Can install 16 pcs batteries and 1 pcs High Voltage Battery cluster control box.

Dimension (W × D × H)
Weight Approximate

1220 × 610 × 1600mm
84kg

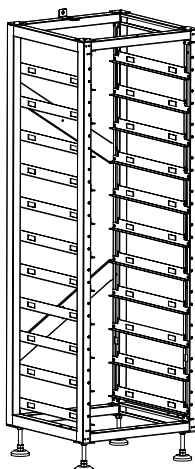


BOS-A-Rack11 BOS-A-Rack11 *2

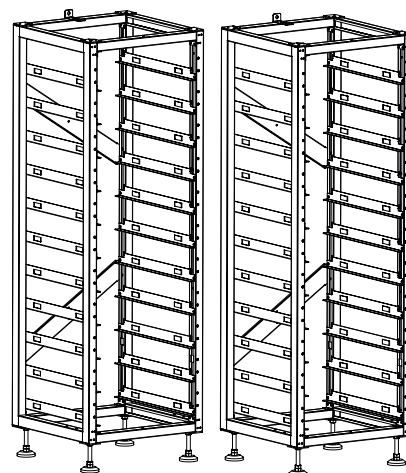
Can install 10 pcs batteries and 1 pcs High Voltage Battery cluster control box.
Can install 21 pcs batteries and 1 pcs High Voltage Battery cluster control box.

Dimension (W × D × H)
Weight Approximate

610 × 610 × 1900mm
47kg



1220 × 610 × 1900mm
94kg

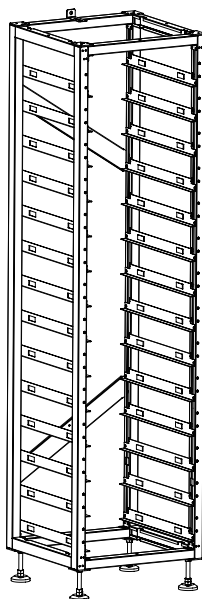


BOS-A-Rack14

Can install 13 pcs batteries and 1 pcs High Voltage Battery cluster control box.

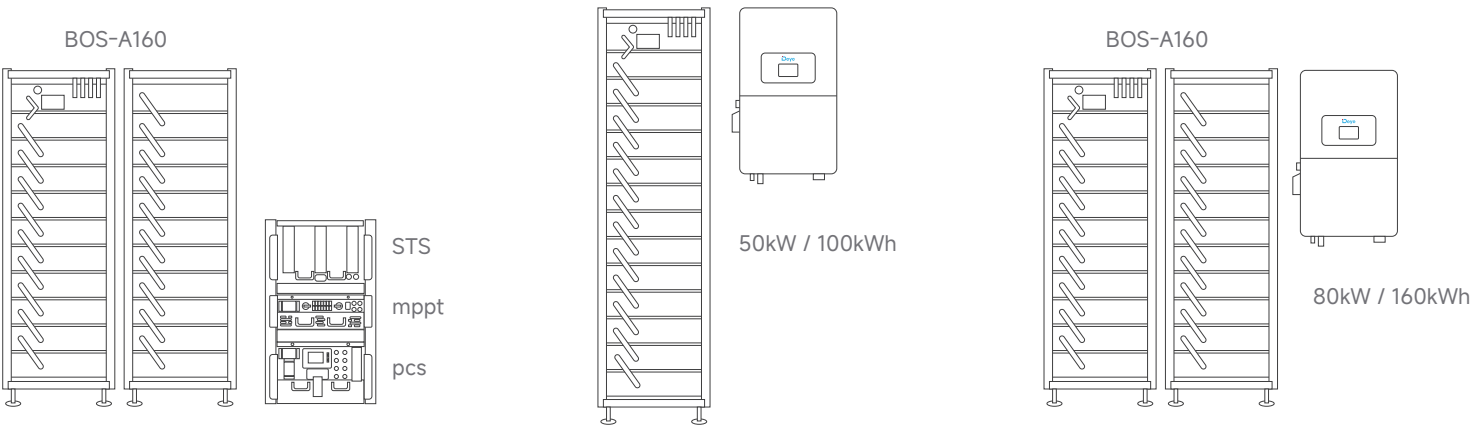
Dimension (W × D × H)
Weight Approximate

610 × 610 × 2350mm
55kg

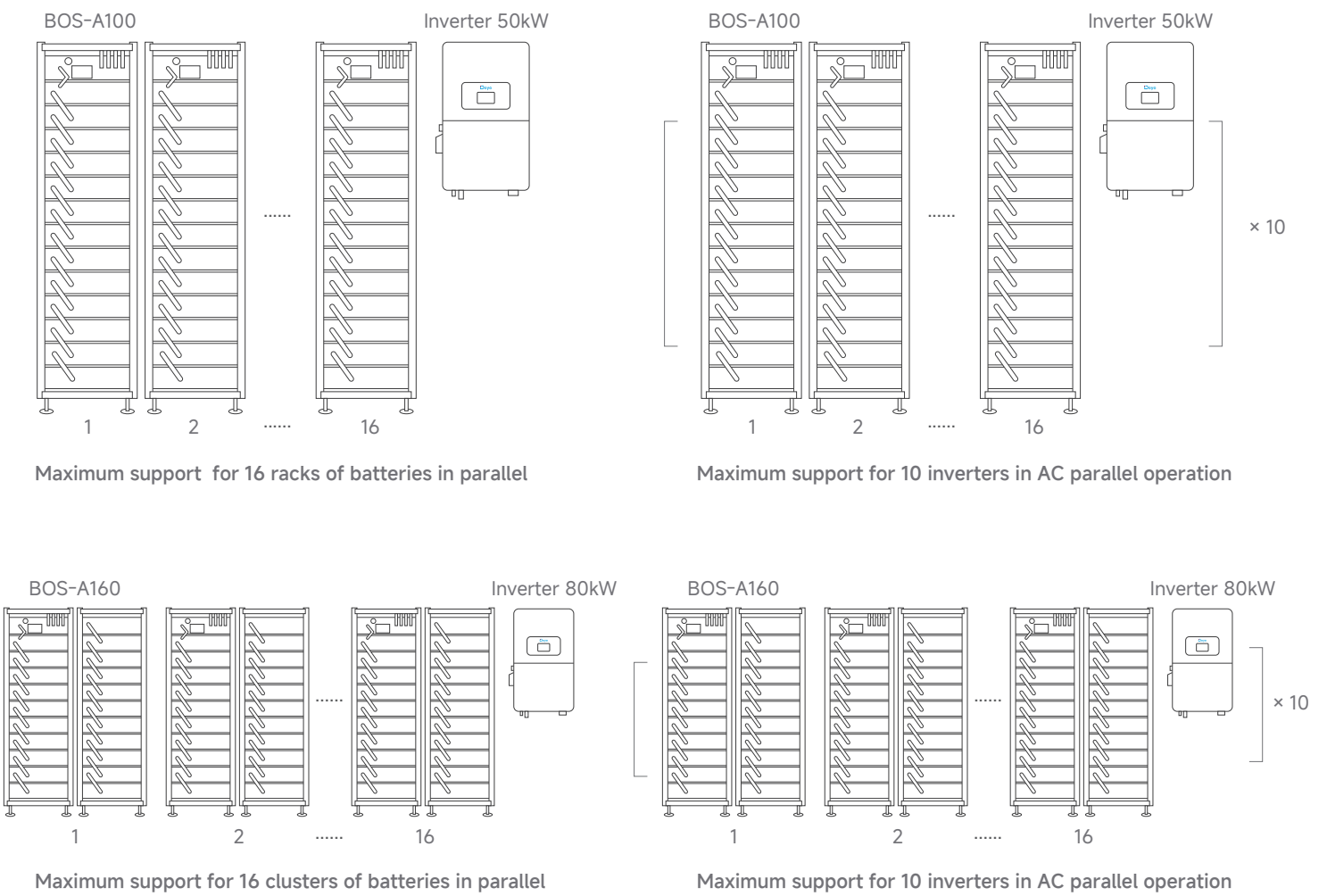


Small-Scale C&I Energy Storage Solution

Backup Power Duration Plan	1 hours		2 hours		4 hours	
Hybrid inverter power	100kW	50kW	80kW	50kW	80kW	
Battery model	BOS-A160	BOS-A100	BOS-A160	BOS-A100	BOS-A160	
Number of batteries	1 pc	1 pc	1 pc	2 pcs	2 pcs	



Typical Application Scenarios

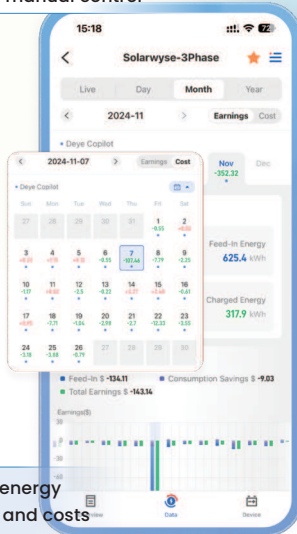


Deye Cloud

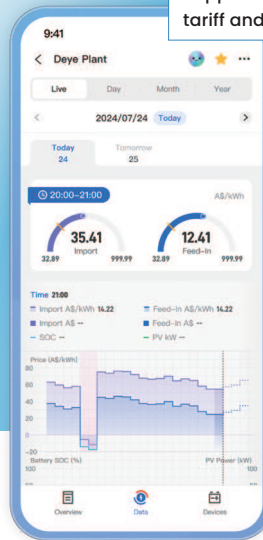
All-in-one Energy & Device Management Platform

-  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

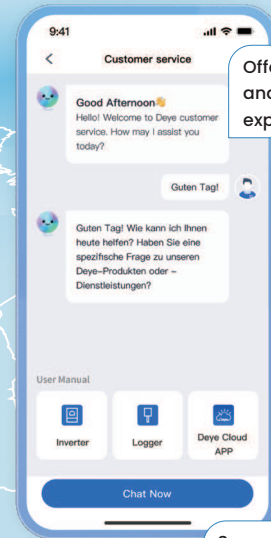


Display energy
savings and costs



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 Energy Storage System

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