



Small-Scale C&I Energy Storage Solution

SUN-50K-SG01HP3-AU-BM4 & BOS-G

SUN-50K-SG01HP3-AU-BM4

-  **Precision Power Tracking**
4 MPPTs with max. 36A PV input current
-  **Stable Working**
UPS level on&off-grid switching time <10ms
-  **Smart Electricity Strategy**
6 time periods for battery charging/discharging
-  **Ultimate Flexibility**
AC couple to retrofit existing solar system
-  **Powerful Operation**
Rated power of 50kW, peak power of 75kW
-  **Battery Side**
Double charging/discharging, 50A + 50A

BOS-G

-  **10-Year Warranty**
Safest LFP battery & Intelligent BMS
-  **Battery Protection**
Auto charge/discharge & Cell voltage balancing
-  **Flexible Expansion**
Support 3 ~ 12 packs in series
-  **Intelligent Control**
Over-discharge/charge/current and temp protection
-  **High-Efficiency Use**
Low self-discharge for 6 months & No memory effect
-  **Smart Control**
Remote monitoring, management, and upgrades

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Model	SUN-50K-SG01HP3-AU-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)	75000
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)	72.5
Max. AC Input/Output Current (A)	72.5
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)	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, Insulation Impedance Detection, Arc Fault Circuit Interrupter (optional),DC Switch, Anti-islanding Protection(Active Frequency shift) , Residual Current Detection
Surge Protection Level	TYPE II(DC), TYPE II(AC)
Interface	
Communication Interface	WIFI,RS485,CAN
LCD/LED Display	LCD
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	10 Years
Protection Level	Class I
Grid Regulation	AS/NZS 4777.2
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2

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Model BOS-GX (X=3, 4, 5, 6, 7, 8, 9, 10, 11, 12)

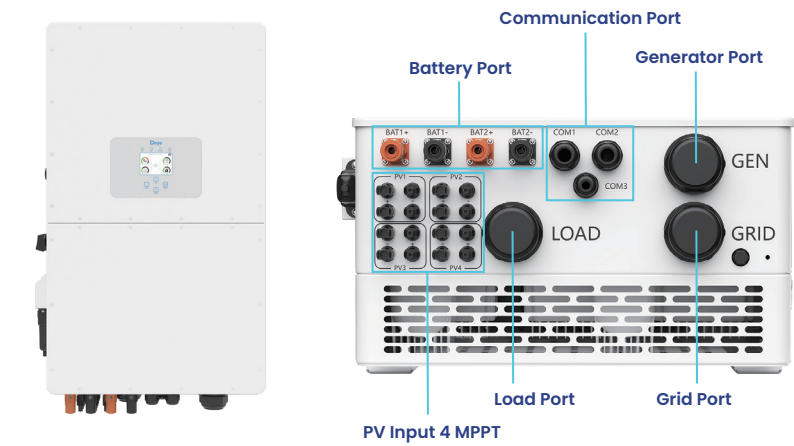
Main Parameters

Cell Chemistry	LiFePO ₄									
Module Energy (kWh)	5.12									
Module Nominal Voltage (V)	51.2									
Module Capacity (Ah)	100									
Battery Module Number	BOS-G15	BOS-G20	BOS-G25	BOS-G30	BOS-G35	BOS-G40	BOS-G45	BOS-G50	BOS-G55	BOS-G60
Battery Module Qty In Series (Optional)	3	4	5	6	7	8	9	10	11	12
System Nominal Voltage (V)	153.6	204.8	256	307.2	358.4	409.6	460.8	512	563.2	614.4
System Operating Voltage (V)	124.8~175.2	166.4~233.6	208~292	249.6~350.4	291.2~408.8	332.8~467.2	374.4~525.6	416~584	457.6~642.4	499.2~700
System Energy (kWh)	15.36	20.48	25.6	30.72	35.84	40.96	46.08	51.2	56.32	61.44
System Usable Energy (kWh)	13.82	18.43	23.04	27.64	32.25	36.86	41.47	46.08	50.68	55.29
Rted DC Power	15.36	20.48	25.6	30.72	35.84	40.96	46.08	51.2	56.32	61.44
Charge / Discharge ² Current (A)	Recommend									
	Nominal									
	Peak Discharge (2 mins, 25°C)									
Working Temperature (°C)	50									
Status Indicator	100									
Communication Port	125									
Humidity	Charge : 0 ~ 55 / Discharge : -20~55									
Altitude	Yellow : Battery High Voltage Power On Red : Battery System Alarm									
IP Rating of Enclosure	CAN2.0 / RS485									
Dimension (W × D × H, mm)	5% ~ 85%RH									
Weight Approximate (kg)	≤2000m									
Installation Location	IP20									
Storage Temperature (°C)	530 × 602 × 1629					530 × 602 × 2187				
Recommend Depth of Discharge	388					562				
Cycle Life	Rack Mounting									
Warranty ³	0 ~ 35									
Certificatio	90%									
	25±2°C, 0.5C/0.5C, EOL70%≥6000									
	10 years									
	CE / CEC / IEC62619 / VDE2510-50 / UL1973 / UL9540A / UN38.3									

1. DC Usable Energy, test conditions : 90% DOD, 0.2C 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.
4. Made in China.

Model

SUN-50K-SG01HP3-AU-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

BOS-G

HVB750V / 100A-EU	High Voltage Battery cluster control box conforming to European or British Standards	
Operating Voltage	120 ~ 750Vdc	
Nominal Charge / Discharge Current	100A	
Max.Charge / Discharge Current	125A	
DC Input Rating	12±2%/4.15A	
Operating Temperature Range	-20 ~ 65°C	
Ingress Protection	IP20	
Dimension (W × D × H)	440 × 570 × 150mm	
Weight Approximate	19kg	

High voltage box Standard configuration :

- ① 120 ohm terminal resistance
- ② 140mm communication cable
- ③ 220mm power cable
- ④ 1.5m power cable (US Version)
2.1m power cable (EU Version)
- ⑤Power plug



BOS-GM5.1	5.12 kwh battery module	
Battery Type	LiFePO ₄ (LFP)	
Nominal Voltage	51.2Vdc	
Rated Capacity	100Ah	
Rated Energy	5.12kWh	
Nominal Charge / Discharge Current	100A	
Peak.Discharge Current	125A	
Charge Temperature	0 ~ 55°C	
Discharge Temperature	-20°C ~ 55°C	
Storage Temperature	0°C ~ 35°C	
Ingress Protection	IP20	
Dimension (W × D × H)	440 × 570 × 133mm	
Weight Approximate	45kg	
Battery module Standard configuration:		
① 110mm communication cable		
② 200mm power cable		



Model

BOS-G

EPcable5.0 (Optional)

Standard 5-meter power cable connected to the positive pole of the external PCS



ENCable5.0 (Optional)

Standard 5-meter power cable connected to the negative pole of the external PCS



EPWR Cable5.0 (Optional)

Standard 5-meter cable connected to external 12VDC power supply



ECOM Cable5.0 (Optional)

Standard 5-meter communication cable connected to the external device

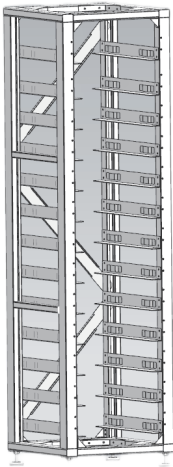


3U-HRACK (Optional)

Standard 19inch rack, caninstall 12 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W × D × H)
Weight Approximate

530 × 602 × 2187mm
51kg

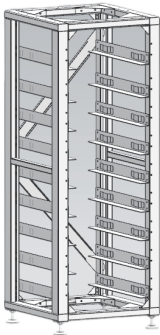


3U-LRACK (Optional)

Standard 19inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box

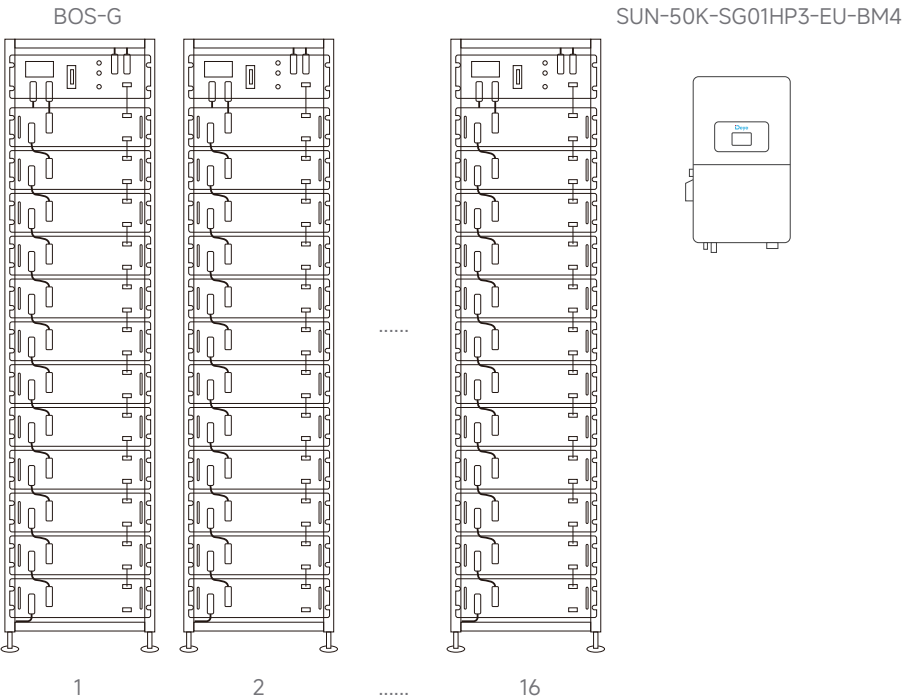
Dimension (W × D × H)
Weight Approximate

530× 602× 1629mm
41kg

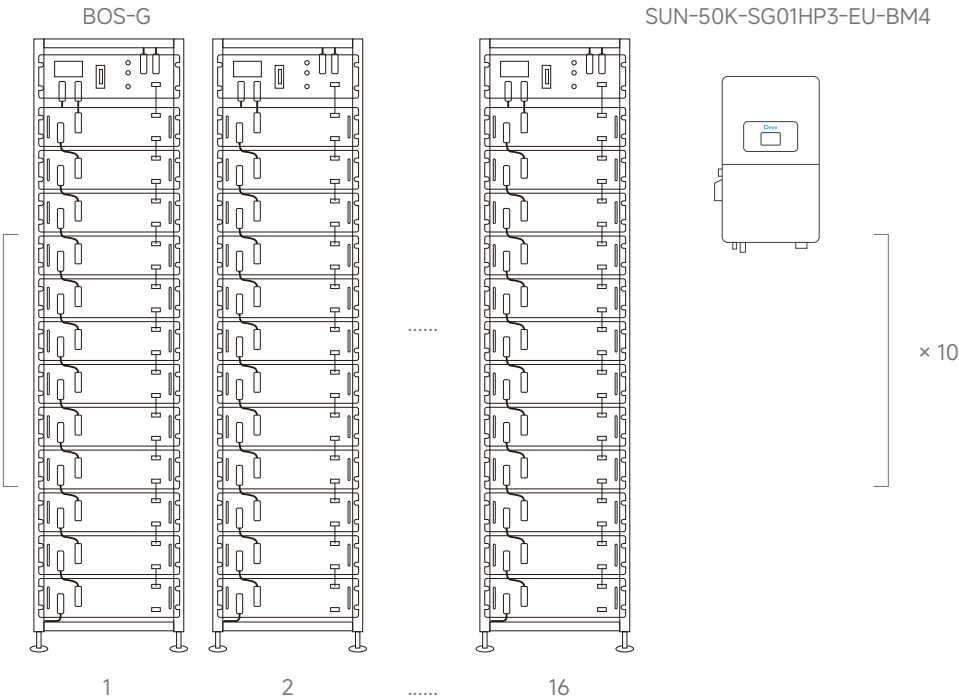


Product Expansion

Battery backup time	BOS-G			
Inverter	1h	2h	3h	4h
SUN-30K-SG01HP3-EU-BM3	6 units	12 units	9 units × 2	12 units × 2
SUN-50K-SG01HP3-EU-BM4	10 units	10 units × 2	10 units × 3	10 units × 4



Maximum support for 16 racks of batteries in parallel



Maximum support for 10 inverters in AC parallel operation

Deye Cloud

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