



Small-Scale C&I Energy Storage Solution

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

SUN-50K-SG01HP3-EU-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-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 Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level		
Surge Protection Level	TYPE II(DC), TYPE II(AC)		
Interface			
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	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 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)

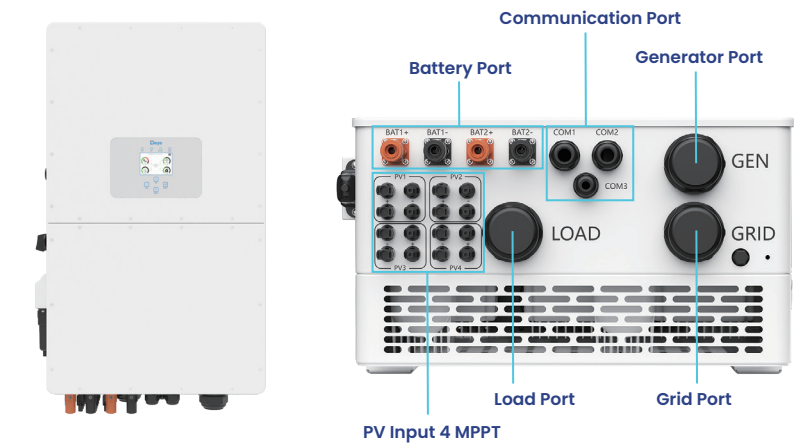
Main Parameters

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 / 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-EU-BM4



- ◎ Battery Port: Dual independent battery circuit port, supporting multiple brand battery connection 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%V/4.15A	
Operating Temperature Range	-20 ~ 65°C	
Ingress Protection	IP20	
Dimension (W × D × H)	440 × 570 × 150mm	
Weight Approximate	19kg	

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

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)
- ⑤ Power 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

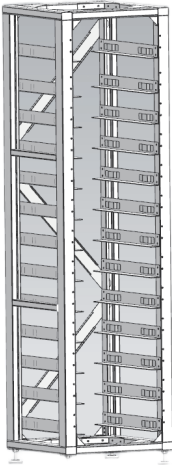
BOS-G

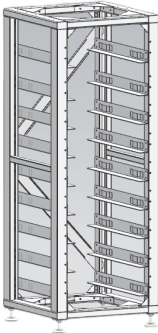
EPcable5.0 (Optional)	Standard 5-meter power cable connected to the positive pole of the external PCS
1000V / 4AWG cable	

ENCable5.0 (Optional)	Standard 5-meter power cable connected to the negative pole of the external PCS
1000V / 4AWG cable	

EPWR Cable5.0 (Optional)	Standard 5-meter cable connected to external 12VDC power supply
	

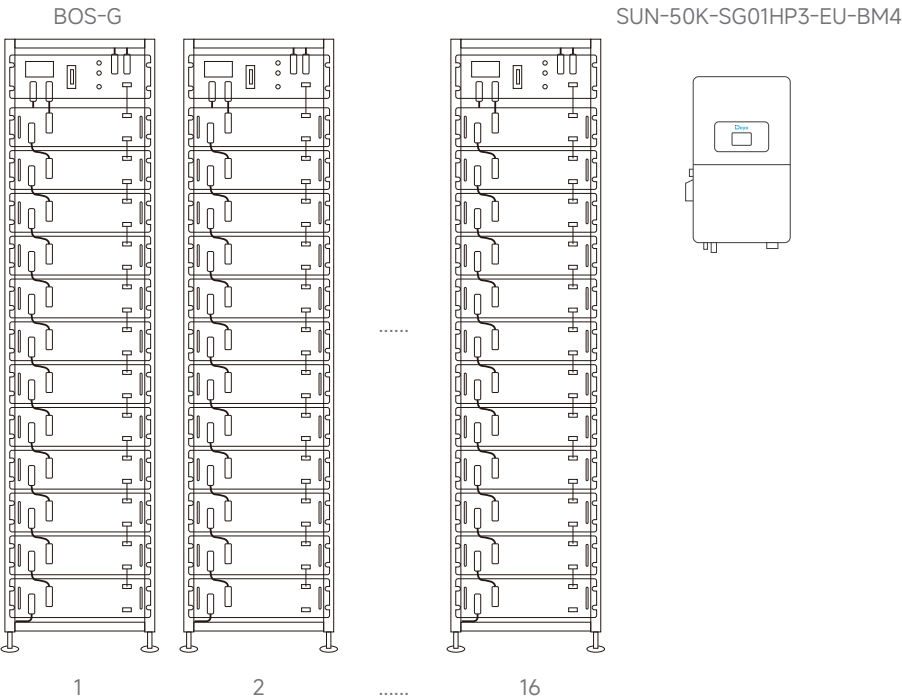
ECOM Cable5.0 (Optional)	Standard 5-meter communication cable connected to the external device
	

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
	

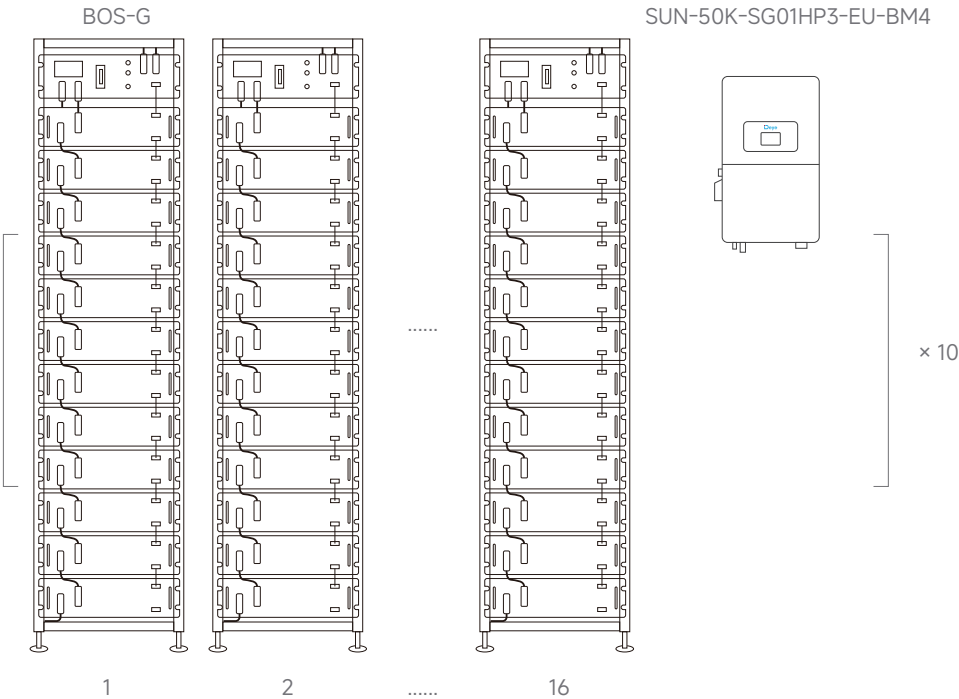
3U-LRACK (Optional)	Standard 19inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box
Dimension (W × D × H) Weight Approximate	530× 602× 1629mm 41kg
	

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

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