

# Small-Scale C&I Energy Storage Solution

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

BOS-G PRO

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

### 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-G Pro

### Convenient

- ◎ Quick installation standard of 19-inch embedded designed module is comfortable for installation and maintenance.

### Intelligent BMS

- ◎ It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

### Eco-friendly

- ◎ The whole module is non-toxic, non-polluting and environmentally friendly

### Safe and reliable

- ◎ Cathode material is made from LiFePO4 with safety performance and long cycle life, The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

### Flexible configuration

- ◎ Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, remote up grade (Compatible with Deye inverter).

### Wide temperature

- ◎ Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.

# 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 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		

# 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+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	121.3/115.9
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 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	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	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			

# Small-Scale C&I Energy Storage Solution



## Model

## BOS-G Pro

### Main Parameter

Cell Chemistry	LiFePO <sub>4</sub>			
Module Energy ( kWh )	5.12			
Module Nominal Voltage ( V )	51.2			
Module Capacity ( Ah )	100			
Battery Module Number	BOS-G25 Pro	BOS-G40 Pro	BOS-G60 Pro	BOS-G80 Pro
Battery Module Qty In Series ( Optional )	5 (Min)	8	12	16
System Nominal Voltage ( V )	256	409.6	614.4	819.2
System Operating Voltage ( V )	220~292	352~467.2	528~700.8	704~934.4
System Energy ( kWh )	25.6	40.96	61.44	81.92
System Usable Energy ( kWh )	23.04	36.86	55.3	73.73
Rated DC Power ( kW )	25.6	40.96	61.44	81.92
Charge / Discharge <sup>2</sup> 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)	≤3000m			
Installation Location	IP20			
Storage Temperature (°C)	530 × 602 × 1629			
Recommend Depth of Discharge	530 × 602 × 2219			
Cycle Life	1060 × 602 × 1629			
Warranty	290			
Certification	428			
	622			
	837			
	Rack Mounting			
	0 ~ 35			
	90%			
	25±2°C, 0.5C / 0.5C, EOL70%≥6000			
	10 years			
	UN38.3 / CE / CE-EMC / IEC62040 / CEC / VDE			

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.

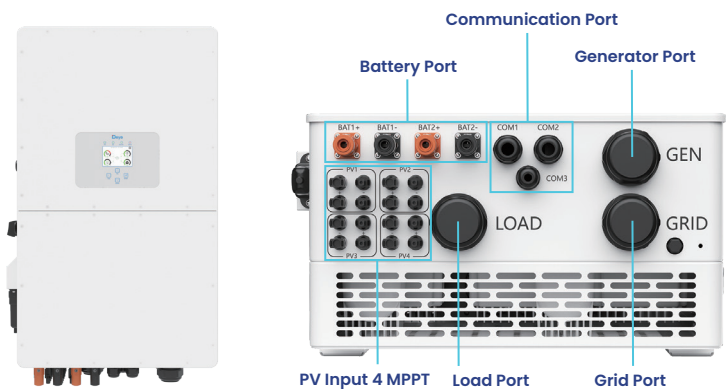
4. Made in China.



# Small-Scale C&I Energy Storage Solution

## Model

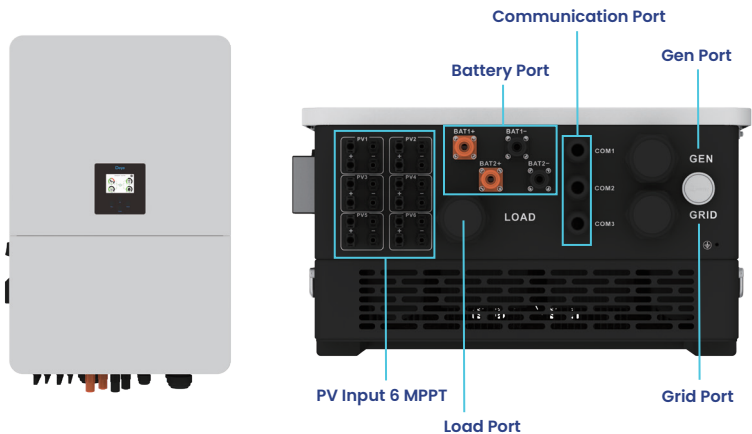
**SUN-50K-SG01HP3-EU-BM4**



- ⊙ 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

**SUN-80K-SG02HP3-EU-EM6**



- ⊙ Battery Port: Dual independent battery circuit port, supporting multiple brand battery connection 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.

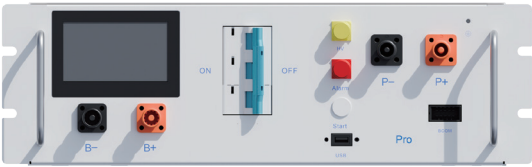
## Model

**BOS-G-PDU-2**

**BOS-G-PDU-2**

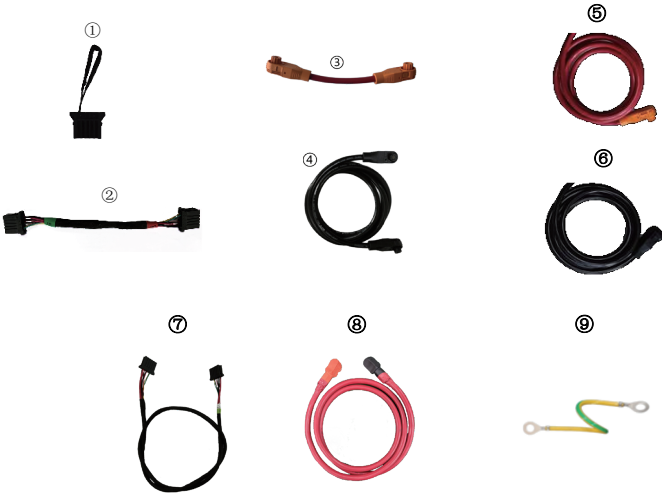
High Voltage Battery cluster control box conforming to European or British Standards

Operating Voltage	200 ~ 1000Vdc
Nominal Charge/Discharge Current	100A
Max.Charge/Discharge Current	120A
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



High voltage box Standard configuration:

- ① 120 ohm terminal resistance
- ② 250mm communication cable
- ③ 140mm power cable
- ④ 2.1m power cable
- ⑤ EPCable2.0  
(Standard 2-meter power cable connected to the positive pole of the external PCS)
- ⑥ ENCable2.0  
(Standard 2-meter power cable connected to the negative pole of the external PCS)
- ⑦ 1000mm communication cable between two battery racks
- ⑧ 1000mm power cable between the two battery racks
- ⑨ 140 mm ground wire



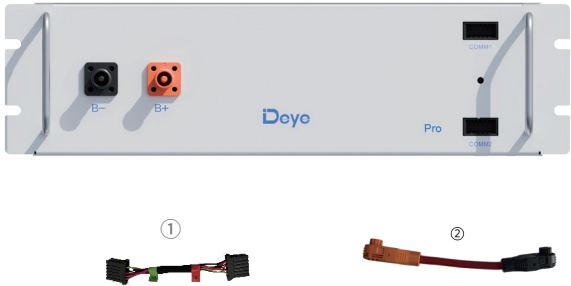
Model

BOS-G-Pack5.1

BOS-G-Pack5.1

5.12 kwh battery module

Battery Type	LiFePO <sub>4</sub> (LFP)
Nominal Voltage	51.2Vdc
Rated Capacity	100Ah
Rated Energy	5.12kWh
Nominal Charge/Discharge Current	100A
Peak.Discharge Current	120A
Charge Temperature	0 ~ 55°C
Discharge Temperature	-20°C ~ 55°C
Storage Temperature	0°C ~ 35°C
Ingress Protection	IP20
Dimension ( W×D×H )	440×585×133mm
Weight Approximate	46kg

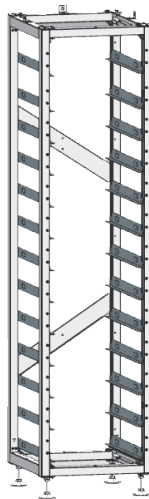


Battery module Standard configuration:  
① 160mm communication cable  
② 200mm power cable

3U-HRACK(Optional)

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

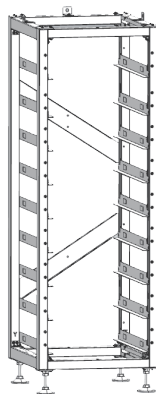
Dimension (W×D×H)	530×602×2219mm
Weight Approximate	51kg



3U-LRACK(Optional)

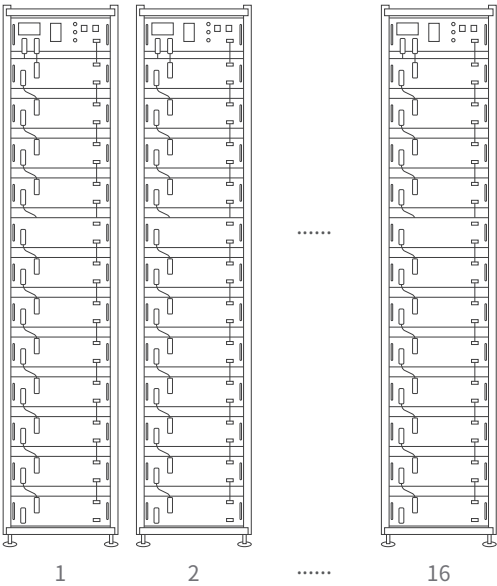
Standard 19inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W×D×H)	530×602×1629mm
Weight Approximate	41kg



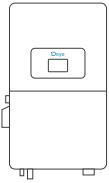
Typical Application Scenarios

BOS-G60 Pro

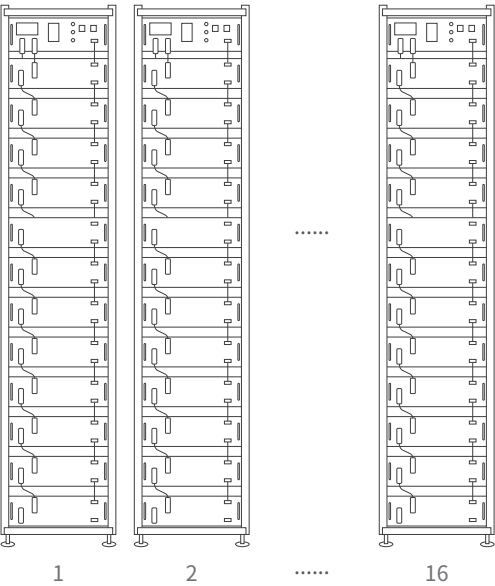


Maximum support for 16 racks of batteries in parallel

Inverter 50kW

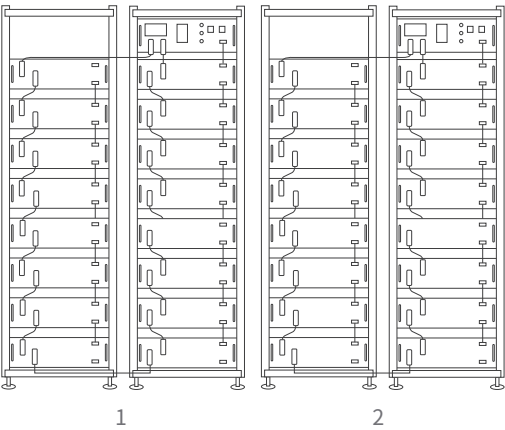


BOS-G60 Pro



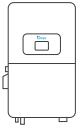
Maximum support for 10 inverters in AC parallel operation

BOS-G80 Pro

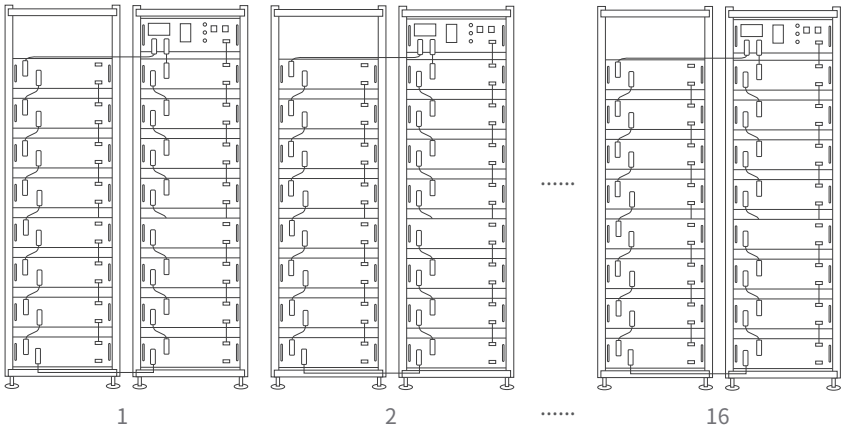


Maximum support for 16 clusters of batteries in parallel

Inverter 80kW



BOS-G80 Pro



Maximum support for 10 inverters in AC parallel operation

# 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



## 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



### All in One

Smarter home energy and device management



### Cloud-edge Collaboration

Faster and more efficient data processing



### Accelerated Connectivity

Optimized for speed and performance



### Advanced Smart Energy

A smarter way to manage your electricity bills



[www.deyeess.com](http://www.deyeess.com) / [www.deyeinverter.com](http://www.deyeinverter.com)



Deye ESS / Deye New Energy