






Small-Scale C&I Energy Storage Solution







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

BOS-W

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-W

- 
Safe & Reliable
 - LFP batteries, with low self-discharge (up to 6 months without charging)
- 
Flexible Expansion
 - Supports multiple battery modules in parallel, USB, and remote upgrades
- 
Wide Temp Range
 - Working temp range: -20 °C to 55 °C
- 
Smart Protection
 - Protects against over-discharge /charge/current and extreme temps
 - Auto-manages charge discharge and cell balancing
- 
No Memory Effect
 - Excellent with shallow charge and discharge
- 
High Performance
 - Superior discharge and ≥ 6000 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



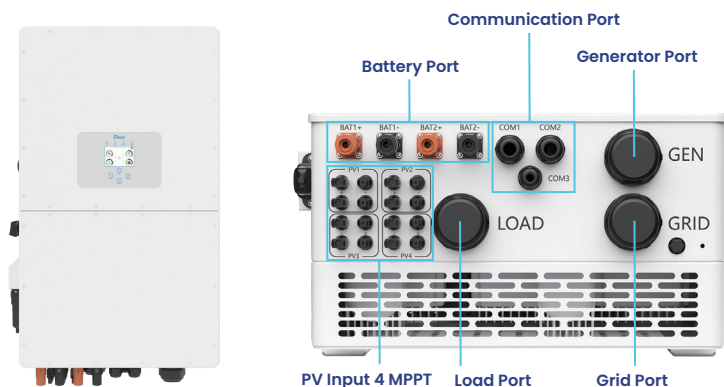
| Model | | BOS-W | | | |
|---|------------------------------|---|-------------|-------------|-------------|
| Main Parameters | | | | | |
| Cell Chemistry | | LiFePO ₄ | | | |
| Module Energy (kWh) | | 5.12 | | | |
| Module Nominal Voltage (V) | | 51.2 | | | |
| Module Capacity (Ah) | | 100 | | | |
| Battery Module Number | | BOS-W25 | BOS-W40 | BOS-W60 | BOS-W80 |
| 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) ¹ | | 23.04 | 36.86 | 55.3 | 73.73 |
| Rated DC Power (kW) | | 25.6 | 40.96 | 61.44 | 81.92 |
| Charge / Discharge Current (A) ² | Recommend | 50 | | | |
| | Nominal | 100 | | | |
| | Peak Discharge(2 mins, 25°C) | 125 | | | |
| 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 / RS485 | | | |
| Humidity | | 5% ~ 85%RH | | | |
| Altitude | | ≤3000m | | | |
| IP Rating of Enclosure | | IP20 | | | |
| Weight Approximate (kg) | | 249 | 387 | 571 | 755 |
| Installation Location | | Rack Mounting | | | |
| Storage Temperature (°C) | | 0 ~ 35 | | | |
| Recommend Depth of Discharge | | 90% | | | |
| Cycle Life | | 25±2°C, 0.5C / 0.5C, EOL70%≥6000 | | | |
| Warranty ³ | | 5 years | | | |
| Certification | | UN38.3 | | | |

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

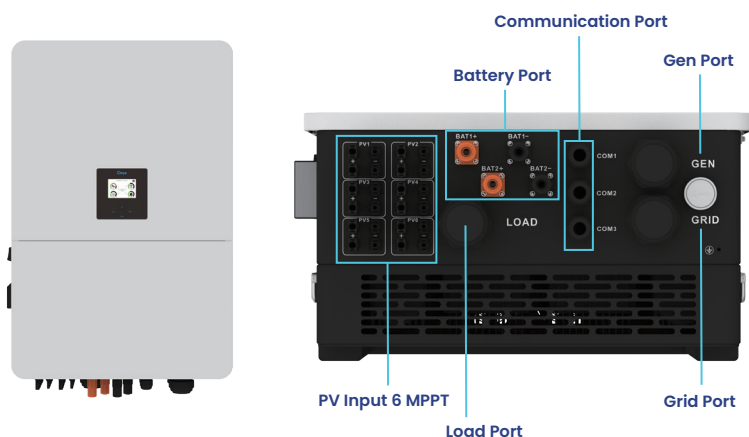
SUN-50K-SG01HP3-EU-BM4



- ⊗ 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

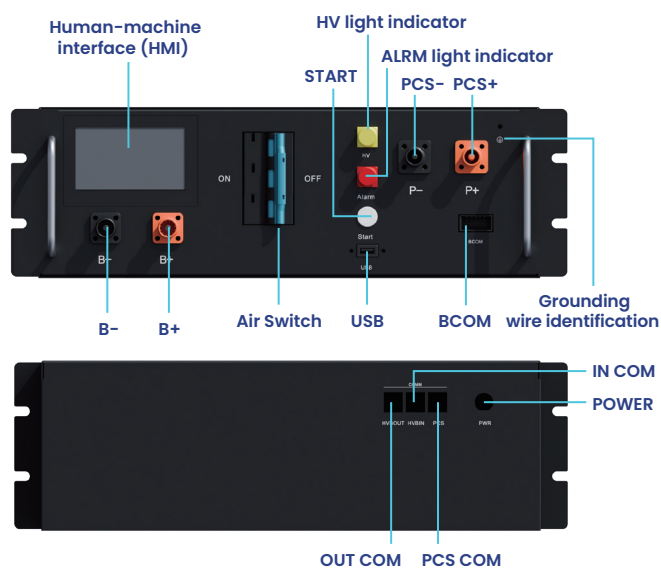
SUN-80K-SG02HP3-EU-EM6



- ⊗ 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

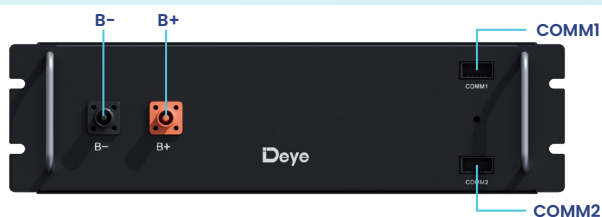
BOS-W-PDU-2



- ⊗ B-:Connection position of the common negative pole of the battery (black).
- ⊗ B+:Connection position of the common positive pole of the battery (orange).
- ⊗ Air switch:Used to manually control the connection between the battery rack and external devices.
- ⊗ USB BMS:Upgrade interface and storage expansion interface.
- ⊗ BCOM:Communicative connection with the first battery module; and Providing 12VDC power for the first battery module.
- ⊗ Human-machine interface (HMI):Display some important battery information.
- ⊗ 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).
- ⊗ PCS-:Connection position of PCS negative pole (black).
- ⊗ PCS+:Connection position of PCS positive pole (orange).
- ⊗ Grounding wire identification:Connection to the battery rack and the ground point.
- ⊗ OUT COM:Connection position with next BOS-W-PDU-2 communication input.
- ⊗ IN COM:Connection position with previous BOS-W-PDU-2 communication output.
- ⊗ PCS COM:PCS COM battery communication terminal: (RJ45 port) follow the CAN Protocol (default baud rate: 500bps) and RS485 Protocol (default baud rate:9.6bps), used to output battery information to the inverter.
- ⊗ POWER:Connection position of external 12VDC power supply.

Model

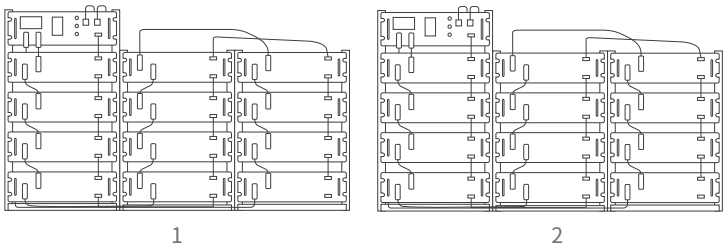
BOS-W-Pack5.1



- ⊗ 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.

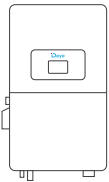
Typical Application Scenarios

BOS-W60

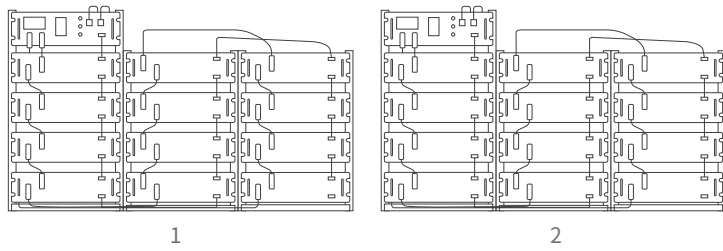


Maximum support for 16 racks of batteries in parallel

Inverter 50kW

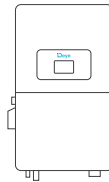


BOS-W60



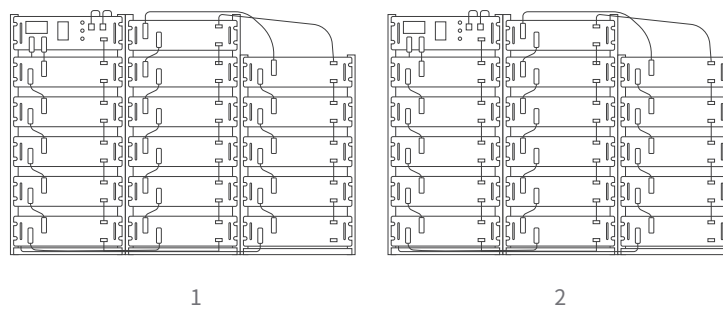
Maximum support for 10 inverters in AC parallel operation

Inverter 50kW



× 10

BOS-W80

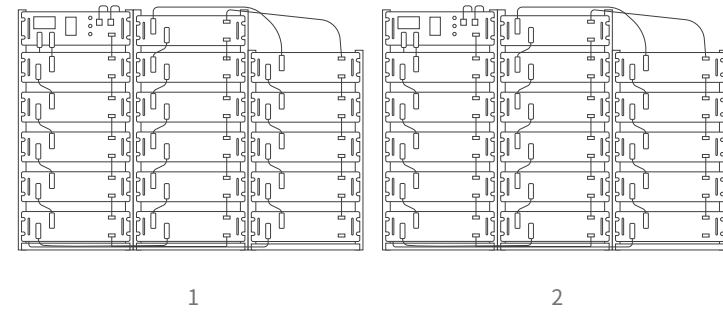


Maximum support for 16 clusters of batteries in parallel

Inverter 80kW

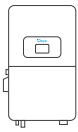


BOS-W80



Maximum support for 10 inverters in AC parallel operation

Inverter 80kW



× 10

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



POWERING YOUR LIFE



www.deyeess.com / www.deyeinverter.com



Deye ESS / Deye New Energy