ORION W
Indoor C&I ESS Solutions

GB-W

SUN-30~125K Series Hybrid Inverter

SUN-100/125K PCS+MPPT+STS Series Module

High Integration, Easy Scalability

· Modular cable-free stacking design enables efficient and convenient installation, drastically cutting installation costs.
· The battery pack is equipped with a quick-release service panel; wearing parts replaceable on-cluster without battery removal — efficient, hassle-free maintenance.
· Single-cluster capacity ranges from 60 to 192kWh, covering diverse energy storage scenarios for small and medium commercial & industrial applications.

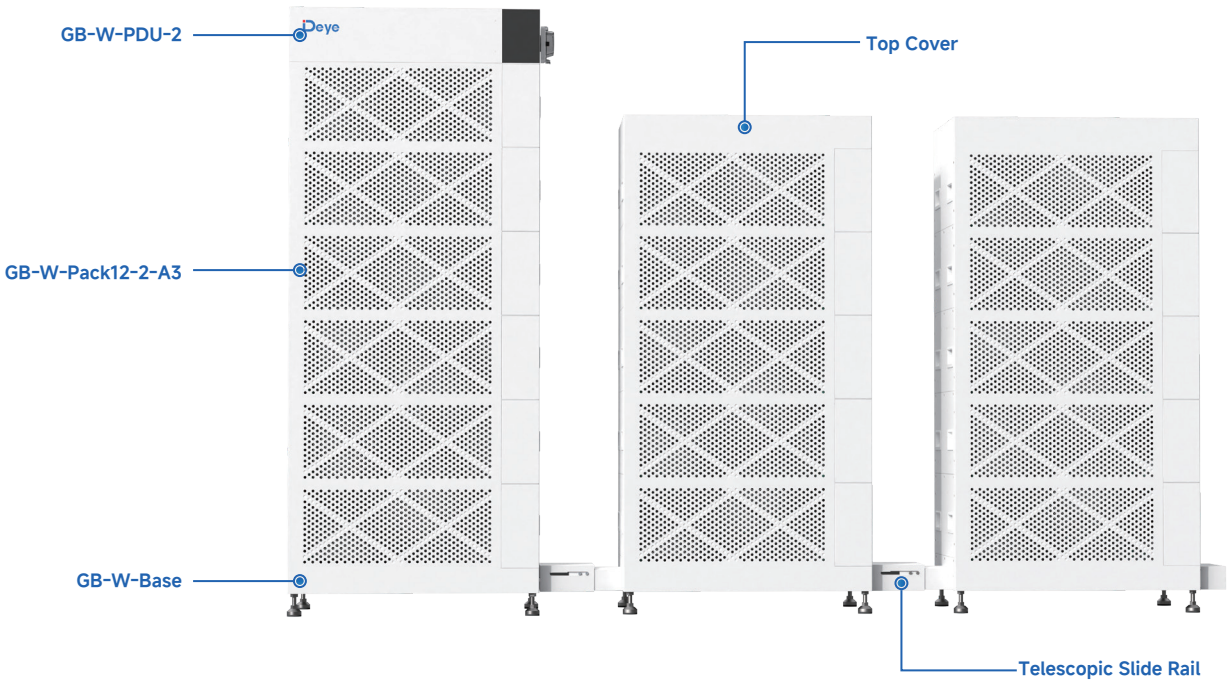
High Performance, Ultimate Safety

· Supports a maximum continuous discharge current of 230A, highly compatible with DEYE 30–125kW high-voltage inverters and 100/125kW PCS.
· Cell-level thermal isolation, pack-level aerosol fire suppression system, and dual temperature monitoring for cells and connections build a full-dimensional safety protection barrier.
· Equipped with a natural air cooling system with directional air ducts and dust filtration, the system keeps cell temperature difference below 4°C, ensuring cycle life and extending service life.

Intelligent Management, Simplified O&M

· Adopts pack-level and cell-level balancing technology, supporting seamless pack replacement for capacity expansion to simplify operation and maintenance.
· DEYE integrated BMS+EMS collaborative control realizes real-time full-link linkage from cells to the system, intelligently optimizing power consumption strategies.
· Supports dual access via local Bluetooth and remote cloud platform, providing 7×24h real-time monitoring, fault diagnosis and remote upgrade.

System Accessories



Model	GB-W-PDU-2
Operating Voltage	200~1000Vdc
Nominal Charge/Discharge Current	230A
Operating Temperature	-20~55°C
Ingress Protection	IP20
Details	690 x 436 x 151.2(W x D x H)，20.8kg
Model	**GB-W-Pack12-2-A3**
Nominal Capacity	235Ah
Nominal Energy	12.03kWh
Nominal Voltage	51.2Vdc
Max Charge/Discharge Current	230A
Ingress Protection	IP20
Operating Temperature (Charge)	0~55°C
Operating Temperature (Discharge)	-20~55°C
StorageTemperature	-30~60°C
Details	690 x 436 x 270.5(W x D x H)，93kg
Model	**GB-W-Base**
Details	690 x 436 x 107(W x D x H),14kg
Model	**Telescopic Slide Rail**
Details	Stroke: 200-300 mm
Model	**Top Cover**
Details	690 x 436 x 107 (W x D x H, 6kg)

Battery System Data

Cell Chemistry		$LiFePO_4$										
Module Energy (kWh)		12.03										
Module Capacity (Ah)		235										
Module Nominal Voltage (V)		51.2										
Battery Module Qty in series (Optional)		5	6	7	8	9	10	11	12	13	14	15	16
Battery Model Number		GB-W60	GB-W72	GB-W84	GB-W96	GB-W108	GB-W120	GB-W132	GB-W144	GB-W156	GB-W168	GB-W180	GB-W192
System Nominal Voltage (Vdc)		256	307.2	358.4	409.6	460.8	512	563.2	614.4	665.6	716.8	768	819.2
System Operating Voltage (Vdc)		208~292	249.6~350.4	291.2~408.8	332.8~467.2	374.4~525.6	416~584	457.6~642.4	499.2~700.8	540.8~759.2	582.4~817.6	624~876	665.6~934.4
System Energy (kWh)		60.1	72.1	84.2	96.2	108.2	120.3	132.3	144.3	156.4	168.4	180.4	192.5
System Usable Energy (kWh)		54.1	64.9	75.8	86.6	97.4	108.2	119.1	129.9	140.7	151.6	162.4	173.2
System Nomianal Charge/Discharge Power (kW)		58.8	70.6	82.4	94.2	105.9	117.7	129.5	141.3	153	164.8	176.6	188.4
Charge / Discharge Current	Max.Continuous	230											
	Peak	322 (1s)											
Working Temperature (°C)		Charge:0~55 / Discharge:-20~55											
Communication Port		CAN / RS485											
Thermal Management		Natural air cooling											
Recommend Depth of Discharge		90%											
Cycle Life		25±2°C,0.5C/0.5C,70%EOL≥6000											
Warranty		10 years											

Other Data

Humidity	0~85%
Altitude (m)	≤3000
IP Rating of Enclosure	IP20
Noise (dB)	≤60@25°C, 1m
Storage Temperature (°C)	-30~60
Installation Location	Floor Mount

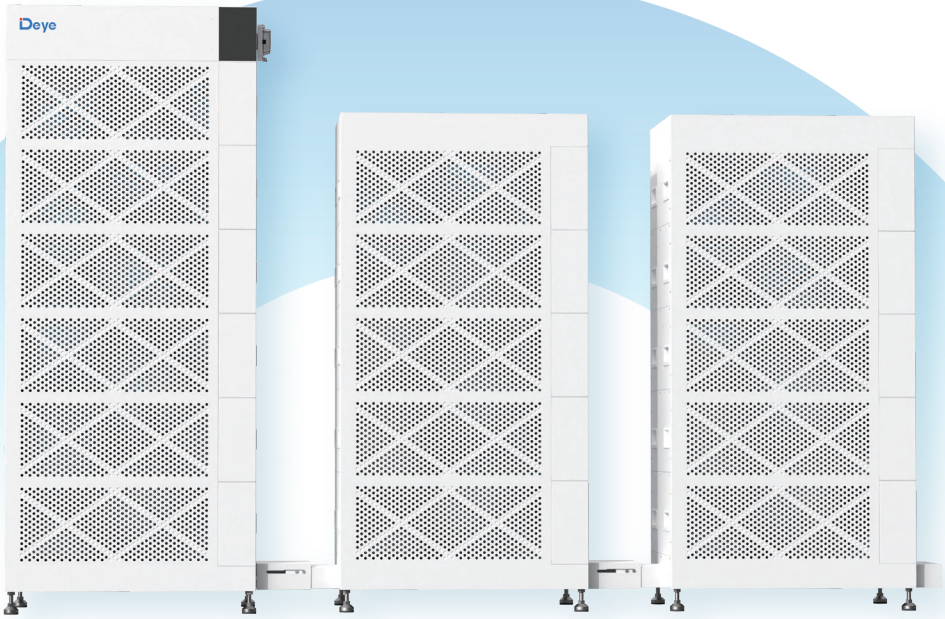
Hybrid Inverter

Model	SUN-60K-SG02HP3-EU-EM6	SUN-70K-SG02HP3-EU-EM6	SUN-80K-SG02HP3-EU-EM6	SUN-100K-SG02HP3-EU-GM10	SUN-125K-SG02HP3-EU-GM10
Battery Input Data					
Battery Type	Lithium-ion				
Battery Voltage Range (V)	160~1000				
Max. Charging Current (A)	80+80			100+100	
Max. Discharging Current (A)	80+80			100+100	
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	160000	200000	250000
Max. PV Input Power (W)	96000	112000	128000	160000	200000
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			42+42+42+42+42+42+42+42+42+42	
Max. Input Short-Circuit Current (A)	54+54+54+54+54+54			63+63+63+63+63+63+63+63+63+63	
No. of MPP Trackers/ No. of Strings MPP Tracker	6/2+2+2+2+2+2			10/2+2+2+2+2+2+2+2+2+2	
AC Input/Output Data					
Rated AC Input/Output Active Power (W)	60000	70000	80000	100000	125000
Max. AC Input/Output Apparent Power (VA)	66000	77000	88000	110000	135000
Rated AC Input/Output Current (A)	91/87	106.1/101.5	121.3/116	151.6/145.0	189.4/181.2
Max. AC Input/Output Current (A)	100/95.7	116.7/111.6	133.4/127.6	166.7/159.5	204.6/195.7
Max. Continuous AC Passthrough (grid to load)(A)	200			250	
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 Rated Power)				
DC Injection Current	<0.5% In				
Efficiency					
Max. Efficiency	98.7%				
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 (AFCI) (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, >45 Derating				
Permissible Ambient Humidity	0~100%				
Permissible Altitude	3000m				
Noise (dB)	≤ 65				
Ingress Protection(IP) Rating	IP65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC II(DC), OVC III(AC)				
Cabinet Size (WxHxD mm)	606×927×314 (Excluding Connectors and Brackets)			734×1091×344 (Excluding Connectors and Brackets)	
Weight (kg)	105			161.7	
Type of Cooling	Intelligent Air 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			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				

Model	SUN-30K-SG02HP3 -EU-BM3(-P)	SUN-40K-SG02HP3 -EU-BM4(-P)	SUN-50K-SG02HP3 -EU-BM4(-P)
Battery Input Data			
Battery Type	Lithium-ion		
Battery Voltage Range (V)	160-800		
Max. Charging Current (A)	100(160)	100(160)	100(160)
Max. Discharging Current (A)	100(160)	100(160)	100(160)
Charging Strategy for Li-ion Battery	Self-adaption to BMS		
Number of Battery Input	1		
PV String Input Data			
Max. PV Access Power (W)	60000	80000	100000
Max. PV Input Power (W)	48000	64000	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+36+36+36	
Max. Input Short-Circuit Current (A)	55+55+55	55+55+55+55	
No. of MPP Trackers/ No. of Strings MPP Tracker	3/2+2+2	4/2+2+2+2	
AC Input/Output Data			
Rated AC Input/Output Active Power (W)	30000	40000	50000
Max. AC Input/Output Apparent Power (VA)	33000	44000	55000
Rated AC Input/Output Current (A)	45.5/43.5	60.7/58	75.8/72.5
Max. AC Input/Output Current (A)	50/47.9	66.7/63.8	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		
Communication Interface	WIFI/RS485 /CAN		
Monitor Mode	GPRS/WIFI/Bluetooth/4G		
General Data			
Operating Temperature Range (°C)	-40 to +60, >45 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)	528×793×278 (Excluding Connectors and Brackets)		
Weight (kg)	65		
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		

PCS Model	SUN-100K-PCS01HP3	SUN-125K-PCS01HP3
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%	
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(℃)	-40℃-60℃,＞45℃ 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（Excluding connectors and brackets）	
Weight (kg)	81.86	
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	

HESS Solution (Recommend)



GB-W
(60~192kWh)

Hybrid Inverter
SUN-30/40/50K-SG02HP3-EU-BM3/4-P

Hybrid Inverter
SUN-60/70/80K-SG02HP3-EU-EM6

Hybrid Inverter
SUN-100/125K-SG02HP3-EU-GM8/10

PCS+MPPT+STS
SUN-100/125K-PCS01HP3+MPPT

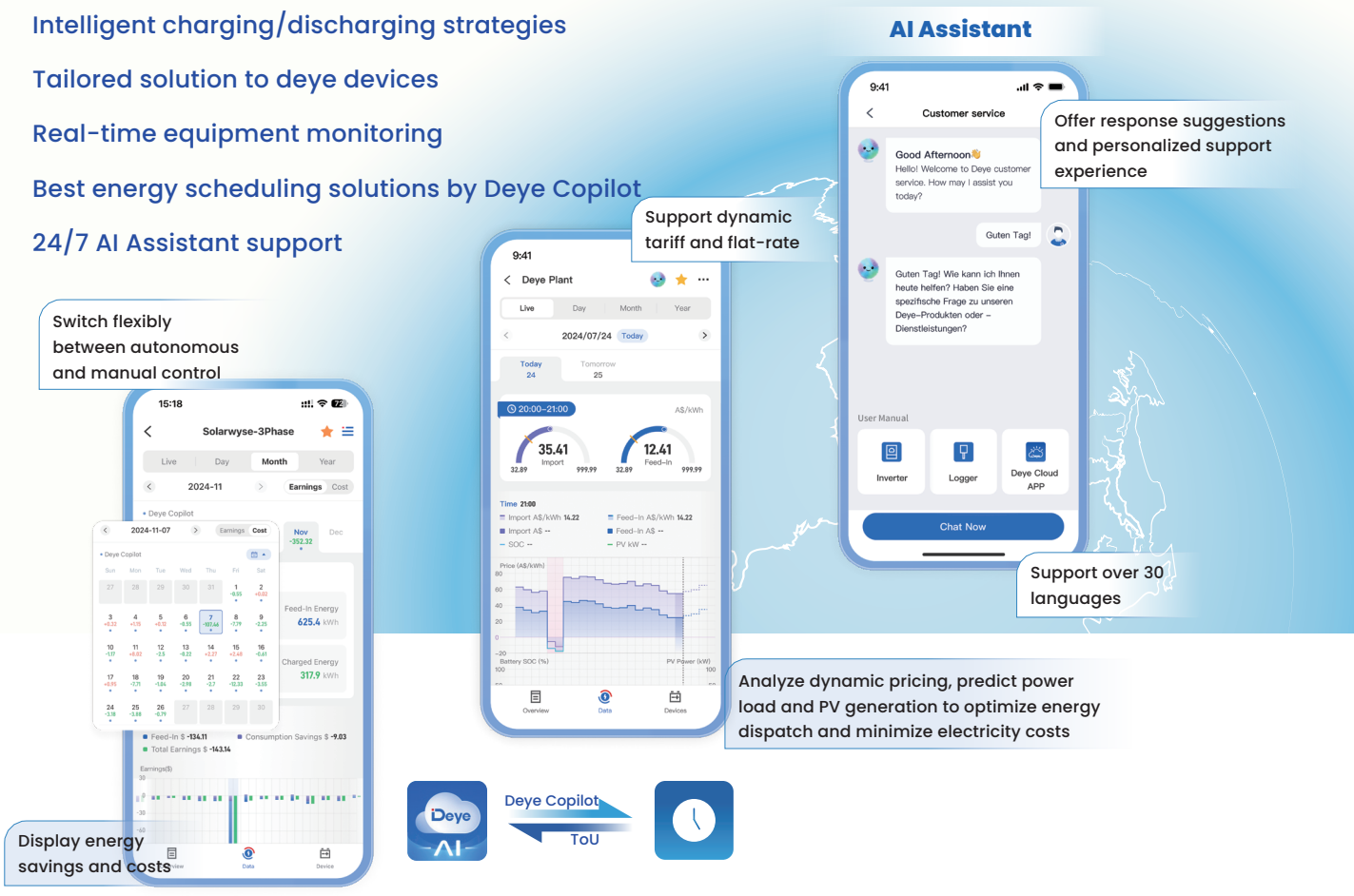
Power Unit	Battery Model	Specification
Primary Recommended Solution		
SUN-125K-SG02HP3-EU-GM10（100A+100A）	GB-W156	125kW/156.4kWh
SUN-100K-SG02HP3-EU-GM8/10（100A+100A）	GB-W120	100kW/120.3kWh
SUN-80K-SG02HP3-EU-EM6（80A+80A）	GB-W120	80kW/120.3kWh
SUN-70K-SG02HP3-EU-EM6（80A+80A）	GB-W108	70kW/108.2kWh
SUN-60K-SG02HP3-EU-EM6（80A+80A）	GB-W96	60kW/96.2kWh
SUN-50K-SG02HP3-EU-BM4-P（160A）	GB-W72	50kW/72.1kWh
SUN-40K-SG02HP3-EU-BM4-P（160A）	GB-W60	40kW/60.1kWh
Other Solution		
SUN-100K-PCS01HP3+MPPT（175A）	GB-W192	100kW/192.5kWh
SUN-125K-PCS01HP3+MPPT（200A）		125kW/192.5kWh
SUN-50K-SG02HP3-EU-BM4（100A）*	GB-W120	50kW/120.3kWh
SUN-50K-SG01HP3-EU-BM4（50A+50A）	GB-W120	50kW/120.3kWh
SUN-40K-SG02HP3-EU-BM4（100A）*	GB-W96	40kW/96.2kWh
SUN-40K-SG01HP3-EU-BM4（50A+50A）	GB-W96	40kW/96.2kWh
SUN-30K-SG02HP3-EU-BM3-P（160A）	GB-W60	30kW/60.1kWh
SUN-30K-SG02HP3-EU-BM3（100A）*	GB-W72	30kW/72.1kWh
SUN-30K-SG01HP3-EU-BM3（50A+50A）	GB-W72	30kW/72.1kWh

Notice：GB-W is standardly equipped with 1/0 AWG power cables and dedicated quick-plug connectors. For solutions marked with an asterisk (*), the BAT port of the matched inverter is incompatible. The required power cables and accessories shall be provided by the user.

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



Smarten Up Your Hybrid 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