



100/125kW C&I Hybrid Inverter Solution

SUN-100/125K-SG02HP3-EU-GM8/GM10

Compatible with Deye GE-F240/256, BOS-B Pro-A3, GB-W & BOS-A Battery Series



Max Yield

200% PV Oversizing & 160% Input Capability



Superior Peak Power

Supports 1.5× peak power for 10s



Maximum Flexibility

8/10 independent MPPTs, 2 strings per MPPT



Flexible Storage

Dual 100A battery ports with 160-1000V wide voltage range



MW-Level Scalability

Up to 1.25MW system with Max.10 units in parallel



Versatile Integration

Diesel generator & AC coupling support

Key Functions

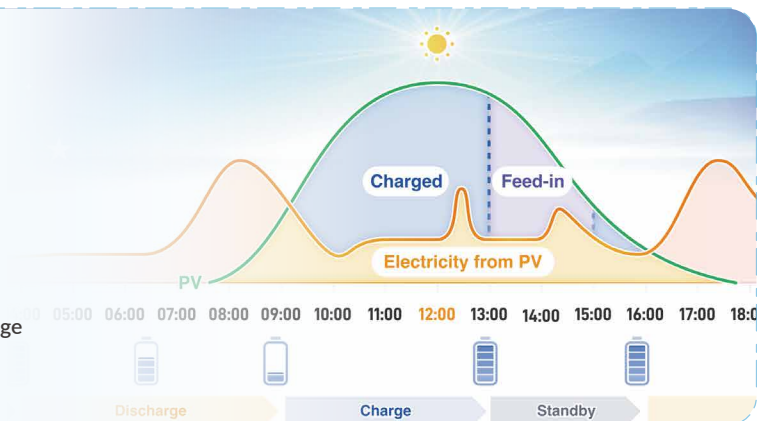
Customizable Charge and Discharge Function

Supports **6** customizable charge/discharge time slots

Enables **off-peak charging** and **peak-time discharging**

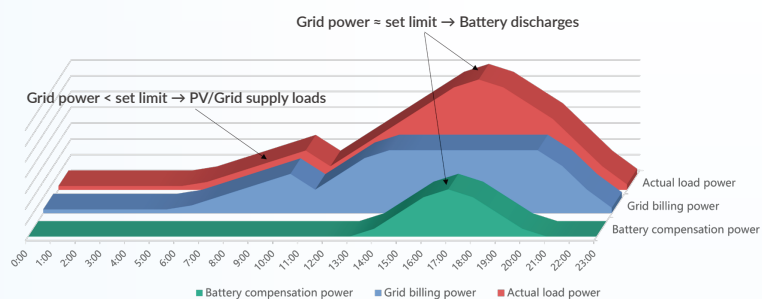
Solar prioritized for loads, battery supports at night

AI-driven dynamic pricing optimization with automated energy arbitrage



Grid Peak Shaving Function

When the power drawn from the grid approaches the set limit, the battery discharges to supplement part of the power, preventing high-rate electricity usage and reducing costs.



Versatile AC Source Integration

Generator Integration

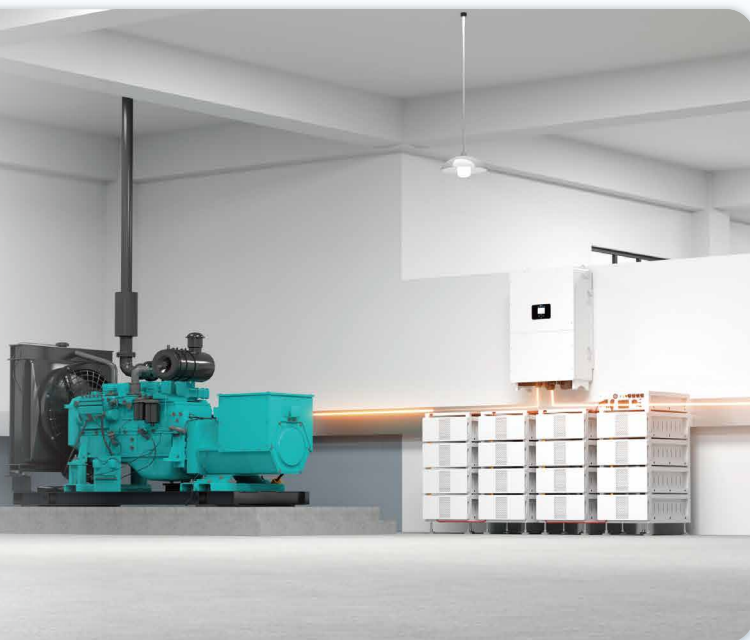
The GEN port supports **diesel generator** integration with intelligent auto start/stop control, providing backup power when PV power is insufficient during extended off-grid operation.

AC Coupling

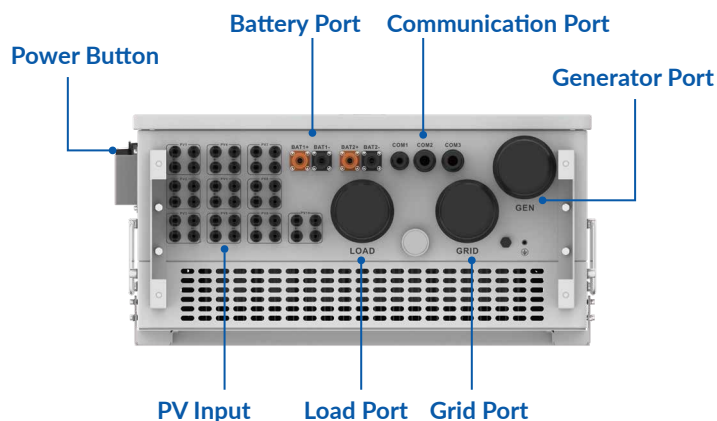
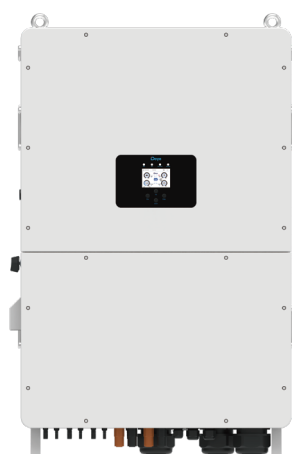
Supports AC coupling with **string or microinverters**, enabling existing PV systems to be upgraded to energy storage without modifying the original solar system.

Smart Load Integration

The GEN port can operate in **Smart Load mode**, automatically directing surplus PV power to EV chargers, electric boilers, and other controllable loads when the battery SOC reaches the preset level.



SUN-100/125K-SG02HP3-EU-GM10



System Architecture

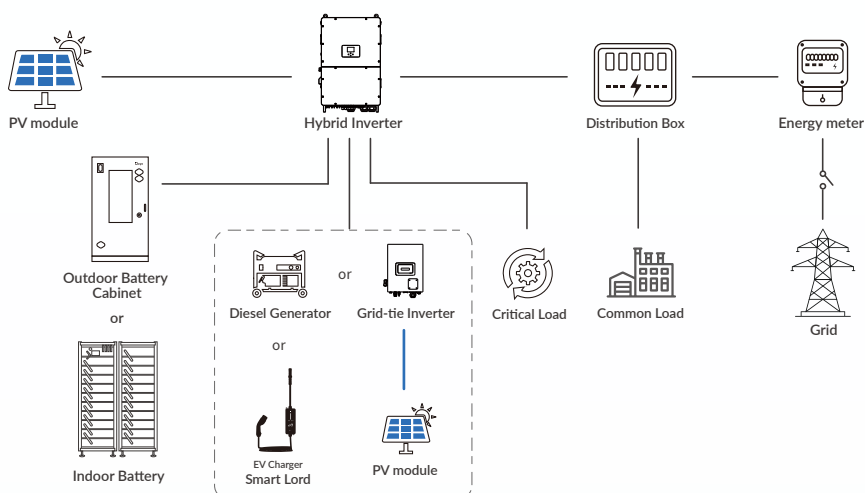
Partial Backup Architecture

Load Port: Critical loads
Grid Port: Common loads

Common loads are not limited by inverter power, enabling larger load connection.

Grid ON: PV + ESS + Grid supply loads, prioritizing critical loads with excess solar supporting common loads.

Grid OFF: Critical loads remain powered; normal loads shut down.



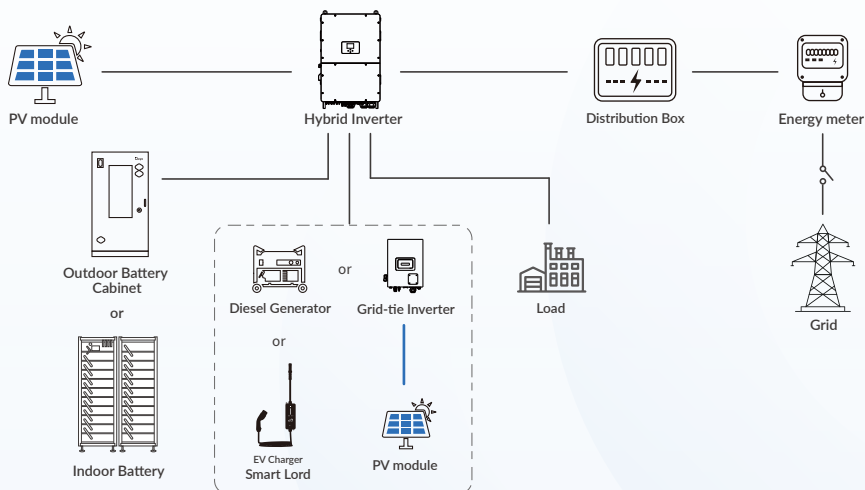
Full Backup Architecture

Load Port: All loads

All loads are backed up through the inverter, enabling whole-site power continuity.

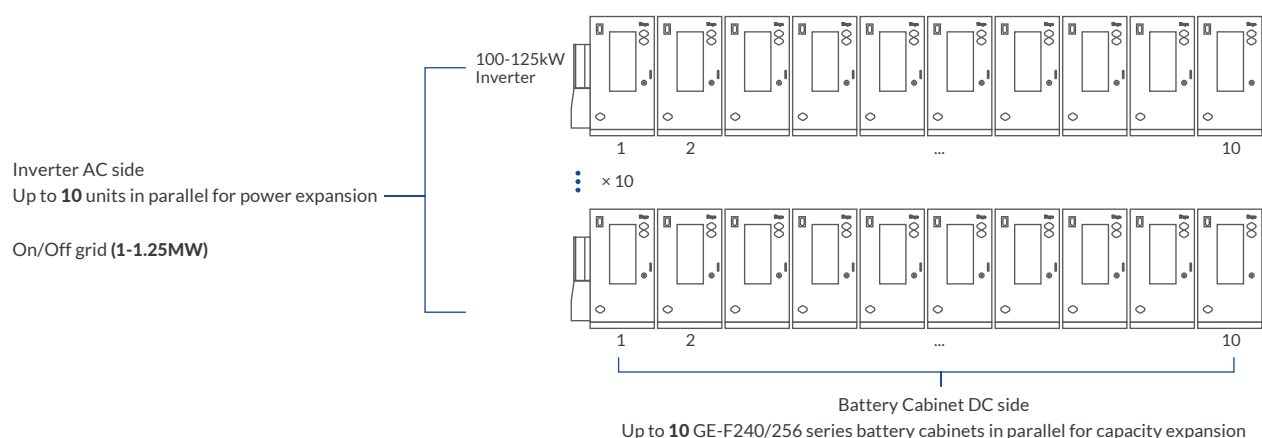
Grid ON: PV + ESS + Grid supply all loads to meet total energy demand.

Grid OFF: PV + ESS, with optional generator support, keep all loads powered for uninterrupted operation.

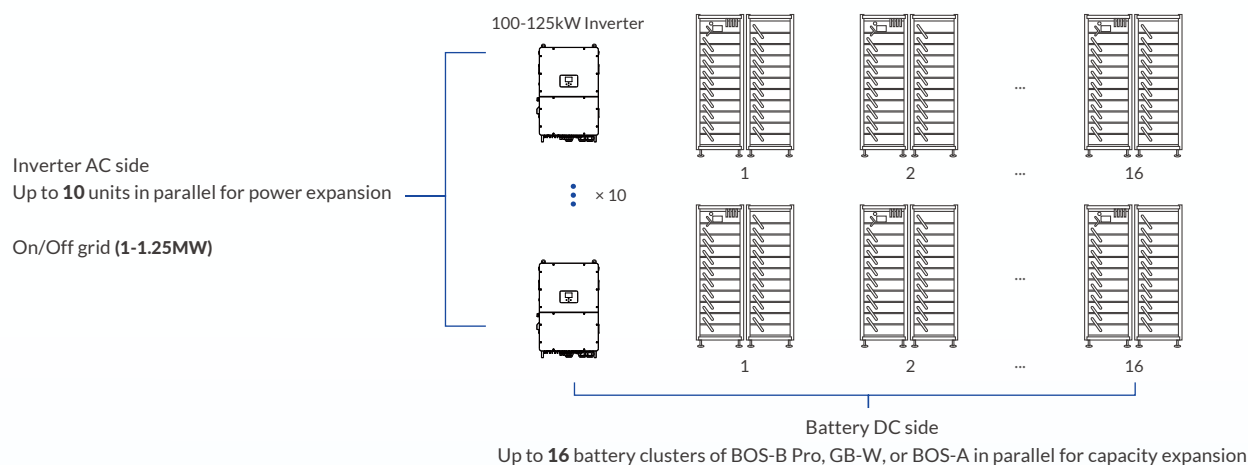


100/125KW-1.25MW C&I ESS Solution

Parallel configuration: Outdoor Solution



Parallel configuration: Indoor Solution



Typical Collocation

Dimension	314Ah Outdoor Solution GE-F240/256 Series	314Ah High-Capacity Solution BOS-B Pro-A3	235Ah Stackable Solution GB-W	200Ah Flexible Solution BOS-A
Charge/Discharge Rate	0.5C	0.5C	1.0C	0.8C
Capacity per Unit	16.08 kWh	16.08 kWh	12.03 kWh	7.68 kWh
Single Cluster Capacity	241/257 kWh	257 kWh	192kWh	161kWh
Max Parallel Configuration	10 Cabinets	16 Clusters	16 Clusters	16 Clusters
Max DC Battery Capacity	2.41/2.57 MWh	4.1 MWh	3 MWh	2.5 MWh
Installation Method	All-in-one Floor Cabinet	5U Rack	Modular Stacking (Cable-free)	3U Rack
Deployment Location	Outdoor (IP55)	Indoor (IP20)	Indoor (IP20)	Indoor (IP20)
Cycle Life	≥8000 (25±2°C 0.5P EOL70%)	≥6000 (25±2°C, 0.5C/0.5C, EOL70%)	≥6000 (25±2°C, 0.5C/0.5C, 70%EOL)	≥6000 (25±2°C, 0.5C/0.5C, EOL70%)
Other Features	Space-saving; Whole cabinet cluster expansion	High-Capacity Scalability	Easy installation; Supports mixing new & old packs	Meets precise capacity ratio requirements

Model	SUN-100K-SG02HP3-EU-GM8			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/Discharging Current (A)	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)	200000			200000			250000		
Max. PV Input Power (W)	160000			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)	42+42+42+42+42+42+42+42			42+42+42+42+42+42+42+42+42+42			42+42+42+42+42+42+42+42+42+42		
Max. Input Short-Circuit Current (A)	63+63+63+63+63+63+63+63			63+63+63+63+63+63+63+63+63+63			63+63+63+63+63+63+63+63+63+63		
No. of MPP Trackers/ No. of Strings MPP Tracker	8/2+2+2+2+2+2+2			10/2+2+2+2+2+2+2+2			10/2+2+2+2+2+2+2+2		
AC Input/Output Data									
Rated AC Input/Output Active Power (W)	100000			100000			125000		
Max. AC Input/Output Apparent Power (VA)	110000			110000			135000		
Rated AC Input/Output Current (A)	151.6/145.0			151.6/145.0			189.4/181.2		
Max. AC Input/Output Current (A)	166.7/159.5			166.7/159.5			204.6/195.7		
Max. Continuous AC Passthrough (grid to load) (A)	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	220/380V, 230/400V 0.85Un-1.1Un 3L+N+PE								
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65								
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 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°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)	734×1091×344 (Excluding Connectors and Brackets)								
Weight (kg)	161.7								
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								



Compatible Battery: GE-F240/256 Series



GE-F240 Series				GE-F256 Series
Model	GE-F176-BC-2-A3	GE-F208-BC-2-A3	GE-F240-BC-2-A3	GE-F256-BC-2-A3
Main Parameters				
Cell Type	LiFePO ₄			
Module Capcity (Ah)	314			
Module Nominal Voltage (Vdc)	51.2			
Module Energy (kWh)	16.08			
Module Qty In Series	11	13	15	16
System Nominal Energy (kWh)	176.84	208.99	241.15	257.23
System Usable Energy (kWh)* ¹	176.84	208.99	241.15	257.23
System Nominal Voltage (Vdc)	563.2	665.6	768	819.2
System Operating Voltage (Vdc)	440~642.4	520~759.2	600~876	640~934.4
Rated DC Power (kW)	88	104	121	129
Charge / Discharge Current(A)* ²	Recommend	157		
	Max. Continuous	180		
	Peak discharge @15s/20~45°C	285		
Other Parameters				
Fire Protection System	Aerosol and Water fire interface CO gas detection, Active exhaust and Explosion venting			
Cooling Method	Smart Air Cooling			
Communication Port	CAN, RS485			
Communication protocol	CAN2.0, Modbus485			
Operating Temperature(°C)* ³	-30 to +55°C			
Recommend Storage Temperature(°C)	0 to +35°C			
Humidity	5-95%RH (No Condensing)			
Altitude	3000m			
IP Protection	IP55			
Anti Corrosion Level	C4-M			
Dimension (W x D x H,mm)	1303 x 1240 x 2405.5			1303x1240×2510
Weight (kg)	2150	2380	2610	2770
Installation Location	Floor mount			
Cycle Life	≥8000 (25±2°C,0.5P,EOL70%)			
Warranty	10 years			
Certification	UN38.3, CE, CB, IEC62933, ROHS, REACH			

1. Test conditions : 100% DOD, 0.5P 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. Derated operation at >45°C.

Compatible Battery: BOS-B Pro-A3



Model	BOS-B Pro-A3	
Main Parameter		
Battery Module Energy (kWh)	16.08	
Battery Module Nominal Voltage (V)	51.2	
Battery Module Capacity (Ah)	314	
Module Weight Approximate (kg)	126	
Battery Module Qty In Series (Optional)	5~16	
Max.System Nominal Voltage (V)	819.2	
Max.System Energy (kWh)	257.23	
Max.System Usable Energy (kWh)	231.51	
Max.Charge/Discharge Current (A)	180	
Other Parameter		
Operating Temperature (°C)	Charge : 0 to +55°C	Discharge : -20 to +55°C
Storage Temperature (°C)	0 to +35°C	
Thermal Management	Smart fan cooling	
LCD Display	SOC / Fault Code	
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm	
Communication Port	TCP / RS485 / CAN	
Communication With BMS	CAN	
Humidity	5 - 85%	
Altitude	≤3000m	
IP Rating of Enclosure	IP20	
Noise (dB)	TBD	
System Dimension (W × H × D, mm)	2150 × 1305 × 800	
System Weight Approximate (kg)	2240	
Installation Location	Rack Mounted	
Recommend Depth of Discharge	90%	
Cycle Life	25±2°C, 0.5C / 0.5C, EOL70%≥6000	
Warranty Period	10 years	
Certification	CE / IEC62619 / IEC62040 / UN38.3	



Compatible Battery: GB-W



Model

GB-W

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											
	Peak											
Working Temperature (°C)	230											
	322 (1s)											
Communication Port	Charge : 0 to +55°C Discharge : -20 to +55°C											
	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)	≤50											
Storage Temperature (°C)	-30 to +60°C											
Installation Location	Floor Mount											



Compatible Battery: BOS-A



Model

BOS-A

Main Parameters

Cell Chemistry	LiFePO ₄		
Module Energy (kWh)	7.68		
Module Nominal Voltage (V)	38.4		
Module Capacity (Ah)	200		
Module Dimension (W × D × H, mm)	601.5 × 520 × 135		
Module Weight Approximate (kg)	70		
Battery Module Qty In Series (Optional)	7	13	21
System Nominal Voltage (V)	268.8	499.2	806.4
System Operating Voltage (V)	235.2 ~ 306.6	436.8 ~ 569.4	705.6 ~ 919.8
System Energy (kWh)	53.76	99.84	161.28
System Usable Energy (kWh) ¹	48.38	89.85	145.15
Charge / Discharge ²	Recommend	100	
Current (A)	Max	160	
Working Temperature (°C)	Charge : 0 to +55°C Discharge : -20 to +55°C		
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm		
Communication Port	CAN2.0		
Humidity	5 - 85%RH		
Altitude	≤3000m		
IP Rating of Enclosure	IP20		
Dimension (W × D × H, mm)	610 × 610 × 1900	610 × 610 × 2350	(610 × 610 × 1900) × 2
Weight Approximate (kg)	525	934	1501
Installation Location	Rack-Mounted		
Storage Temperature (°C)	0 to +35°C		
Recommend Depth of Discharge	90%		
Cycle Life	≥6000 (25±2°C, 0.5C / 0.5C, EOL70%)		
Warranty ³	10 years		
Certification	CE / IEC 62619 / IEC 62040 / UN38.3 / VDE-2510		

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.

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 algorithm
- 24/7 AI Assistant support



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



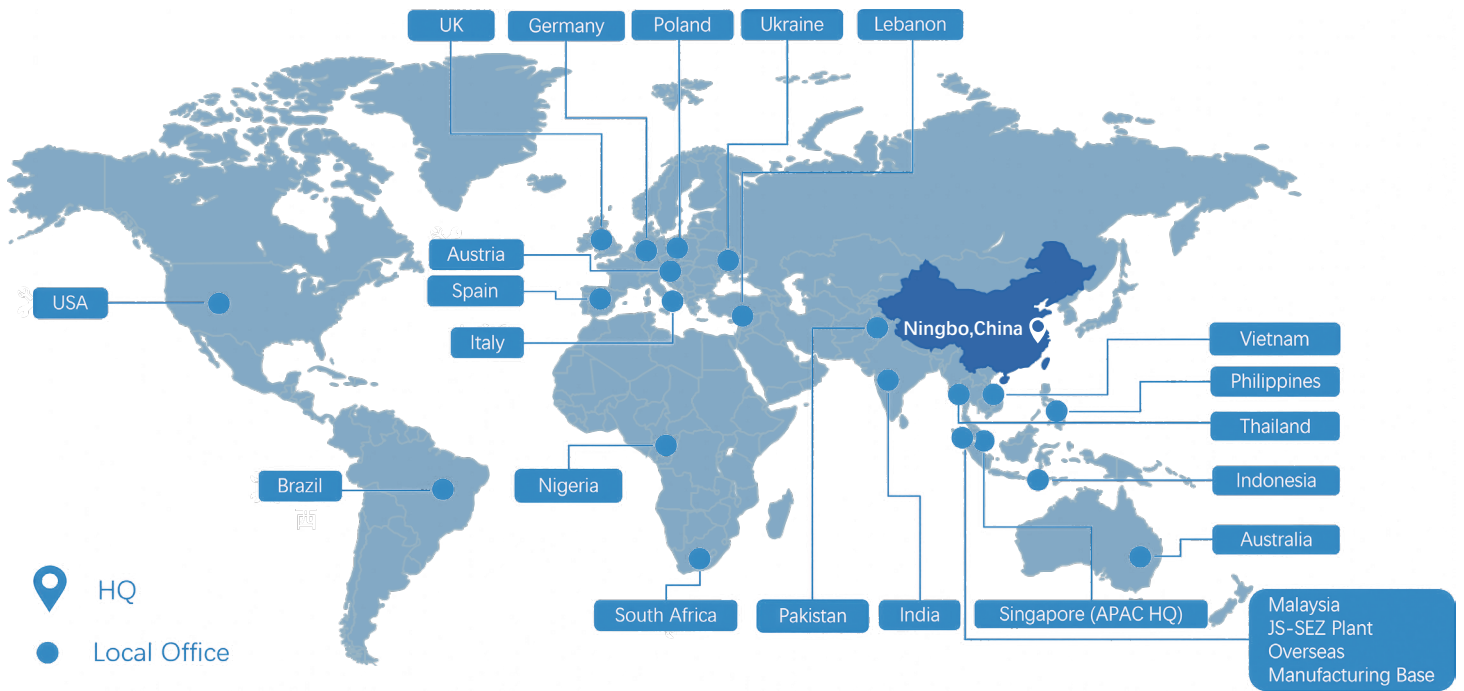
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Manage your energy effortlessly
- Cloud-edge Collaboration**
Faster and more efficient
- Accelerated Connection**
Optimized for speed and performance
- Localized Data Centers**
Ensure data sovereignty and compliance in EU & US
- Deye Copilot**
AI-powered energy analysis and control
- AI Assistant**
24/7 support, fast, efficient, in your language



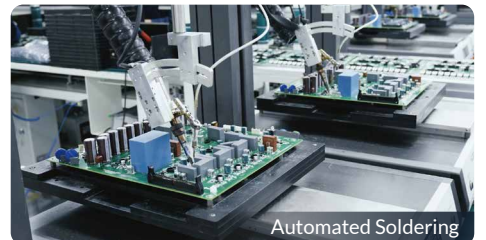
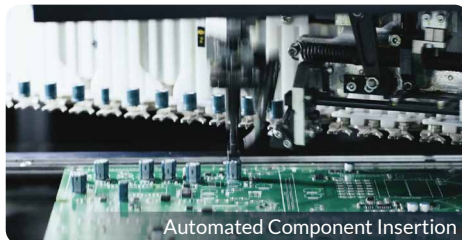
About Deye

Founded in 2000 (Stock Code: 605117.SH), Deye is a globally leading provider of photovoltaic (PV) inverter and energy storage system solutions. Deye has built an integrated value chain spanning R&D, design, production, sales and service, supported by modern intelligent manufacturing bases in Ningbo, Jiaxing and Johor, Malaysia, equipped with comprehensive production and testing facilities.

Through years of dedicated innovation, Deye has developed industry-leading R&D capabilities and scale advantages, delivering integrated solar PV and energy storage solutions for residential, commercial, industrial and utility-scale applications. Recognized for outstanding performance and reliability, Deye has established a global sales network covering over 160 countries and regions.



World-Class R&D and Manufacturing





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Deye Inverter Website



Deye ESS Website

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