60-80kW C&I Hybrid Inverter Solution

SUN-60/70/75/80K-SG02HP3-EU-EM6

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



High PV Yield

200% PV oversizing & 160% DC input capability

Maximum Power Capability

1.1× continuous overload capability & 1.5× peak power output for 10s

Flexible Energy Harvesting

6 independent MPPTs with 2 strings per MPPT

Flexible Battery Integration

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

Flexible System Expansion

Up to 800kW system with max. 10 units in parallel

Versatile System Integration

Supports diesel generator & AC coupling applications

Key Functions

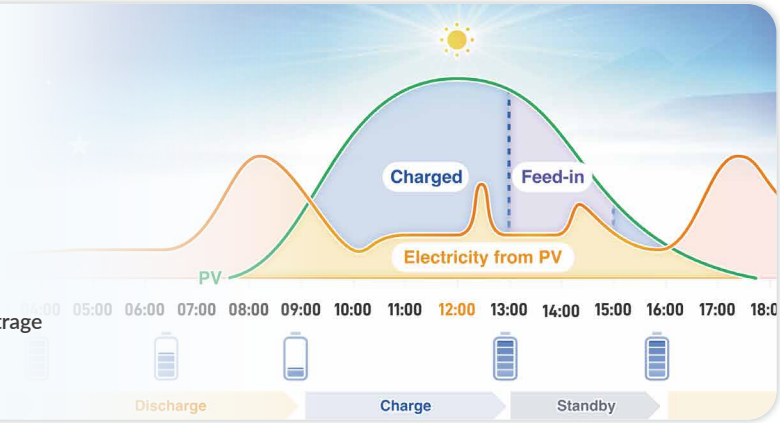
Customizable Charge and Discharge Function

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

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

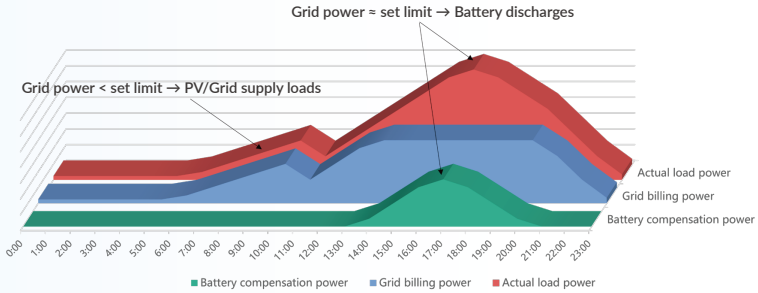
Solar prioritized for loads, battery supports at night

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

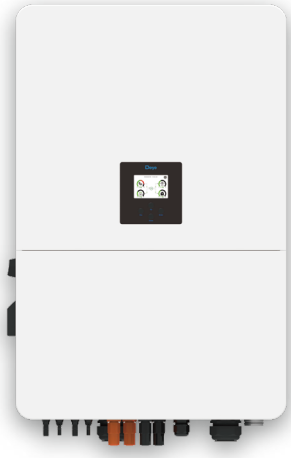
Supports AC coupling with **string or microinverters**, enabling existing PV systems to be upgraded to energy storage without modifying the original solar system.

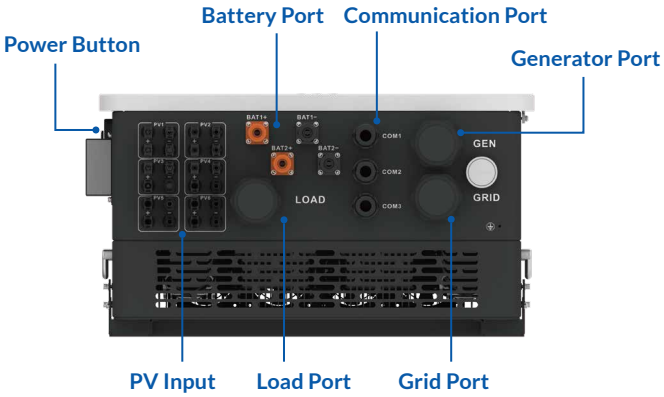
Smart Load Integration

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.

60-800kW C&I ESS Solution

SUN-60/70/75/80K-SG02HP3-EU-EM6





System Architecture

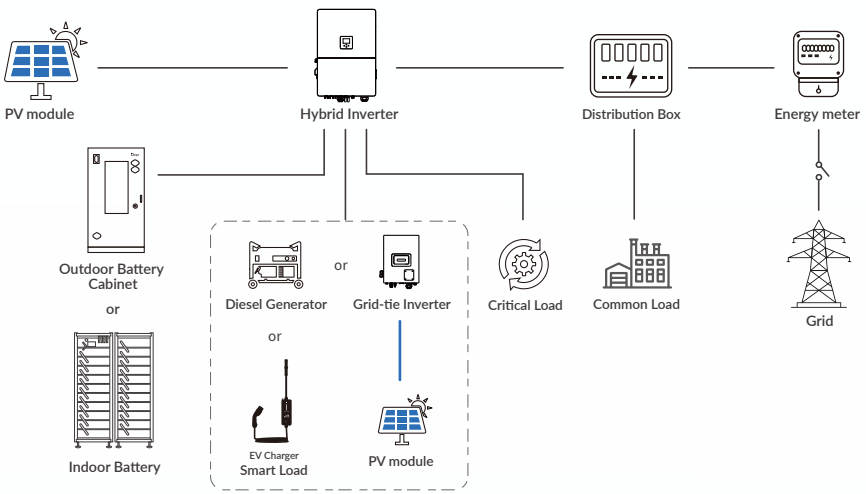
Partial Backup Architecture

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.



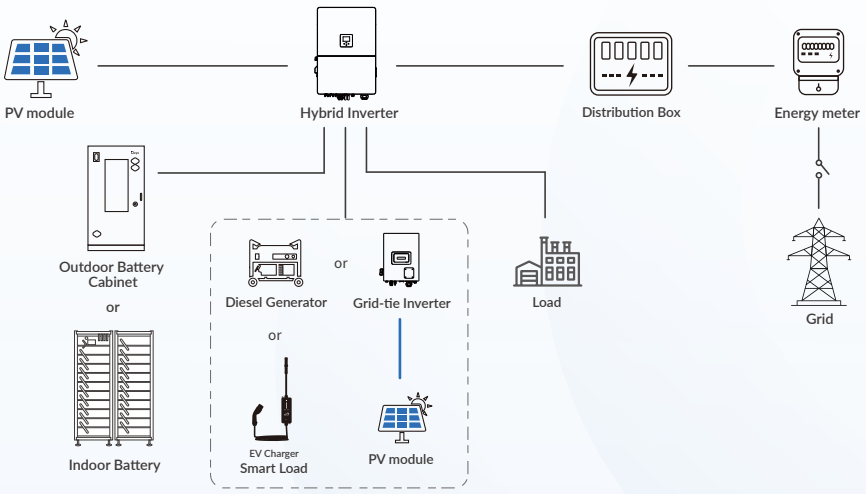
Full Backup Architecture

Load Port: All loads

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

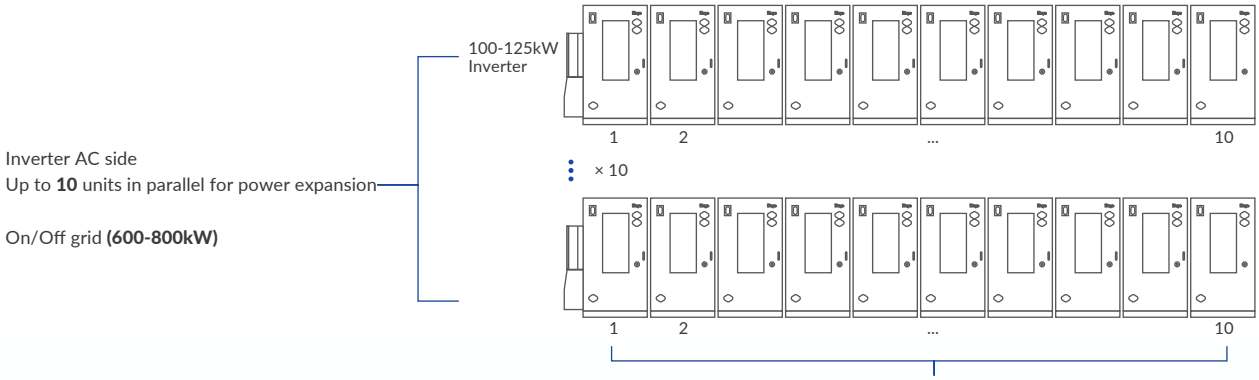
Grid ON: PV + ESS + Grid supply all loads to meet total energy demand.

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

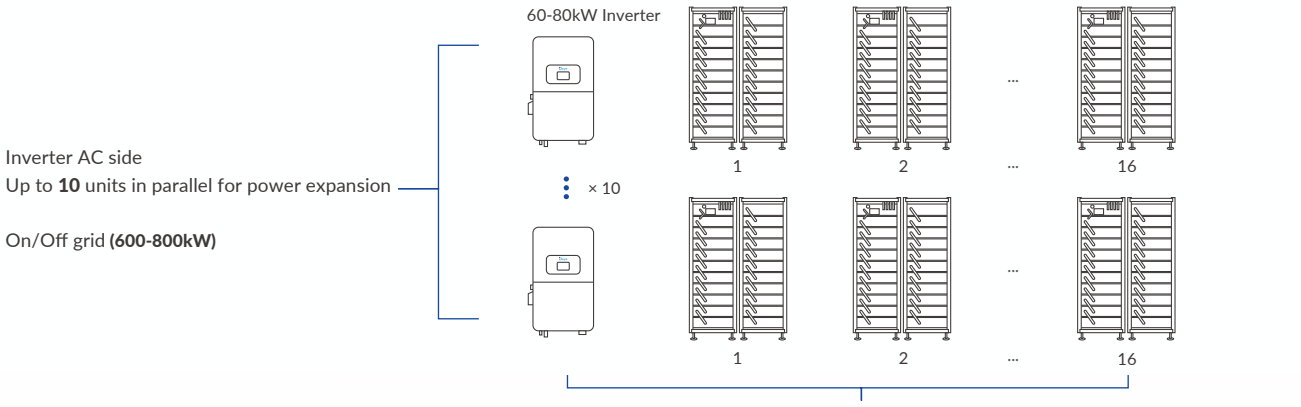


60-800kW C&I ESS Solution

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	100Ah Entry-Level Solution BOS-G Pro
Charge/Discharge Rate	0.5C	0.5C	1.0C	0.8C	0.5C
Capacity per Unit	16.08 kWh	16.08 kWh	12.03 kWh	7.68 kWh	5.12 kWh
Single Cluster Capacity	241/257 kWh	257 kWh	192kWh	161kWh	81.92 kWh
Max Parallel Configuration	10 Cabinets	16 Clusters	16 Clusters	16 Clusters	16 Clusters
Max DC Battery Capacity	2.41/2.57 MWh	4.1 MWh	3 MWh	2.5 MWh	1.31MWh
Installation Method	All-in-one Floor Cabinet	5U Rack	Modular Stacking (Cable-free)	3U Rack	3U Rack
Deployment Location	Outdoor (IP55)	Indoor (IP20)	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%)	≥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	Ideal for lower-capacity ESS projects

Note: BOS-W (100 Ah) is also available in select markets (5.12 kWh/module, max 87.04 kWh/cluster).

C&I Hybrid Inverter: SUN-(60-80)K-SG02HP3-EU-EM6

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/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	121.3/116
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	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%			
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)	606×927×314 (Excluding Connectors and Brackets)			
Weight (kg)	105			
Type of Cooling	Smart 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 Capacity (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 (℃)	Charge： 0 to +55℃ Discharge： -20 to +55℃
Storage Temperature (℃)	0 to +35℃
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℃, 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 Nominal 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 to +55°C Discharge： -20 to +55°C											
Communication Port		CAN / RS485											
Thermal Management		Natural air cooling											
Recommend Depth of Discharge		90%											
Cycle Life		25±2 ℃,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] Current (A)	Recommend	100		
	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.

Compatible Battery: BOS-G Pro



Model		BOS-G-Pro			
Main Parameter					
Cell Chemistry		$LiFePO_4$			
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 (Max)
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	73.72
Rated DC Power (kW)		25.6	40.96	55.3	81.92
Charge / Discharge[2] Current	Recommend	50			
	Nominal	100			
	Peak Discharge (2 mins, 25°C)	125			
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 / RS485			
Humidity		5% ~ 85%RH			
Altitude		≤3000m			
IP Rating of Enclosure		IP20			
Dimension (W×D×H,mm)		530 × 602 × 1629		530 × 602 × 2219	1060 × 602 × 1629
Weight Approximate (kg)		290	428	622	883
Installation Location		Rack Mounting			
Storage Temperature (°C)		0 to +35°C			
Recommend Depth of Discharge		90%			
Cycle Life		25±2°C, 0.5C / 0.5C, EOL70%≥6000			
Warranty[3]		10 years			
Certification		UN38.3 / CE / CE-EMC / IEC62040 / CEC / VDE			

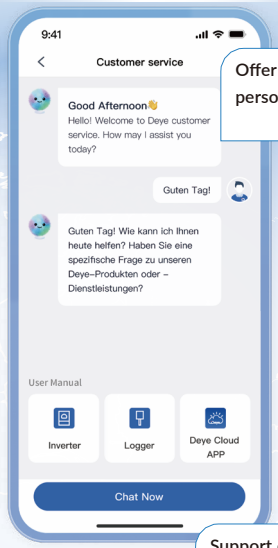
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2. The current is affected by temperature and SOC.
3. The warranty is due whichever reached first of warranty period or life cycle power.
4. Made in China.

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

AI Assistant

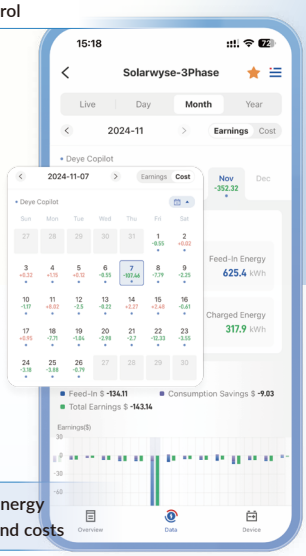


Offer response suggestions and personalized support experience

Support dynamic tariff and flat-rate



Switch flexibly between autonomous and manual control



Display energy savings and costs

Deye Copilot

ToU

Support over 30 languages

Analyze dynamic pricing, predict power load and PV generation to optimize energy dispatch and minimize electricity costs

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

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

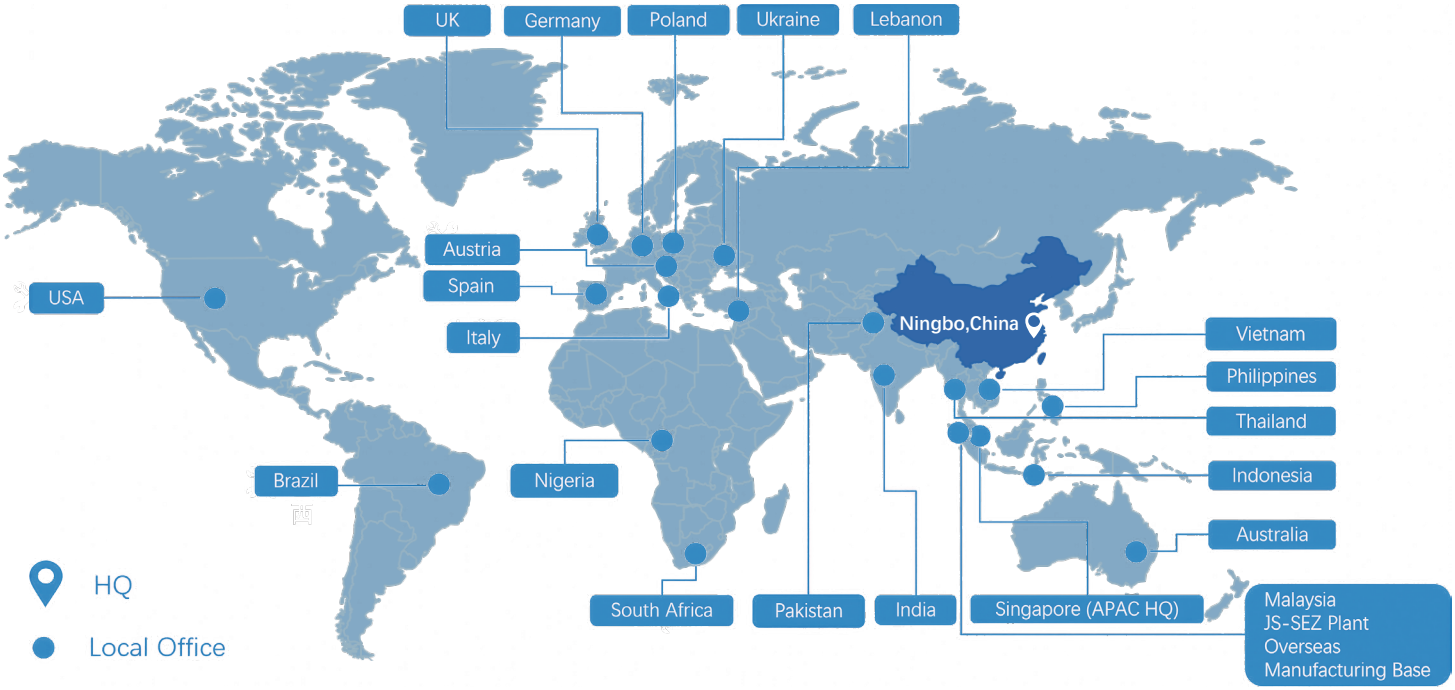
Deye Copilot
AI-powered energy analysis and control

AI Assistant
24/7 support, fast, efficient, in your language

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.



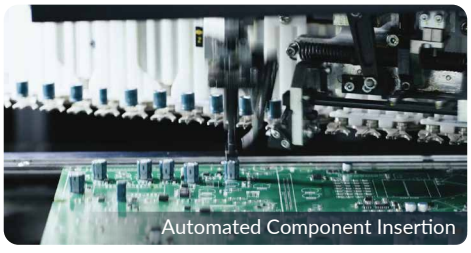
- **World-Class R&D and Manufacturing**

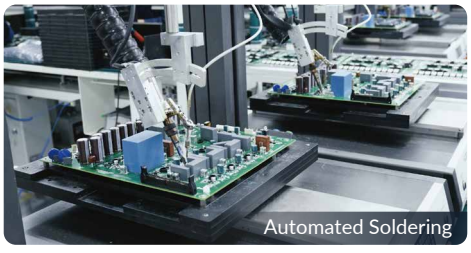

Electronic Component Testing


Rain and Snow Testing


85°C/85% RH Testing


SMT Placement


Automated Component Insertion


Automated Soldering


Assembly Workshop


Aging Testing


ATE Functional Testing

Notes:

Business Card

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Address: No.568 South Rixian Road, Binhai Economic Development Zone, Cixi, Ningbo, Zhejiang, P.R.China

Website: www.deyeess.com

Information is subject to change without notice. Please scan the QR code or contact Deye representative for the latest updates.

Deye Inverter Website

Deye ESS Website

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