SMALL-SCALE C&I ESS SOLUTION

HYBRID ENERGY STORAGE SYSTEM

GE-F128 Series Outdoor Battery Cabinet
+
SUN-30~60K Hybrid Inverter

Ultimate Protection, Continuing "0" safety accidents

· **Six-dimensional** safety design, eliminating the risk of fire and explosion
  D1 electrical isolation + D2 physical insulation + D3 active exhaust + D4 directional venting + D5 aerosol suppression + D6 water fire sprinkler
· High-intensity cabinet, **unique patented door latch design**, eliminates structural weak points
· **Hour-level fire resistance**, prevent heat spread

Highly Integrated, All-in-one quick deployment

· Outer cabinet wall preset inverter bracket installation position, **no wall bearing concerns, no need to drill**
· **Hybrid inverter,** covering PV, grid, load, generator, and battery interfaces
· Single cabinet can easily deploy **PV+BESS, PV+BESS+DG**

Stable Efficient, Excellent performance ensures returns

· Long-life lithium iron phosphate battery, **≥ 8000 cycles**
· High-efficiency thermal management, **no derating at 45°C,** cell temperature difference ≤6°C
· **100%** unbalanced output, up to **200%** PV over-matching access

Intelligent Management, Flexible adaptation and expansion

· Leading **rack-level + pack-level + cell-level** energy balancing algorithm, non-inductive pack change and cabinet expansion
· Single cabinet can be configured with a **2/3/4h system of 30~60kW**, up to **10 units** AC-side on/off-grid parallel or **10 units** DC-side battery parallel
· Integrated energy platform, **24/7 AI** smart customization of optimal power usage strategies

Outdoor Battery Cabinet

	GE-F128 Series	
Model	GE-F112-BC-2-A3	GE-F128-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	7	8
System Nominal Energy (kWh)	112.53	128.61
System Usable Energy (kWh)[1]	112.53	128.61
System Nominal Voltage (Vdc)	358.4	409.6
System Operating Voltage (Vdc)	280-408.8	320-467.2
Rated DC Power (kW)	56	64
Charge/Discharge Current(A)[2] — Recommend	157	
Charge/Discharge Current(A)[2] — Max. Continuous	180	
Charge/Discharge Current(A)[2] — 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]	-30~55	
Recommend Storage Temperature(°C)	0~35	
Humidity	5% ~ 95%RH (No Condensing)	
Altitude	3000m	
IP Protection	IP55	
Anti Corrosion Level	C4-M	
Dimension(W x D x H,mm)	998 x 1240 x 2405.5	
Weight(kg)	1575	1690
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.

Model	SUN-30K-SG02HP3 -EU-BM3	SUN-40K-SG02HP3 -EU-BM4	SUN-50K-SG02HP3 -EU-BM4-P	SUN-60K-SG02HP3 -EU-EM6
Battery Input Data				
Battery Type	Lithium-ion			
Battery Voltage Range (V)	160~800			160~1000
Max. Charging Current (A)	100	100	160	80+80
Max. Discharging Current (A)	100	100	160	80+80
Charging Strategy for Li-ion Battery	Self-adaption to BMS			
Number of Battery Input	1			2
PV String Input Data				
Max. PV Access Power (W)	60000	80000	100000	120000
Max. PV Input Power (W)	48000	64000	80000	96000
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		36+36+36+36+36+36
Max. Input Short-Circuit Current (A)	55+55+55	55+55+55+55		54+54+54+54+54+54
No. of MPP Trackers/ No. of Strings MPP Tracker	3/2+2+2	4/2+2+2+2		6/2+2+2+2+2+2
AC Input/Output Data				
Rated AC Input/Output Active Power (W)	30000	40000	50000	60000
Max. AC Input/Output Apparent Power (VA)	33000	44000	55000	66000
Rated AC Input/Output Current (A)	45.5/43.5	60.7/58	75.8/72.5	91/87
Max. AC Input/Output Current (A)	50/47.9	66.7/63.8	83.4/79.8	100/95.7
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%			98.7%
Euro Efficiency	97.0%			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			LCD+LED
Communication Interface	WIFI/RS485/CAN			RS485,RS232,CAN
Monitor Mode	GPRS/WIFI/Bluetooth/4G			GPRS/WIFI/Bluetooth/ 4G/LAN(optional)
General Data				
Operating Temperature Range (℃)	-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)			606×927×314 (Excluding Connectors and Brackets)
Weight (kg)	65			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			

HESS Solution (Recommend)

GE-F128 Series + SUN-30K-SG02HP3-EU-BM3
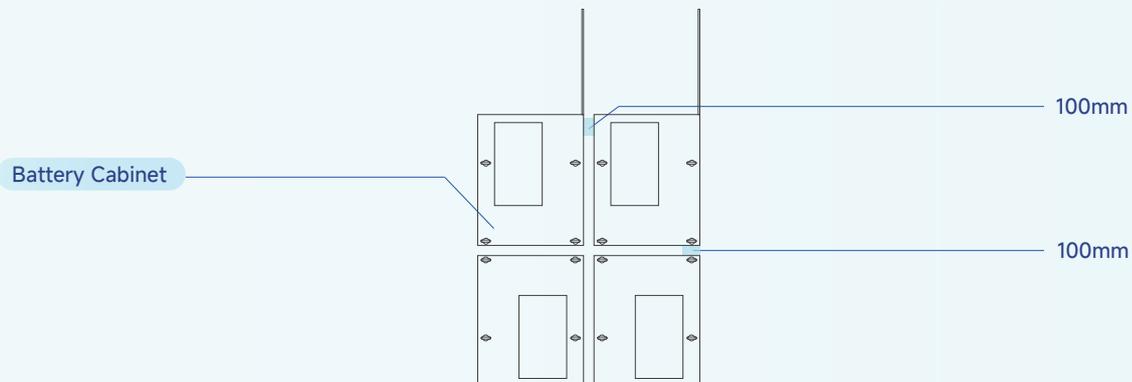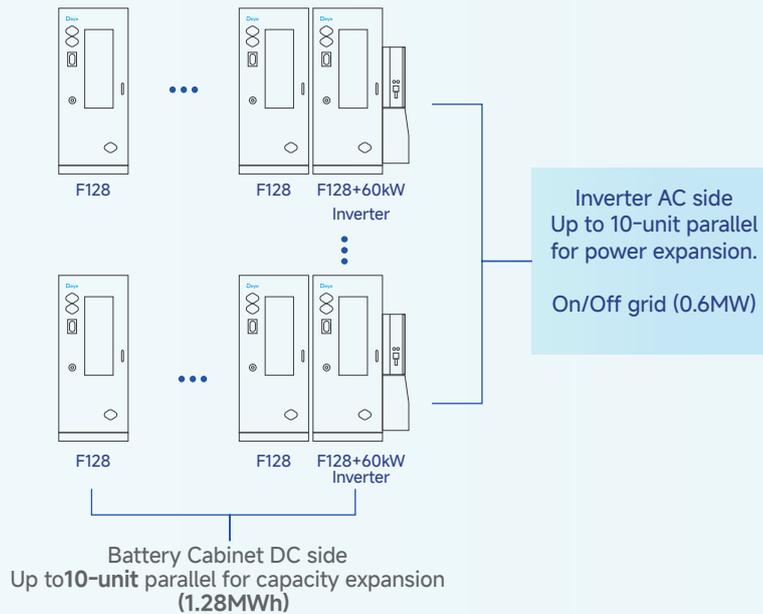SUN-40K-SG02HP3-EU-BM4
SUN-50K-SG02HP3-EU-BM4-P

Or SUN-60K-SG02HP3-EU-EM6

Power Unit	Battery Cabinet Model	Specification
2h HESS Solution		
SUN-50K-SG02HP3-EU-BM4-P	GE-F112-BC-2-A3	50kW/112kWh
SUN-60K-SG02HP3-EU-EM6	GE-F128-BC-2-A3	60kW/128kWh
3h HESS Solution		
SUN-40K-SG02HP3-EU-BM4	GE-F128-BC-2-A3	40kW/128kWh
4h HESS Solution		
SUN-30K-SG02HP3-EU-BM3	GE-F128-BC-2-A3	30kW/128kWh

AC/DC Side Parallel Expansion (Capacity & Power)

HESS HYBRID ENERGY STORAGE SYSTEM

F128   F128   F128+60kW
                    Inverter

F128   F128   F128+60kW
                    Inverter

Inverter AC side
Up to 10-unit parallel
for power expansion.

On/Off grid (0.6MW)

Battery Cabinet DC side
Up to **10-unit** parallel for capacity expansion
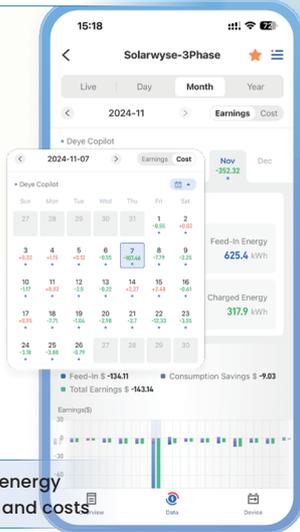**(1.28MWh)**

Battery Cabinet

100mm

100mm

Support back-to-back and side-by-side installation.

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

AI Assistant

Offer response suggestions and personalized support experience

Support dynamic tariff and flat-rate

Switch flexibly between autonomous and manual control

Support over 30 languages

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

Deye Copilot

ToU

Display energy savings and costs

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

Deye

POWERING YOUR LIFE

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