Deye

Stock Code: 605117.SH

1-PHASE RESIDENTIAL ESS

VPP Ready

Pure Off-Grid Supporting

- Versatile & Flexible

  Six time periods for battery charging/discharging
  Diesel generator-ready

- Scalable & Reliable

  High-energy density
  Max. 16 inverters in parallel; Max. 32 units of batteries in parallel
  Ultra 4ms on-grid & off-grid mode switching

- High cost effective

  AC couple to retrofit existing solar system
  Shorter ROI time period

- Safety & High Performance

  Low Voltage LFP ESS
  Maximum support 1C charge and 1.2C discharge

INVERTER SPECIFICATIONS

Model	SUN-5K-SG04 LP1-AU	SUN-6K-SG04 LP1-AU	SUN-8K-SG05 LP1-AU	SUN-10K-SG02 LP1-AU-AM3
Battery Input Data				
Battery Type	Lead-acid or Lithium-ion			
Battery Voltage Range (V)	40-60			
Max. Charging Current (A)	120	135	190	220
Max. Discharging Current (A)	120	135	190	220
External Temperature Sensor	Yes			
Charging Curve	3 Stages / Equalization			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
PV String Input Data				
Max. PV Access Power (W)	10000	12000	16000	20000
Max. DC Input Power (W)	7500	9000	12000	15000
Rated PV Input Voltage (V)	500			
Start-up Voltage (V)	125			
MPPT Voltage Range (V)	150-425			
Full Load DC Voltage Range (V)	300-425	300-425	200-425	200-425
PV Input Current (A)	13+13	13+13	26+26	26+26+26
Max. PV I_{SC} (A)	19.5+19.5	19.5+19.5	39+39	44+44+44
No.of MPP Trackers	2			3
No.of Strings per MPP Tracker	1+1	1+1	2+2	2+2+2
AC Output Data				
Rated AC Output Active Power (W)	5000	6000	8000	9999
Max AC Output Active Power (W)	5000	6000	8000	9999
AC Output Rated Current (A)	21.7	26.1	34.8	43.5
Max. AC Output Current (A)	21.7	26.1	34.8	43.5
Max. Continuous AC Passthrough (A)	35	40	50	60
Peak Power (off-grid)	2 time of rated power, 10 S			
Power Factor Adjustment Range	0.8 leading to 0.8 lagging			
Rated Input/Output Voltage/Range(V)	230/400V 0.85Un-1.1Un			
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz			
Grid Connection Form	L+N+PE			
Total Harmonics Current Distortion (THDi)	<3% (of nominal power)			
DC Current Injection	<0.5% In			
Efficiency				
Max. Efficiency	97.60%			
Euro Efficiency	96.5%			
MPPT Efficiency	99.90%			
Protection				
Integrated	Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge Protection			
Over Voltage Category	DC Type II/AC Type III			
Certifications and Standards				
Grid Regulation	AS/NZS 4777.2			
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			
General Data				
Operating Temperature Range (℃)	-40 to +60 °C, >45°C Derating			
Cooling	Natural cooling	Smart Cooling		
Noise (dB)		<30 dB		<45 dB
Communication with BMS	RS485; CAN			
Weight (kg)	17		24.9	35.6
Cabinet Size (WxHxD mm) (Excluding Connectors and Brackets)	330×433×229		330×580×232	420×670×233
Protection Degree	IP65			
Installation Style	Wall-mounted			
Warranty	10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy			

BATTERY SPECIFICATIONS

Model		RW-M6.1-B
Main Parameter		
Battery Chemistry		LiFePO4
Built-in Circuit Breaker		125A 2P, 60Vdc
Capacity(Ah)		120
Scalability		Max.32 pcs in Parallel(196kWh)
Nominal Voltage (V)		51.2
Operating Voltage(V)		43.2~57.6
Energy (kWh)		6.14
Usable Energy(kWh) [1]		5.53
Charge/Discharge Current (A) [2]	Recommend	60
	Max	100
	Peak	150 (2mins, 25°C)
Other Parameter		
Recommend Depth of Discharge		90%
Dimension (W/H/D, mm)		510*740*145(Without Base,depth of 161mmwith Hanging Board)
Weight Approximate (kg)		58
Master LED Indicator		5LED(SOC:20%~SOC100%), 3LED (working, alarming, protecting)
IP Rating of Enclosure		IP65
Operating Temperature		Charge:0~ 55°C / Discharge:-20°C ~ 55°C
Storage Temperature		0°C~35°C
Humidity		5%~95%
Altitude		≤2000m
Cycle Life		≥6000(25°C± 2°C,0.5C/0.5C,90%DOD,70%EOL)
Installation		Wall-Mounted, Floor-Mounted
Communication Port		CAN2.0, RS485
Warranty Period [3]		10 years
Energy Throughput		20MWh@70%EOL
Certification		UN38.3, IEC62619, CE, CEI 0-21, VDE2510-50

[1] DC Usable Energy, test conditions: 90% DOD, 0.5C 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] Conditions apply, refer to Deye Warranty Letter.

BATTERY SPECIFICATIONS

Model		RW-F10.2
Main Parameter		
Battery Chemistry		LiFePO4
Built-in Circuit Breaker		125A 4P, 60Vdc
Capacity(Ah)		200
Scalability		Max. 32 pcs pack (Max.327kWh) in parallel
Nominal Voltage (V)		51.2
Operating Voltage(V)		43.2~57.6
Nominal Energy (kWh)		10.24
Usable Energy(kWh) [1]		9.2
Charge/Discharge Current (A) [2]	Recommend	100
	Max	Discharge: 250 / Charge: 200
	Peak	300 (2mins, 25°C)
Other Parameter		
Recommend Depth of Discharge		90%
Dimension (W/H/D, mm)		600*760*200(Without hanging board)
Weight Approximate (kg)		103
Master LED Indicator		5LED(SOC:20%~SOC100%), 3LED (working, alarming, protecting)
IP Rating of Enclosure		IP65
Operating Temperature		Charge: 0~55°C / Discharge: -20°C~55°C
Recommend Operating Temperature		/
Storage Temperature		0°C~35°C
Humidity		5%~95%
Altitude		≤2000m
Cycle Life		≥6000(25°C±2°C , 0.5C/0.5C, 90%DOD, 70%EOL)
Installation		Wall-Mounted, Floor-Mounted
Communication Port		CAN2.0, RS485
Warranty Period [3]		10 years
Energy Throughput		32MWh(25°C, 0.5C/0.5C, 70%EOL)
Certification		UN38.3, IEC62619, CE, CEI 0-21, VDE2510-50, CEC

[1] DC Usable Energy, test conditions: 90% DOD, 0.5C 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] Conditions apply, refer to Deye Warranty Letter.

BATTERY SPECIFICATIONS

Model		AI-W5.1-B					
Main Parameter							
Battery Chemistry		$LiFePO_4$					
Battery Module Energy (kWh)		5.12					
Battery Module Voltage (V)		51.2					
Battery Module Capacity (Ah)		100					
Scalability		1	2	3	4	5	6
Nominal Voltage (V)		51.2					
Operating Voltage(V)		43.2~57.6					
Nominal Energy (kWh)		5.12	10.24	15.36	20.48	25.6	30.72
Usable Energy (kWh) [1]		4.6	9.2	13.8	18.4	23	27.6
Charge/Discharge Current (A) [2]	Recommend	50	100	150	200	250	250
	Max.	100	180	250	250	250	250
	Peak(10s,25℃)	150	270	360	360	360	360
Other Parameter							
Recommend Depth of Discharge		90%					
System Dimension (W/D/H, mm)		720*255*569	720*255*850	720*255*1131	720*255*1412	720*255*1693	720*255*1974
System Weight (kg)		74.5	127.5	180.5	233.5	286.5	339.5
Battery Module Dimension(W/D/H, mm)		720*255*300 (without terminal parts)					
Battery Module Weight (kg)		53					
Master LED Indicator		Battery module: 3LED (working, alarming, protecting), PDU module: 5LED(SOC:20%~100%)&3LED (working, alarming, protecting)					
IP Rating of Enclosure		IP65 (after stacking)					
Operating Temperature		Charge: 0～55℃ / Discharge: -20℃～55℃					
Storage Temperature		0℃～35℃					
Humidity		5%~95%					
Altitude		≤2000m					
Installation		Wall-Mounted, Floor-Mounted					
Communication Port		CAN2.0, RS485					
Cycle Life		≥6000(25℃±2℃,0.5C/0.5C,90%DOD,70%EOL)					
Energy Throughput		16MWh(Battery Module @70%EOL)					
Warranty Period [3]		10 years					
Certification		UN38.3, IEC62619, CE, UK, VDE2510-50, CEI 0-21,CE-LVD, CEC					

[1] DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25℃. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.

Introduction

This series lithium iron phosphate battery is one of new energy storage products developed and produced by Deye , it can be used to support reliable power for various types of equipment and systems.

This series is especially suitable for application scene of high power, limited installation space, restricted load-bearing and long cycle life.

This series has built-in BMS battery management system, which can manage and monitor cells information including voltage, current and temperature. What's more, BMS can balance cells charging to extend cycle life. Multiple batteries can connect in parallel for larger capacity and longer power supporting.

TYPICAL APPLICATION DIAGRAM