

Single Phase Hybrid Inverter

SUN-3K-SG04LP1-24-EU

SUN-3/3.6/5/6K-SG04LP1-EU



Colorful touch LCD, IP65 protection degree



AC couple to retrofit existing solar system



Max. 16 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel



Max. charging/discharging current of 140A



6 time periods for battery charging/discharging



Support storing energy from diesel generator

Deye

Stock Code: 605117.SH

Model	SUN-3K -SG04LP1-24-EU	SUN-3K -SG04LP1-EU	SUN-3.6K -SG04LP1-EU	SUN-5K -SG04LP1-EU	SUN-6K -SG04LP1-EU
Battery Input Data					
Battery Type	Lead-acid or Lithium-ion				
Battery Voltage Range (V)	20-30	40-60	40-60	40-60	40-60
Max. Charging Current (A)	140	70	90	120	135
Max. Discharging Current (A)	140	70	90	120	135
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
Number of Battery Input	1				
PV String Input Data					
Max. PV Access Power (W)	6000	6000	7200	10000	12000
Max. PV Input Power (W)	4800	4800	5760	8000	9600
Max. PV Input Voltage (V)	500				
Start-up Voltage (V)	125				
MPPT Voltage Range (V)	150-425				
Rated PV Input Voltage (V)	370				
Max. Operating PV Input Current (A)	13		13+13		
Max. Input Short-Circuit Current (A)	17		17+17		
No. of MPP Trackers/ No. of Strings MPP Tracker	1/1		2/1+1		
AC Input/Output Data					
Rated AC Input/Output Active Power (W)	3000		3600	5000	6000
Max. AC Input/Output Apparent Power (VA)	3300		3960	5500	6600
Rated AC Input/Output Current (A)	13.6/13		16.4/15.7	22.7/21.7	27.3/26.1
Max. AC Input/Output Current (A)	15/14.3		18/17.2	25/23.9	30/28.7
Max. Continuous AC Passthrough (grid to load) (A)	35				40
Peak Power (off-grid) (W)	2 times of rated power, 10s				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage/Range (V)	220/230 0.85Un-1.1Un				
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65				
Grid Connection Form	L+N+PE				
Total Current Harmonic Distortion THDi	<3% (of nominal power)				
DC Injection Current	<0.5% In				
Efficiency					
Max. Efficiency	97.6%				
Euro Efficiency	96.5%				
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					
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	2000m				
Noise (dB)	<30				
Ingress Protection(IP) Rating	IP 65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC II(DC), OVC III(AC)				
Cabinet Size (WxHxD mm)	330×433×229 (Excluding Connectors and Brackets)				
Weight (kg)	17				
Type of Cooling	Natural 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, G98, G99, VDE-AR-N 4105				
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				

Hi-MO 7

LR8-66HGD 595~625M

- High-performance PV modules for utility power plants
- Advanced HPDC cell technology delivers superior module efficiency and power
- High bifaciality and excellent power temperature coefficient achieves high energy yield
- LONGi lifecycle quality ensures long-term performance



12-year Warranty for
Materials and Processing



30-year Warranty for Extra
Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO9001:2015: ISO Quality Management System

ISO14001: 2015: ISO Environment Management System

ISO45001: 2018: Occupational Health and Safety

IEC62941: Guideline for module design qualification and type approval

LONGi



23.1%
MAX MODULE
EFFICIENCY

0~3%
POWER
TOLERANCE

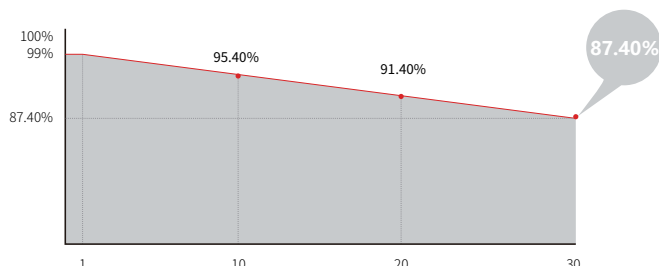
<1%
FIRST YEAR
POWER DEGRADATION

0.4%
YEAR 2-30
POWER DEGRADATION

HALF-CELL
Lower operating temperature

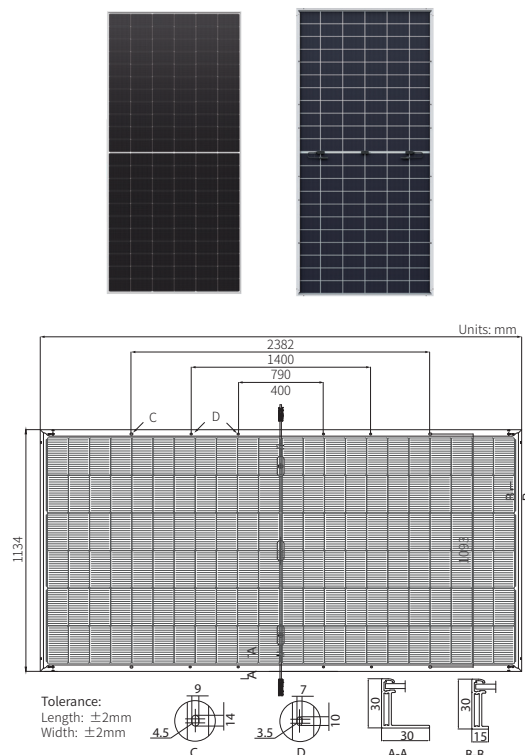
Additional Value

30-Year Power Warranty



Mechanical Parameters

Cell Orientation	132 (6×22)
Junction Box	IP68, three diodes
Output Cable	4mm ² , +400, -200mm/±1400mm length can be customized
Glass	Dual glass, 2.0+2.0mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Weight	33.5kg
Dimension	2382×1134×30mm
Packaging	36pcs per pallet / 144pcs per 20' GP / 720pcs or 576pcs (only for USA) per 40' HC



Electrical Characteristics

STC : AM1.5 1000W/m² 25°C NOCT : AM1.5 800W/m² 20°C 1.0 m/s Test uncertainty for Pmax: ±3%

Module Type	LR8-66HGD-595M		LR8-66HGD-600M		LR8-66HGD-605M		LR8-66HGD-610M		LR8-66HGD-615M		LR8-66HGD-620M		LR8-66HGD-625M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	595	452.9	600	456.7	605	460.5	610	464.3	615	468.1	620	471.9	625	475.8
Open Circuit Voltage (Voc/V)	47.78	45.41	47.98	45.60	48.18	45.79	48.38	45.98	48.58	46.17	48.78	46.36	48.98	46.55
Short Circuit Current (Isc/A)	15.80	12.69	15.85	12.73	15.90	12.77	15.95	12.81	16.00	12.85	16.05	12.89	16.10	12.93
Voltage at Maximum Power (Vmp/V)	39.91	37.93	40.11	38.12	40.31	38.31	40.51	38.50	40.71	38.69	40.91	38.88	41.11	39.07
Current at Maximum Power (Imp/A)	14.91	11.94	14.96	11.98	15.01	12.02	15.06	12.06	15.11	12.10	15.16	12.14	15.21	12.18
Module Efficiency(%)	22.0		22.2		22.4		22.6		22.8		23.0		23.1	

Electrical characteristics with different rear side power gain (reference to 610W front)

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
641	48.38	16.75	40.51	15.81	5%
671	48.38	17.55	40.51	16.57	10%
703	48.48	18.34	40.61	17.32	15%
734	48.48	19.14	40.61	18.07	20%
764	48.48	19.94	40.61	18.82	25%

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	35A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Bifaciality	80±5%
Fire Rating	UL type 29 IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

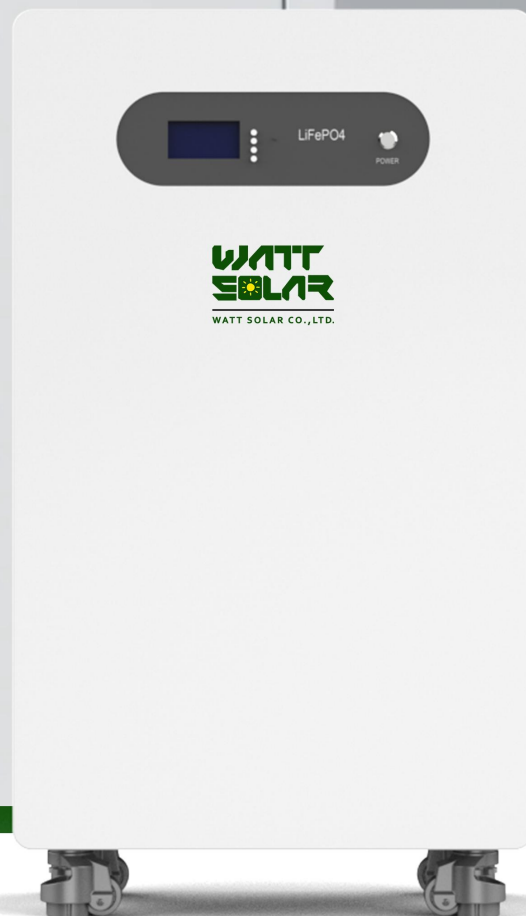
Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.045%/°C
Temperature Coefficient of Voc	-0.230%/°C
Temperature Coefficient of Pmax	-0.280%/°C

WS Staanding Model Lithium Battery

14/16KWH

Wattsolar 51.2V 280AH/314AH Lithium Battery Use REPT Original & A Grade & New Battery Cells & Offering 10 Years Warranty.Easy to move, no installation required, specially designed for residential energy storage system.



Product Advantages



≥8000 Cycles,Long Life

Long cycle life with tier 1 brand A grade cells and superior performance



Safety & Reliable

Very Safe and High Quality with LiFePO4 technology & Smart BMS



High Compatibility BMS

Seamless communication with most brands inverters



Expand Capacity Flexibly

Parallel to expand capacity easily up to 257kwh

Technical Data

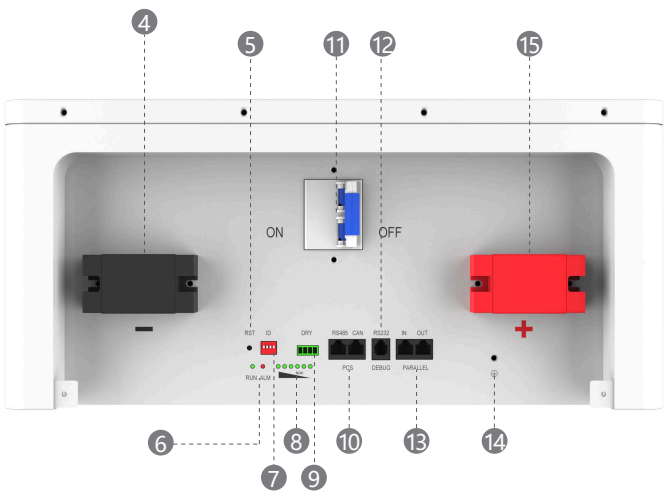
Main Parameter

Model	WS-280	WS-314
Battery Chemistry	LiFePO4	
Built-In Circuit Breaker	125A 2P	
Nominal Capacity	280Ah	314Ah
Nominal Voltage	51.2V	
Operating Voltage	43.2~58.4V	
Nominal Energy	14.336Kwh	16.076Kwh
Scalability	Max. 16 pcs pack (Max. 229.376kWh) in parallel	Max. 16 pcs pack (Max. 257.392kWh) in parallel
Charge/Discharge Current	Max. Continuous	200A
	Peak	250A(500ms)

Other Paramete

Recommend Depth of Discharge	90% DoD	
Dimension	500*233*880mm	500*233*880mm
Package Size	943*563*396mm	943*563*396mm
Battery Pack N.W./G.W.	117kg/130kg	125kg/147kg
Master LED Indicator	5LED (SOC : 20% ~ SOC100%) , 3LED (working, alarming, protecting)	
Bluetooth	Include	
Communication Port	CAN/RS232/RS485	
IP Rating of Enclosure	IP20	
Operating Temperature	Charge : 0°C~60°C, Discharge : -20°C ~ 60°C	
Storage Temperature	0 ~ 35°C	
Relative Humidity	95%	
Altitude	≤2000 m	
Cycle Life	≥8000 90%DOD	
Warranty Period	10Years	
Installation	Floor-Mounted(Movable with wheels)	
Certification	CE,UN38.3,MSDS	

Battery Overview



1	Display Screen	2	Screen Button	3	Power Switch
4	Negative Connector	5	Reset Button	6	RUN/ALARM LED
7	DIP	8	SOC LED	9	DRY CONTACT
10	CAN/RS485 Port	11	Breaker	12	RS232 Port
13	IN/OUT Port For Parallel	14	Grounding	15	Positive Connector

Battery Pack Default Accessories

	DC Power Cable: Pair of 35mm2 DC power cable(end is M10 copper terminal). The default length is 1500mm
	Ground Cable: 6mm2 Yellow-green ground line, The default length is 1500mm
	RJ45 communication cable: One RJ45 communication cable connect with hybrid inverter. The default length is 1500mm

Easy Expansion

