

Three Phase Hybrid Inverter

SUN-3/4/5/6/8/10/12K-SG05LP3-EU-SM2



- 100** 100% unbalanced output, each phase; Max. output up to 50% rated power
-  AC couple to retrofit existing solar system
- 10** Max. 10 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 240** Max. charging/discharging current of 240A
- 48** 48V low voltage battery, transformer isolation design
- 6** 6 time periods for battery charging/discharging
-  Support storing energy from diesel generator

Deye

Stock Code: 605117.SH

Model	SUN-3K-SG05 LP3-EU-SM2	SUN-4K-SG05 LP3-EU-SM2	SUN-5K-SG05 LP3-EU-SM2	SUN-6K-SG05 LP3-EU-SM2	SUN-8K-SG05 LP3-EU-SM2	SUN-10K-SG05 LP3-EU-SM2	SUN-12K-SG05 LP3-EU-SM2
Battery Input Data							
Battery Type	Lead-acid or Lithium-ion						
Battery Voltage Range (V)	40-60						
Max. Charging Current (A)	70	95	120	135	190	210	240
Max. Discharging Current (A)	70	95	120	135	190	210	240
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	8000	10000	12000	16000	20000	24000
Max. PV Input Power (W)	4500	6000	7500	9000	12000	15000	18000
Max. PV Input Voltage (V)	800						
Start-up Voltage (V)	160						
MPPT Voltage Range (V)	200-650						
Rated PV Input Voltage (V)	550						
Max. Operating PV Input Current (A)	20+20						
Max. Input Short-Circuit Current (A)	30+30						
No. of MPP Trackers/ No. of Strings MPP Tracker	2/1+1						
AC Input/Output Data							
Rated AC Input/Output Active Power (W)	3000	4000	5000	6000	8000	10000	12000
Max. AC Input/Output Apparent Power (VA)	3300	4400	5500	6600	8800	11000	13200
Rated AC Input/Output Current (A)	4.6/4.4	6.1/5.8	7.6/7.3	9.1/8.7	12.2/11.6	15.2/14.5	18.2/17.4
Max. AC Input/Output Current (A)	5/4.8	6.7/6.4	8.4/8	10/9.6	13.4/12.8	16.7/16	20/19.2
Max. Continuous AC Passthrough (grid to load) (A)	45						
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)	220/380V, 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	97.6%						
Euro Efficiency	97.0%						
MPPT Efficiency	>99%						
Equipment Protection							
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level						
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	3000m						
Noise (dB)	≤55						
Ingress Protection(IP) Rating	IP 65						
Inverter Topology	Non-Isolated						
Over Voltage Category	OVC II(DC), OVC III(AC)						
Cabinet Size (WxHxD mm)	386×660×250 (Excluding Connectors and Brackets)						
Weight (kg)	35.2						
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						

Certificate of Conformity

Certificate Number: CN-PVES-240098

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	NingBo Deye Inverter Technology Co., Ltd. No. 26 South YongJiang Road, Daqi, Beilun, NingBo, China
Product:	Hybrid inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	SUN-3K-SG05LP3-EU-SM2, SUN-4K-SG05LP3-EU-SM2, SUN-5K-SG05LP3-EU-SM2, SUN-6K-SG05LP3-EU-SM2, SUN-8K-SG05LP3-EU-SM2, SUN-10K-SG05LP3-EU-SM2, SUN-12K-SG05LP3-EU-SM2.
Brand Name<s>:	Deye (Deye)
Product Complies with:	IEC 61727:2004 IEC 62116:2014
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2 nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	2311A0686SHA-001

Additional information in Appendix.

Signature



Certification Manager: Qiao Qiao

Date: 25 March 2024



PRD N° 306B

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-240098

Ratings & Principle Characteristics:

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Battery Input Data							
Battery Type	Lead-acid or Li-Ion						
Battery Voltage Range(V)	40-60V						
Max.Charging Current(A)	70A	95A	120A	135A	190A	210A	240A
Max.Discharging Current(A)	70A	95A	120A	135A	190A	210A	240A
Charging Curve	3 Stages / Equalization						
External Temperature Sensor	yes						
PV String Input Data							
Max. PV Input Power(W)	3900W	5200W	6500W	7800W	10400W	13000W	15600W
PV Input Voltage(V)	160V-800V						
MPPT Range(V)	200V-650V						
Full Load PV Voltage Range(V)	250V-650V					350V-650V	
Start-up Voltage(V)	160V						
PV Input Current(A)	20A+20A						
Max.PV Isc(A)	30A+30A						
No. of MPP Trackers	2						
No. of Strings Per MPP Tracker	1+1						

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AC Output Data							
Rated AC Output and UPS Power(W)	3000W	4000W	5000W	6000W	8000W	10000W	12000W
Max. AC Output Power(W)	3300W	4400W	5500W	6600W	8800W	11000W	13200W
Peak Power(off grid)	2 times of rated power, 10S						
AC Output Rated Current(A)	4.6/4.4	6.1/5.8	7.6/7.3	9.1/8.7	12.2/11.6	15.2/14.5	18.2/17.4
Max. AC Current(A)	5/4.8	6.7/6.4	8.4/8	10/9.6	13.4/12.8	16.7/16	20/19.2
Max. Three-phase Unbalanced Output Current(A)	6.9/6.6	9.1/8.7	11.4/10.9	13.7/13.1	18.2/17.4	22.8/21.8	27.3/26.1
Max. Continuous AC Passthrough(A)	45A						
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac						
Grid Type	Three Phase						
Total Harmonic Distortion (THD)	<3% (of nominal power)						
DC current injection	<0.5% In						
Others							
Operating Temperature Range(°C)	-40 to 60°C, >45°C Derating						
Cooling	Intelligent Air Cooling						
Noise(dB)	≤ 55 dB						
Weight (kg)	35.2						
Protection Degree	IP65						
Permissible Altitude	3000m						
Overvoltage category	OVC III (AC main), OVC II (DC)						
Firmware Version	1144						

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