Three Phase Hybrid Inverter

SUN- 5 / 6 / 8 / 10 / 12 K-SG04LP3-EU

- 100% unbalanced output, each phase; Max. output up to **50%** rated power
- DC couple and AC couple to retrofit existing solar system
- Max. 16pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- Max. charging/discharging current of 240A
- 48V low voltage battery, transformer isolation design
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator

Technical Data

Model	SUN-5K -SG04LP3-EU	SUN-6K -SG04LP3-EU	SUN-8K -SG04LP3-EU	SUN-10K -SG04LP3-EU	SUN-12K -SG04LP3-EU
Battery Input Data					
Battery Type	Lead-acid or Li-Ion				
Battery Voltage Range (V)			40~60		
Max. Charging Current (A)	120	150	190	210	240
Max. Discharging Current (A)	120	150	190	210	240
External Temperature Sensor	Yes				
Charging Curve	3 Stages / Equalization				
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
PV String Input Data					
Max. DC Input Power (W)	6500	7800	10400	13000	15600
Rated PV Input Voltage (V)	550 (160~800)				
Start-up Voltage (V)	160				
MPPT Voltage Range (V)	200-650				
Full Load DC Voltage Range (V)	350-650				
PV Input Current (A)	13+13			26+13	
Max. PV ISC (A)	17+17			34+17	
Number of MPPT / Strings per MPPT	2/1+1			2/2+1	
AC Output Data					
Rated AC Output and UPS Power (W)	5000	6000	8000	10000	12000
Max. AC Output Power (W)	5500	6600	8800	11000	13200
AC Output Rated Current (A)	7.6	9.1	12.1	15.2	18.2
Max. AC Current (A)	11.4	13.6	18.2	22.7	27.3
Max. Continuous AC Passthrough (A)	45				
Peak Power (off grid)	2 time of rated power, 10 S				
Power Factor	0.8 leading to 0.8 lagging				
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac				
Grid Type	Three Phase				
DC injection current (mA)	THD<3% (Linear load<1.5%)				
Efficiency					
Max. Efficiency	97.60%				
Euro Efficiency	97.00%				
MPPT Efficiency	99.90%				
Protection					
Integrated	PV Input Lightning Protection, 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				
Output Over Voltage Protection	DC Type II/AC Type III				
Certifications and Standards					
Grid Regulation	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range (℃)	-45~60℃, >45℃ derating				
Cooling	Smart cooling				
Noise (dB)	<45 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	33.6				
Size (mm)	422W x 699.3H x279D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				

Certificate of compliance

Applicant:	**NingBo Deye Inverter Technology Co., Ltd.** No. 26 South YongJiang Road, Daqi, Beilun, NingBo, **China**
Product:	**Hybrid Inverter**
Model:	**SUN-5K-SG04LP3-EU** **SUN-6K-SG04LP3-EU** **SUN-8K-SG04LP3-EU** **SUN-10K-SG04LP3-EU** **SUN-12K-SG04LP3-EU**

Use in accordance with regulations:

Generating unit with automatic disconnection device with three-phase mains surveillance in accordance with “TOR Erzeuger Typ A” and “OVE-Richtlinie R25” for systems with a three-phase parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the stated inverter.

Applied rules and standards:

TOR Erzeuger Typ A:2019-12

Connection and parallel operation of power generation plants of type A and small generation plants

OVE-Richtlinie R25:2020-03

Test requirements for generating units (generators) intended for connection and parallel operation on low-voltage distribution networks

5.1 Checking the network perturbations

5.2 Checking the symmetry behaviour of three-phase inverters

5.3 Checking the behaviour of the generating unit on the network

5.4 Checking the automatic activation point

5.5 Checking the connection conditions and synchronization

5.6 Proof of robustness and dynamic network support

At the time of issue of this certificate, the representative product listed above corresponds to the stated rules and standards.

Report number:	**CDAN-ESH-P21110559-R1**	**Certification Program:**	**NSOP-0032-DEU-ZE-V01**
Certificate number:	**U22-0466**	**Date of issue:**	**2022-07-27**

Certification body

Alf ASSENKAMP

Certification body Bureau Veritas Consumer Products Services Germany GmbH accreditation to DIN EN ISO/IEC 17065

Testing laboratory accredited according to DIN EN ISO/IEC 17025

A partial representation of the certificate requires the written approval of Bureau Veritas Consumer Products Services Germany GmbH