

HYBRID INVERTER 6/8/12kW Three-Phase Low Voltage Battery

Higher yields
Safe and reliable
Smart
User-friendly

Deye SUN-6K-SG04LP3-EU (6kW)
SUN-8K-SG04LP3-EU (8kW)
SUN-12K-SG04LP3-EU (12kW)



The DEYE SUN 6/8/12K-SG04LP3 is a three-phase hybrid inverter offering a low-voltage battery option (48V), ensuring system safety and reliability.

This series boasts a compact design and high power density, enabling a 1:3 DC/AC ratio support that effectively reduces device investment. The system facilitates three-phase unbalanced output, broadening its application potential.

Featuring dual CAN ports for BMS and parallel connections, along with a RS485 port for BMS, a RS232 port for remote control, and a DRM port, this system is characterized by its intelligence and flexibility.

Features

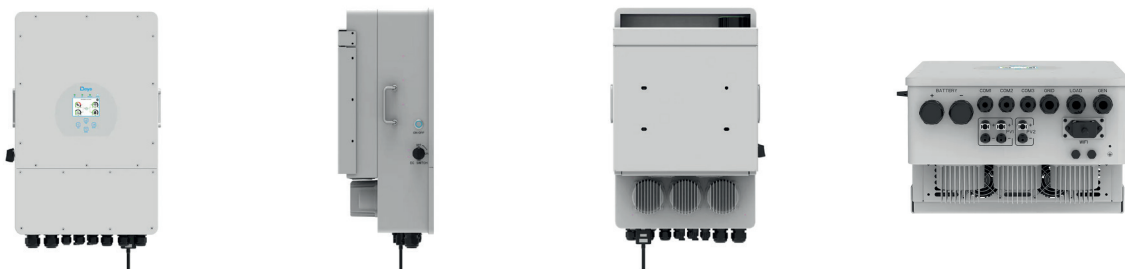
- 100% unbalanced output, each phase
- Max. output up to 50% nominal power
- Colourful touch LCD
- IP65 protection grade
- DC and AC connections to integrate existing solar energy systems
- Max. 10 pieces parallel for on-grid and off-grid systems; supports parallel use of multiple batteries
- Max. charge/discharge current: 240A
- 48V low-voltage battery, transformer isolated design
- 6 time periods for battery charging/discharging
- Supports energy storage via generator

Dimensions

422 x 699 x 279 (W x H x D, in mm)

Weight

33.6 kg



HYBRID INVERTER

6/8/12kW Three-Phase



Technical Data

Model	SUN-6K-SG04LP3-EU	SUN-8K-SG04LP3-EU	SUN-12K-SG04LP3-EU
Battery Input Data			
Battery Type	Lead-acid or Li-Ion		
Battery Voltage Range (V)	40-60V		
Max. Charging Current (A)	150A	190A	240A
Max. Discharging Current (A)	150A	190A	240A
Charging Curve	3 Stages / Equalization		
External Temperature Sensor	Yes		
Charging Strategy for Li-Ion Battery	Self-adaption to BMS		
PV String Input Data			
Max. DC Input Power (W)	7800Q	10400W	15600W
PV Input Voltage (V)	550V (160V-800V)		
MPPT Range (V)	200V-650V		
Start-up Voltage(V)	160V		
PV Input Current (A)	13A+13A	13A+13A	26A+13A
Max.PV Isc (A)	17A+17A	17A+17A	34A+17A
No. of MPPT Trackers	2		
No. of Strings Per MPPT Tracker	1+1	1+1	2+1
AC Output Data			
Rated AC Output and UPS Power (W)	6000W	8000W	12000W
Max. AC Output Power (W)	6600W	8800W	13200W
Peak Power (off grid)	2 times of rated power, 10 s		
AC Output Rated Current (A)	9.1/8.7A	12.1/11.6A	18.2/17.4A
Max. AC Current (A)	10/9.6A	13.4/12.8A	20/19.1A
Max. Three-phase Unbalanced Output Current (A)	13.6/13A	18.2/17.4A	27.3/26.1A
Max Output Short Circuit Current(A)	75A		
Max. Continuous AC Passthrough(A)	45A		
Output Frequency and Voltage	50/60Hz;3L/N/PE 220/380, 230/400Vac (Three-Phase)		
Grid Type	Three-Phase		
Total Harmonic Distortion (THD)	<3% (of nominal power)		
DC current injection	<0.5% In		
Efficiency			
Max. Efficiency	97.60%		
Euro Efficiency	97.00%		
MPPT Efficiency	>99%		
Protection			
PV Arc Fault Detection	Integrated		
PV Input Lightning Protection	Integrated		
Anti-Islanding Protection	Integrated		
PV String Input Reverse Polarity Protection	Integrated		
Insulation Resistor Detection	Integrated		
Residual Current Monitoring Unit	Integrated		
Output Over Current Protection	Integrated		
Output Shorted Protection	Integrated		
Surge Protection	DC Type III / AC Type III		
Over Voltage Category	DC Type II / AC Type III		
Certifications and Standards			
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		
EMC/Safety Regulation	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2		
General Data			
Operating Temperature Range (°C)	-40~60°C, >45°C Derating		
Cooling	Smart cooling		
Noise (dB)	<55 dB (A)		
Communication with BMS	RS485; CAN		
Weight (kg)	33.6		
Cabinet size (mm)	422×702×281 WxHxD (Excluding connectors and brackets)		
Protection Degree	IP65		
Installation Style	Wall-mounted		
Warranty	5 years		