

HYBRID INVERTER 3.6/5kW Single Phase Low Voltage Battery

Higher yields
Safe and reliable
Smart
User-friendly

Deye SUN-3.6K-SG03LP1-EU (3.6kW)
SUN-5K-SG03LP1-EU (5kW)



The DEYE SUN-3.6/5K-SG03LP1 hybrid inverter is ideal for both residential and light commercial applications, optimizing solar energy utilization and enhancing energy self-reliance.

In daylight hours, the photovoltaic (PV) system produces electricity primarily for immediate consumption. Any surplus energy generated is directed towards charging the battery through the SUN 3.6/5K-SG03LP1 inverter. This stored energy becomes available for use as needed.

Furthermore, the battery can be charged by a generator, guaranteeing continuous power provision during unexpected outages.

Features

- Colourful touch LCD
- IP65 protection grade
- DC and AC connections to integrate existing solar energy systems
- Max. charge/discharge current: 190A
- Max. 16 pieces parallel for on-grid and off-grid systems
- Supports parallel use of multiple batteries
- 6 time periods for battery charging/discharging
- Supports energy storage via generator

Dimensions

330 x 580 x 232 (W x H x D, in mm)

Weight

24 kg



HYBRID INVERTER

3.6/5kW Single Phase



Technical Data

Model	SUN-3.6K-SG03LP1-EU	SUN-5K-SG03LP1-EU
Battery Input Data		
Battery Type	Lead-acid or Li-Ion	
Battery Voltage Range (V)	40-60V	
Max. Charging Current (A)	90A	120A
Max. Discharging Current (A)	90A	120A
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)	4680W	6500W
PV Input Voltage (V)	370V (125V-500V)	
MPPT Range (V)	150-425V	
Full Load DC Voltage Range (V)	300-425V	
Start-up Voltage(V)	125V	
PV Input Current (A)	13A+13A	
Max.PV Isc (A)	17A-17A	
No. of MPPT Trackers	2	
No. of Strings Per MPPT Tracker	1+1	
AC Output Data		
Rated AC Output and UPS Power (W)	3600W	5000W
Max. AC Output Power (W)	3960W	5500W
Peak Power (off grid)	2 times of rated power, 10 s	
AC Output Rated Current (A)	16.4/15.7A	22.7/21.7A
Max. AC Current (A)	18/17.2A	25/23.9A
Max. Continuous AC Pass Through (A)	35A	35A
Power Factor	0.8 leading to 0.8 lagging	
Output Frequency and Voltage	50/60Hz; 220/230V (Single Phase)	
Grid Type	Single Phase	
Total Harmonic Distortion (THD)	<3% (of nominal power)	
DC current injection	<0.5% In	
Efficiency		
Max. Efficiency	97.60%	
Euro Efficiency	96.50%	
MPPT Efficiency	>99%	
Protection		
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 II / AC Type II	
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 to +60°C, >45°C Derating	
Cooling	Smart cooling	
Noise (dB)	<30 dB	
Communication with BMS	RS485; CAN	
Weight (kg)	20.5	
Cabinet size (mm)	330×580×232 WxHxD (Excluding connectors and brackets)	
Protection Degree	IP65	
Installation Style	Wall-mounted	
Warranty	5 years	