

HYBRID INVERTER 30/50kW Three-Phase High Voltage Battery

Higher yields
Safe and reliable
Smart
User-friendly

Deye SUN-30K-SG01HP3-EU-BM3 (30kW)
SUN-50K-SG01HP3-EU-BM4 (50kW)



The DEYE SUN-30/50K-SG01HP3-EU represents a cutting-edge three-phase hybrid inverter crafted to accommodate high-voltage batteries (160-800V), optimizing system efficiency and minimizing the necessity for heat dissipation.

Characterized by its compact design and remarkable power density, this series enables a 1.3 DC/AC ratio, thereby lowering the equipment investment needed. Moreover, the DEYE SUN-30/50 hybrid inverter enables three-phase unbalanced output, broadening its scope of utility.

Features

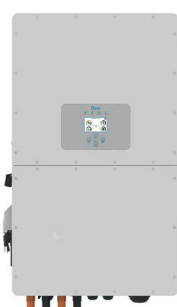
- 100% unbalanced output, each phase
- AC connections to integrate existing solar energy systems
- Max. charge/discharge current: 100A
- Max. 10 pieces parallel for on-grid and off-grid systems; supports parallel use of multiple batteries
- High voltage battery, higher efficiency
- 6 time periods for battery charging/discharging
- Supports energy storage via generator or wind turbine

Dimensions

527 x 894 x 294 (W x H x D, in mm)

Weight

80 kg



HYBRID INVERTER

30/50kW Three-Phase HV



Technical Data

Model	SUN-30K-SG01HP3-EU-BM3		SUN-50K-SG01HP3-EU-BM4	
Battery Input Data				
Battery Type	Li-Ion			
Battery Voltage Range (V)	160-800			
Max. Charging Current (A)	50+50			
Max. Discharging Current (A)	50+50			
Number of Battery Input	2			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
PV String Input Data				
Max. DC Input Power (W)	39000		65000	
Max. DC Input Voltage (V)	1000			
Start-up Voltage(V)	180			
MPPT Range (V)	150-850			
Full Load DC Voltage Range (V)	360-850		450-850	
Rated DC Input Voltage (V)	600			
PV Input Current (A)	36+36+36		36+36+36+36	
Max. PV Isc (A)	55+55+55		55+55+55+55	
No. of MPPT Trackers	3		4	
No. of Strings Per MPPT Tracker	2+2+2		2+2+2+2	
AC Output Data				
Rated AC Output Active Power (W)	30000		50000	
Max. AC Output Active Power (W)	33000		55000	
AC Output Rated Current (A)	45.5/43.5		75.8/72.5	
Max. AC Output Rated Current (A)	50/47.8		83.4/79.7	
Max. Three-phase Unbalanced Output Current (A)	60		83.3	
Max. Continuous AC Passthrough (A)	200			
Peak Power (Off Grid)	1.5 times of rated power, 10 s			
Generator Input/Smart Load/AC Couple Current (A)	45.5/200/45.5		75.8/200/75.8	
Power Factor Adjustment Range	0.8 leading to 0.8 lagging			
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			
Efficiency				
Max. Efficiency	97.60%			
Euro Efficiency	97.00%			
MPPT Efficiency	99.90%			
Protection				
Integrated	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			
Over Voltage Category	DC Type II / AC Type III			
Certifications and Standards				
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150			
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)	<65 dB			
Communication with BMS	RS485; CAN			
Weight (kg)	80			
Cabinet size (mm)	527×894×294 WxHxD (Excluding connectors and brackets)			
Protection Degree	IP65			
Installation Style	Wall-mounted			
Warranty	5 years			

Note: We have successfully connected five units in parallel, and we are currently conducting tests on connecting ten units in parallel. It is essential to use inverters of the same model for parallel connections.