

OPTONICA

THREE-PHASE HYBRID INVERTERS

Deye



- 100** 100% unbalanced output, each phase; Max. output up to 50% rated power
- AC couple** 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** Support storing energy from diesel generator

Technical Data

SKU / Model	SUN-5K -SG04LP3-EU	9445 / SUN-6K -SG04LP3-EU	9436 / SUN-8K -SG04LP3-EU	9435 / SUN-10K -SG04LP3-EU	9441 / SUN-12K -SG04LP3-EU
Battery Input Data					
Battery Type	Lead-acid or Lithium-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 I _{SC} (A)	17+17			34+17	
No. of MPP Trackers	2				
No. of Strings per MPP Tracker	1+1		2+1		
AC Output Data					
Rated AC Output Active Power (W)	5000	6000	8000	10000	12000
Max AC Output Active Power (W)	5500	6600	8800	11000	13200
AC Output Rated Current (A)	7.6/7.2	9.1/8.7	12.1/11.6	15.2/14.5	18.2/17.4
Max AC Output Current (A)	8.4/8	10/9.6	13.4/12.8	16.7/15.9	20/19.1
Max. Three-phase Unbalanced Output Current (A)	11.4/10.9	13.6/13	18.2/17.4	22.7/21.7	27.3/26.1
Max Output short circuit current (A)	75				
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				
Total Harmonic Distortion (THD)	<3% (of nominal power)				
DC Current Injection	<0.5% I _n				
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	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				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range ()	-40-60°C, >45°C Derating				
Cooling	Smart Cooling				
Noise (dB)	≤45 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	33.6				
Cabinet Size (WxHxD mm)	422×702×281 (Excluding Connectors and Brackets)				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 Years (10 Years Optional)				