



THREE PHASE HYBRID INVERTER

SUN-20K-SG01HP3

BY **Deye**



- 100** 100% unbalanced output, each phase; Max. output up to 50% rated power
-  DC couple and AC couple to retrofit existing solar system

- 10** Max. 10pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 37** Max. charging/discharging current of 37A
- H** High voltage battery, higher efficiency
- 6** 6 time periods for battery charging/discharging
-  Support storing energy from diesel generator

Model	SUN-5K-SG01 HP3-EU-AM2	SUN-6K-SG01 HP3-EU-AM2	SUN-8K-SG01 HP3-EU-AM2	SUN-10K-SG01 HP3-EU-AM2	SUN-12K-SG01 HP3-EU-AM2	SUN-15K-SG01 HP3-EU-AM2	SUN-20K-SG01 HP3-EU-AM2
Battery Input Data							
Battery Type	Lithium-ion						
Battery Voltage Range (V)	160~700						
Max. Charging Current (A)	37						
Max. Discharging Current (A)	37						
Number of battery input	1						
Charging Strategy for Li-Ion Battery	Self-adaption to BMS						
PV String Input Data							
Max. DC Input Power (W)	6500	7800	10400	13000	15600	19500	26000
Max. DC Input Voltage (V)	1000						
Start-up Voltage (V)	180						
MPPT Range (V)	150-850						
Full Load DC Voltage Range (V)	195-850	195-850	260-850	325-850	340-850	420-850	500-850
Rated DC Input Voltage (V)	600						
PV Input Current (A)	20+20			26+20		26+26	
Max. PV I_{sc} (A)	30+30			39+30		39+39	
No. of MPP Trackers	2						
No. of Strings per MPP Tracker	1			2+1		2	
AC Output Data							
Rated AC Output and UPS Power (W)	5000	6000	8000	10000	12000	15000	20000
Max. AC Output Power (W)	5500	6600	8800	11000	13200	16500	22000
AC Output Rated Current (A)	7.6/7.3	9.1/8.7	12.2/11.6	15.2/14.5	18.2/17.4	22.8/21.8	30.4/29
Max. AC Output Rated Current (A)	8.4/8	10/9.6	13.4/12.8	16.7/16	20/19.2	25/24	33.4/31.9
Max. Three-phase Unbalanced Output Current	13	13	18	22	25	30	35
Max. Continuous AC Passthrough (A)	40			80			
Peak Power (off grid)	1.5 time of rated power, 10 S						
Generator input/Smart load /AC couple current (A)	7.6/40/7.6	9.1/40/9.1	12.2/40/12.2	15.2/40/15.2	18.2/80/18.2	22.8/80/22.8	30.4/80/30.4
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% In						
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	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150						
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 , >45 derating						
Cooling	Smart cooling						
Noise (dB)	≤55 dB						
Communication with BMS	RS485; CAN						
Weight (kg)	30.5						
Size (mm)	408W×638H×237D						
Protection Degree	IP65						
Installation Style	Wall-mounted						
Warranty	5 years						

*Note: The function of Multiple units work in parallel mode will be available in Q1 2023