

2. TECHNICAL SPECIFICATION

■ SUNSYNK-3.6K-SG02LP1 and SUNSYNK-5K-SG03LP1

Model	SUNSYNK-3.6K-SG02LP1	SUNSYNK-5K-SG03LP1
Battery Input Data		
Battery Type	Lead-acid or Lithium-ion	
Battery Voltage Range (V)	40~60V	
Max. Charging Current (A)	90A	120A
Max. Discharging Current (A)	90A	120A
Charging Curve	3 Stages/Equalisation	
External Temperature Sensor	Optional	
Charging Strategy for Li-Ion Battery	Self-Adaptation to BMS	
PV String Input Data		
Max. DC Input Power (W)	4680W	6500W
PV Input Voltage (V)	370V (100V~500V)	
MPPT Range (V)	125~425V	
Full Load DC Voltage Range (V)	240~425V	
Start-up Voltage (V)	150V	
PV Input Current (A)	11A+11A	
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 Power (W)	3960W	5500W
Peak Power (off-grid)	2 times of rated power, 10 S	
AC Output Rated Current (A)	15.7A	21.7A
Max AC Output Current (A)	18A	25A
Max Continuous AC Passthrough (A)	35A	
Power Factor	0.8 leading to 0.8 lagging	
Output Frequency and Voltage	50/60Hz; 220/230/240Vac (single phase)	
Grid Type	Single Phase	
Current Harmonic Distortion	THD<3%(Linear load<1.5%)	
Efficiency		
Max. Efficiency	97.60%	
MPPT Efficiency	96.50%	
Euro Efficiency	99.90%	
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	
Output Over Voltage Protection	Integrated	
Certifications and Standards		
Grid Regulation	VDE 0126, AS4777, NRS2017, G98, G99, IEC61683, IEC62116, IEC61727, RD1699:2011, XP C15-712-3:2019-05	
Safety Regulation	IEC62109-1, IEC62109-2	
EMC	EN61000-6-1, EN61000-6-3	
General Data		
Operating Temperature Range (°C)	-25~60°C, >45°C Derating	
Cooling	Fan	
Noise (dB)	<30	

Communication with BMS	RS485; CAN
Weight (kg)	20.5
Size (Length x Width x Height)	580 x 330 x 208 mm
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years
Maximum Altitude	4000 m

■ **SUNSYNK-5K-SG02LP1, SUNSYNK-6K-SG02LP1, SUNSYNK-7.6K-SG02LP1, SUNSYNK-8K-SG01LP1, and SUNSYNK-8K-SG02LP1**

Model	SUNSYNK-5K-SG02LP1	SUNSYNK-6K-SG02LP1	SUNSYNK-7.6K-SG02LP1	SUNSYNK-8K-SG01LP1/ SUNSYNK-8K-SG02LP1
Battery Input Data				
Battery Type	Lead-acid or Lithium-ion			
Battery Voltage Range (V)	40~60V			
Max. Charging Current (A)	120A	135A	190A	190A
Max. Discharging Current (A)	120A	135A	190A	190A
Charging Curve	3 Stages/Equalisation			
External Temperature Sensor	Optional			
Charging Strategy for Li-Ion Battery	Self-Adaptation to BMS			
PV String Input Data				
Max. DC Input Power (W)	6500W	7800W	9880W	10400W
PV Input Voltage (V)	370V (100V~500V)			
MPPT Range (V)	125~425V			
Start-up Voltage (V)	150V			
PV Input Current (A)	11A+11A	18A+9A	22A+22A	22A+22A
No. of MPPT Trackers	2			
No. of Strings Per MPPT Tracker	1+1	2+1	2+2	2+2
AC Output Data				
Rated AC Output and UPS Power (W)	5000W	6000W	7600W	8000W
Max. AC Power (W)	5500W	6600W	8360W	8800W
Peak Power (off-grid)	2 times of rated power, 10 S			
AC Output Rated Current (A)	20.8A	25A	31.7A/33A	33.4A/35A
Max AC Output Current (A)	24A	28.8A	36.4A/38A	38.3A/40A
Max Continuous AC Passthrough (A)	48A	80A	90A	90A
Output Frequency and Voltage	50/60Hz; 120/240Vac(split phase), 208Vac(2/3), 230Vac(single phase)			
Grid Type	Split phase, 2/3 phase, Single phase			
Current Harmonic Distortion	THD<3%(Linear load<1.5%)			
Efficiency				
Max. Efficiency	97.60%			
MPPT Efficiency	96.50%			
Euro Efficiency	99.90%			
Protection				
PV Arc Fault Detection	Integrated (Except European Type)			
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			

Output Over Voltage Protection	Integrated
Certifications and Standards	
Grid Regulation	UL1741, IEEE1547, RULE21, VDE0126, AS4777, NRS2017, G98,G99, IEC61683, IEC62116, IEC61727
Safety Regulation	IEC62109-1, IEC62109-2
EMC	EN61000-6-1, EN61000-6-3, FCC 15 Class B
General Data	
Operating Temperature Range (°C)	-25~60°C, >45°C Derating
Cooling	Fan
Noise (dB)	<30
Communication with BMS	RS485; CAN
Weight (kg)	32
Size (Length x Width x Height)	670 x 420 x 233 mm
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years
Maximum Altitude	4000 m

2.1. System Diagram

