

SUN  SYNK®

# SINGLE-PHASE HYBRID INVERTER



## DATASHEET

SYNK-7K-SG05LP1-SM2  
SYNK-7.6K-SG05LP1-SM2  
SYNK-8K-SG05LP1-SM2

Model	SYNK-7K-SG05LP1-SM2	SYNK-7.6K-SG05LP1-SM2	SYNK-8K-SG05LP1-SM2
<b>Battery Input Data</b>			
Battery Type	Lead-acid or Li-Ion		
Battery Voltage Range	48Vd.c (40Vd.c ~ 60Vd.c)		
Max. Charging/Discharging Current	175Ad.c (max.)	190Ad.c (max.)	
Charging Strategy for Li-Ion Battery	Self-adaption to BMS		
Number of Battery Input	1		
<b>PV String Input Data</b>			
Max. PV Access Power	14000W	15200W	16000W
Max. PV Input Power	11200W	12160W	12800W
Max. PV Input Voltage	500V		
Start-up Voltage	125V		
PV Input Voltage Range	125-500V		
MPPT Voltage Range	150-425V		
Full Load MPPT Voltage Range	200-425V		
Rated PV Input Voltage	370V		
Max. Operating PV Input Current	32A+32A		
Max. Input Short-Circuit Current	48A+48A		
No. of MPP Trackers/No. of Strings MPP Tracker	2/2+2		
Max. Inverter Backfeed Current to The Array	0		
<b>AC Input/Output Data</b>			
Rated AC Input/Output Active Power	7000W	7600W	8000W
Max. AC Input/Output Apparent Power	7700VA	8360VA	8800VA
Peak Power (off-grid)	2 times of rated power, 10s		
Rated AC Input/Output Current	31.9/30.5Aa.c	34.6/33.1Aa.c	36.4/34.8Aa.c
Max. AC Input/Output Current	35/33.5Aa.c	38/36.4Aa.c	40/38.3Aa.c
Max. Continuous AC Passthrough (grid to load)	50A		
Max. Output Fault Current	70A	76A	80A
Max. Output Overcurrent Protection	140A		
Rated Input/Output Voltage/Range	220V/230V 0.85Un-1.1Un		
Grid Connection Form	L+N+PE		
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/55Hz-65Hz		
Power Factor Adjustment Range	0.8 leading to 0.8 lagging		
Total Current Harmonic Distortion THDi	<3% (of nominal power)		
DC Injection Current	<0.5% In		
<b>Efficiency</b>			
Max. Efficiency	97.60%		
Euro Efficiency	96.50%		
MPPT Efficiency	>99%		

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	DC Type II / AC Type II
Over Voltage Category	DC Type II / AC Type III
Interface	
Display	LCD+LED
Communication Interface	RS232, RS485, CAN
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN (optional)
General Data	
Operating Temperature Range	-40~60 °C, >45 °C Derating
Permissible Ambient Humidity	0-100%
Permissible Altitude	2000m
Noise	<30 dB
Ingress Protection (IP) Rating	IP65
Inverter Topology	Non-Isolated
Over Voltage Category	OVC II(DC), OVC III(AC)
Cabinet Size (WxHxD)	366x589.5x237mm (Excluding connectors and brackets)
Weight	26.8kg
Warranty	5 years (10 years when installed with a Sunsynk battery)
Type of Cooling	Smart cooling
Grid Regulation	NRS 097-2-1; Additional connections available upon request
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2



### NOTE:

#### Safe Transport and Handling of Inverter:

When transporting the equipment, use its original packaging and keep it as a complete unit. Store the product in a dry environment, avoiding direct sunlight, and maintain a temperature range between -40°C and 60°C. Since the equipment can be quite heavy, always consider its total weight when moving, transporting, or installing it, ensuring that the installation site has adequate load-bearing capacity. Transporting and installing the inverter should be carried out solely by qualified personnel.