

SUN  SYNK®

SINGLE-PHASE HYBRID INVERTER



DATASHEET

SYNK-5K-SG04LP1-SM2

Model	SYNK-5K-SG04LP1-SM2
Battery Input Data	
Battery Type	Lead-acid or Li-Ion
Battery Voltage Range	40Vd.c ~ 60Vd.c
Max. Charging/Discharging Current	120Ad.c
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
Number of Battery Input	1
PV String Input Data	
Max. PV Access Power	10000W
Max. PV Input Power	8000W
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	300~425V
Rated PV Input Voltage	370V
Max. Operating PV Input Current	18Ad.c + 18Ad.c
Max. Input Short-Circuit Current	27Ad.c + 27Ad.c
No. of MPPT/No. of Strings per MPPT	2/1+1
Max. Inverter Backfeed Current to the Array	0
AC Input/Output Data	
Rated AC Input/Output Active Power	5000W
Max. AC Input/Output Apparent Power	5500VA
Peak Power (Off-Grid)	2 times of rated power, 10 s
Rated AC Input/Output Current	22.8/21.8Aa.c
Max. AC Input/Output Current	25/24Aa.c
Max. Continuous AC Passthrough (grid to load)	35A
Max. Output Fault Current	50A
Max. Output Overcurrent Protection	80A
Rated Input/Output Voltage/Range	220 V/230 V 0.85Un-1.1Un
Grid Connection Form	L+N+PE
Rated Input/Output Grid Frequency/Range	50 Hz/45 Hz-55 Hz 60 Hz/55 Hz-65 Hz
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
Efficiency	
Max. Efficiency	97.60%
Euro Efficiency	96.50%
MPPT Efficiency	>99%

Protection

Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection, DC Terminal Insulation Impedance Monitoring, DC Component Monitoring, Ground Fault Current Monitoring, Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, Overvoltage Load Drop Protection, Residual Current (RCD) Detection
Integrated (Optional)	Arc Fault Circuit Interrupter (AFCI)
Surge Protection Level	TYPE II (DC), TYPE II (AC)

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	<30dB
Ingress Protection (IP) Rating	IP65
Inverter Topology	Non-Isolated
Over Voltage Category	OVC II (DC), OVC III (AC)
Net Weight	19kg
Cabinet Size (WxHxD)	376×470×241.5 mm (Excluding connectors and brackets)
Warranty	5 years (10 when installed with a Sunsynk battery)
Type of Cooling	Natural Cooling
Grid Regulation	NRS 097-2-1; Additional connections available upon request
EMC/Safety Regulation	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
Pollution Degree	PD2 (Inside) PD3 (Outside)
Manufacturer Country	China



NOTICE

Safe Transport and Handling of the Inverter

When transporting the equipment, always use its original packaging and keep it intact 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. As 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 only be carried out by qualified personnel.