



# THREE-PHASE HYBRID INVERTER



## DATASHEET

SYNK-8K-SG04LP3  
SYNK-10K-SG04LP3  
SYNK-12K-SG04LP3

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Model	SYNK-8K-SG04LP3	SYNK-10K-SG04LP3	SYNK-12K-SG04LP3
Battery Input Data			
Battery Type	Lead-acid or Li-Ion		
Battery Voltage Range	40Vd.c ~ 60Vd.c		
Max. Charging/Discharging Current	190Ad.c (max.)	210Ad.c (max.)	240Ad.c (max.)
Charging Curve	3 Stages / Equalization		
External Temperature Sensor	Yes		
Charging Strategy for Li-Ion Battery	Self-adaption to BMS		
PV String Input Data			
Max. DC Input Power	10400W	13000W	15600W
PV Input Voltage	550Vd.c (160Vd.c ~ 800Vd.c)		
MPPT Range	200Vd.c ~ 650Vd.c		
Start-up Voltage	160V		
PV Input Current	13Ad.c + 13Ad.c	26Ad.c + 13Ad.c	
Max. PV Isc	17Ad.c + 17Ad.c	34Ad.c + 17Ad.c	
No. of MPPT Trackers	2		
No. of Strings Per MPPT Tracker	1+1	2+1	
AC Output Data			
Rated AC Output and UPS Power	8000W	10000W	12000W
Max. AC Output Power	8800W	11000W	13200W
Peak Power (Off-Grid)	2 times of rated power, 10 S		
AC Output Rated Current	12.1/11.6A	15.2/14.5A	18.2/17.4A
Max. AC Current	13.4/12.8A	16.7/15.9A	20/19.1A
Max. Three-phase Unbalanced Output Current	18.2/17.4A	22.7/21.7A	27.3/26.1A
Max. Output Short Circuit Current	75A		
Max. Continuous AC Passthrough	45A		
Output Frequency and Voltage	50/60Hz;3L/N/PE 220/380, 230/400Vac (Three phase)		
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%		
Protection			
Integrated	PV Arc Fault Detection, 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	TYPE II(DC), TYPE II(AC)		
Over Voltage Category	OVC II(DC), OVC III(AC)		

### Certifications and Standards

Grid Regulation	EN 50549-1, AS-NZS 4777.2, 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

### General Data

Operating Temperature Range	-40 to +60 °C, >45 °C Derating
Cooling	Intelligent Air Cooling
Noise	≤45 dB
Communication with BMS	RS485; CAN
Net Weight	38.5kg
Gross Weight	47.5kg
Cabinet Size	422W×702H×281D (Excluding connectors and brackets)
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 Years



#### 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.