

# THREE-PHASE HYBRID INVERTER



## DATASHEET




8K-SG04LP3

10K-SG04LP3

12K-SG04LP3

v.22 (12/12/2023)

[www.voltha.net](http://www.voltha.net)  
[sales@voltha.net](mailto:sales@voltha.net)  
[support@voltha.net](mailto:support@voltha.net)

 **PLEASE RETAIN FOR  
FUTURE REFERENCE**

Model	SYNK-8K-SG04LP3	SYNK-10K-SG04LP3	SYNK-12K-SG04LP3
<b>Battery Input Data</b>			
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		
<b>PV String Input Data</b>			
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	
<b>AC Output Data</b>			
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, 10s		
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	35A		
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		
<b>Efficiency</b>			
Max. Efficiency	97.60%		
Euro Efficiency	97.00%		
MPPT Efficiency	>99%		
<b>Protection</b>			
PV Arc Fault Detection	Integrated		
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		

Surge Protection	DC Type III / AC Type III
Over Voltage Category	DC Type II / AC Type III
<b>Certifications and Standards</b>	
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150
EMC/Safety Regulation	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4
<b>General Data</b>	
Operating Temperature Range	-40~60 °C, >45 °C Derating
Cooling	Smart cooling
Noise	≤45 dB
Communication with BMS	RS485; CAN
Weight	38.5kg
Cabinet size	422W×702H×281D (Excluding connectors and brackets)
Protection Degree	IP65
Installation Style	Wall-mounted
Warranty	5 years