



Product Service

CERTIFICATE

No. Z2 119210 0012 Rev. 00

Holder of Certificate: **Senmarck Energy Ltd**
2F Building 5A, Tusincere Park, No. 333 Longfei Rd
Longgang District
518100 Shenzhen
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: **Converter**
(Hybrid Solar Inverter)

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 64290233064401

Valid until: 2027-12-05

Date, 2023-05-12

(Billy Qiu)

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Model(s): Guard Plus-8KH3, Guard Plus-10KH3,
Guard Plus-12KH3

Parameters:

Model Name	Guard Plus-8KH3	Guard Plus-10KH3	Guard Plus-12KH3
Battery terminal Data			
Battery Voltage Range	44~58 Vd.c.		
Max. Charge Current	160 Ad.c.		
Max. Discharge Current	160 Ad.c.	200 Ad.c.	
Max. Charge Power	8000 W		
Max. Discharge Power	8000 W	10000 W	
PV String Input Data			
Max. PV Input Power	16000 W	20000 W	20000 W
Max. PV Input Voltage	1100 Vd.c.		
MPPT Range	140-1000 Vd.c.		
MPPT Range (Full load)	380~850 Vd.c.	420~850 Vd.c.	480~850 Vd.c.
Nominal PV Input Voltage	720 Vd.c.		
Max. Input Current	15 Ad.c. x 2		
Max. Short Current	20 Ad.c. x 2		
No. of MPP Trackers	2		
Strings per MPP Tracker	1		
AC terminal Data(On-grid)			
Nominal Output Power	8000 W	10000 W	12000 W
Max. Output Power	8800 VA	11000 VA	13200 VA
Nominal Input Power	16000 W	17800 W	
Max. Input Power	16000 VA	17800 VA	
Nominal Output Voltage	3W/N/PE, 230/400 Va.c.		
Nominal Output Frequency	50/60 Hz		
Max. AC Output Current	12.8 Aa.c.	16 Aa.c.	19.2 Aa.c.
Rated AC Output Current	11.6 Aa.c.	14.5 Aa.c.	17.4 Aa.c.
Max. AC Input Current	25 Aa.c.	25 Aa.c.	
Rated AC Input Current	23.2 Aa.c.	25 Aa.c.	
Output Power Factor	Adjustable from 0.8 leading to 0.8 lagging		
AC Output Data (Back-up/Load Control)			
Max. Output Power	8000 VA	10000 VA	10000 VA
Rated Output Power	7360 W	9200 W	9200 W
Rated Output current	10.7 Aa.c.	13.3 Aa.c.	13.3 Aa.c.
Max. Output Current	11.6 Aa.c	14.5 Aa.c.	14.5 Aa.c.
Nominal Output Voltage	3/N/PE, 230/400Va.c.		
Nominal Output Frequency	50/60 Hz		
General Data			
Operating Temperature Range	-25°C ~+60°C (derating above 40°C)		
Relative Humidity	0-95%		
Operating Altitude	≤2000 m		

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Cooling	Nature Cooling
Protection class	I
Ingress protection	IP65

**Tested
according to:**

IEC 62109-1:2010
EN 62109-1:2010
IEC 62109-2:2011
EN 62109-2:2011