

## VERIFICATION OF COMPLIANCE

No.: GZES2503003702PV

Applicant: Shenzhen Aohai Digital Power Co., Ltd.  
10<sup>th</sup> Floor, Building 4, Tianan Yungu Industrial Park Phase II,  
Gangtou Community, Bantian Street, Longgang District,  
Shenzhen, Guangdong, China

Manufacturer: Shenzhen Aohai Digital Power Co., Ltd.  
10<sup>th</sup> Floor, Building 4, Tianan Yungu Industrial Park Phase II,  
Gangtou Community, Bantian Street, Longgang District,  
Shenzhen, Guangdong, China

Product Name: Single Phase Hybrid Inverter

Product Description: Inverter used in PV system

Model No.: HSA-8K1P-BL, HSA-10K1P-BL, HSA-12K1P-BL

Trade Mark: **AOHAI**

Rating: See page 2-3

Protection against Electric Shock: Class I

Degree of Protection: IP66

Additional Information: Software version: BB1.0  
Hardware version: HAS-8-12K1P-BL-V1.0

Sufficient samples of the product have been tested and found to be in conformity with

Test Standard: IEC 62109-1:2010  
IEC 62109-2:2011

as shown in the

Test Report Number(s): GZES250300370201  
GZES250300370202

This Verification of Compliance has been granted to the applicant based on the results of tests, performed by Laboratory of SGS-CSTC Standards Technical Services Co., Ltd. On sample of the above-mentioned product in accordance with the provisions of the relevant specific standards.

  
David Guo

Technical Manager

SGS-CSTC Standards Technical Services Co., Ltd.

2025-10-20

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**SGS-CSTC Standards Technical Services Co., Ltd.**  
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[www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
Member of the SGS Group (SGS SA)

No.: GZES2503003702PV  
 Other information added:  
 Rating:

Rating specifications of Hybrid Inverter			
Model	HSA-8K1P-BL	HSA-10K1P-BL	HSA-12K1P-BL
Solar Input Data			
Recommended Max. PV Array Size (W)	16000	24000	
Max. PV Input Power (W)	12000	18000	
Max. Input Voltage (V)	500		
Start-up Voltage (V)	120		
Nominal Input Voltage (V)	370		
MPPT Operating Voltage Range (V)	120~425		
Max. Input Current per MPPT (A)	27+27	27+27+27	
Max. Short Circuit Current per MPPT (A)	44+44	44+44+44	
Number of MPPT	2	3	
Number of Strings per MPPT	2+2	2+2+2	
Battery Data			
Battery Type	Lead-acid or Lithium-ion		
Battery Voltage Range (V)	40~60		
Max. Charge / Discharge Current (A)	190	220	250
AC Input Data (Grid&Generator)			
Nominal Input Voltage (V)	230, L+N+PE		
Input Voltage Range (V)	0.85Un-1.1Un		
Max. Continuous Curent (A)	60		
AC Frequency / Range (Hz)	50/45-55		
AC Output Data (On-Grid)			
Nominal Output Power (W)	8000	10000	12000
Max. Apparent Output Power (VA)	8800	11000	13200
Nominal Output Voltage (V)	230, L+N+PE		
Nominal Grid Frequency / Range (Hz)	50/45-55		
Nominal Output Current (A)	34.8	43.5	52.2
Max. Output Current (A)	38.3	47.9	57.4
Power Factor	0.8 leading~0.8 lagging		
THD (at nominal power)	<3%		

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No.:

GZES2503003702PV

Other information added:

Rating:

Rating specifications of Hybrid Inverter			
Model	HSA-8K1P-BL	HSA-10K1P-BL	HSA-12K1P-BL
AC Output Data (Back-UP)			
Nominal Output Power (W)	8000	10000	12000
Max. Apparent Output Power (VA)	8800	11000	13200
Nominal AC Voltage (V)	230, L+N+PE		
Nominal Grid Frequency / Range (Hz)	50/45-55		
Nominal Output Current (A)	34.8	43.5	52.2
Max. Output Current (A)	38.3	47.9	57.4
THDv (@linear load)	< 3 %		
General Data			
Dimension (W*H*D) (mm)	420×680×252 (Excluding connectors and brackets)		
Weight (kg)	34.5		
Operating Temperature Range (°C)	-25 to +60°C, >45°C Derating		
Altitude (m)	2000		
Cooling Method	Intelligent Air Cooling		
Ingress Protection	IP66		
Over Voltage Category	OVC II (DC), OVC III (AC)		
Topology	Non-Isolated		

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