

Technical Report No.: 64.290.22.31001.01

Date: 2022-10-13

Client: AISWEI Technology (Shanghai) Co., Ltd.
Room 905B, 757 Mengzi Road Huangpu District 200023 Shanghai
PEOPLE'S REPUBLIC OF CHINA

Factory: AISWEI New Energy Technology (Yangzhong) Co., Ltd.
No.588 Gangxing Road, Economic Development Zone, 212200
Yangzhong PEOPLE'S REPUBLIC OF CHINA

Test object: Product: Hybrid Solar Inverter
Model: ASW06kH-T1, ASW08kH-T1, ASW10kH-T1,
ASW12kH-T1, ASW15kH-T1

Test specification: VDE-AR-N 4105:2018 and DIN VDE V 0124-100:2020

Purpose of examination: • Testing and evaluation according to the test specification

Test result: The test results show that the presented product is in compliance with the above listed test specifications.

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1. Description of the test object

1.1 Picture(s)



Front view



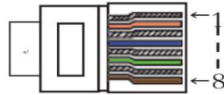
internal view



Terminal view

1.2 Function

- (1) All the models are three phase non-isolated type multi-functions hybrid solar inverter which will be installed and connected to the grid network after installation, for indoor and outdoor use.
- (2) If certain functions are not permitted by local regulation, the function shall be disabled by hardware or software setting (if applicable) by the manufacturer before putting into the market. For example, it's not permissible to draw electricity from the grid and then feed it back in order to claim statutory reimbursement in some nations.
- (3) Low voltage electrical installations shall comply with national and local regulation. Only qualified electricians are allowed to install and maintain the converter.
- (4) In order to protect the inverter, user and installer, external DC and AC circuit breaker shall be equipped for all source port (battery, AC grid) at the end-use application
- (5) Software version: ARM: V1.03.08, DSP: V1.02.11
- (6) The PCE uses the DRM port for remote logic control, after receiving the signal, the inverter will decrease output active power to zero in 5 seconds. The DRM port is connected to pin 5 and pin 7 or 8 of the terminal



1	2	3	4	5	6	7	8
DRM1/5	DRM2/6	DRM3/7	DRM4/8	+5V	DRM0	GND	GND

1.3 Consideration of the foreseeable use

- ☐ Not applicable
☒ Covered through the applied standard
☐ Covered by the following comment
☐ Covered by attached risk analysis

1.4 Technical Data

Model	ASW06kH-T1	ASW08kH-T1	ASW10kH-T1	ASW12kH-T1	ASW15kH-T1
Battery terminal parameters					
Rated battery DC voltage	200Vd.c.	250Vd.c.	300Vd.c.	350Vd.c.	400Vd.c.
Battery DC voltage range	125-600Vd.c.				
Max charging / discharging current	50 Ad.c.				
Maximum charge/discharge power	15000 W				
Battery type	Lithium-ion				
PV terminal parameters					
Max. Input Power	9000W	12000W	15000W	18000W	22500W
Maximum DC input voltage	1000Vd.c.				
MPPT Range	180~850Vd.c.				
MPPT Range (full load)	250~850 Vd.c.	330~850 Vd.c.	430~850 Vd.c.	510~850 Vd.c.	620~850 Vd.c.
Max. Input Current	2*13Ad.c.				
Isc PV	2*25Ad.c.				
Grid terminal parameters					
Rated output Power	6000W	8000W	10000W	12000W	15000W
Maximum continuous output apparent power	6600VA	8800VA	11000VA	13200VA	16500VA
Max. AC output current	9.5Aa.c.	12.7Aa.c.	15.9Aa.c.	19.1Aa.c.	23.8Aa.c.
Max. active power PEmax	5999.1W	7980.2W	9987.6W	11992.4W	15004.9W
Max. apparent power SEMax	6614.0VA	8837.8VA	11003.5VA	13192.0VA	16540.9VA

Maximum continuous input apparent power	13200VA	17600VA	22000VA	26400VA	30000VA
Max. AC input current	19Aa.c.	25.5Aa.c.	31.9Aa.c.	38.2Aa.c.	43.5Aa.c.
Rated AC voltage	230/400Va.c., 3W+N+PE				
Rated AC frequency	50Hz				
Power factor	0.9 lagging to 0.9 leading				
Backup terminal parameters					
Rated apparent power	6000VA	8000VA	10000VA	12000VA	15000VA
Maximum continuous output apparent power	6600VA	8800VA	11000VA	13200VA	16500VA
Max. AC current	9.5Aa.c.	12.7Aa.c.	15.9Aa.c.	19.1Aa.c.	23.8Aa.c.
Rated AC voltage	230/400Va.c., 3W+N+PE				
Rated AC frequency	50Hz				

1.5 Rating Label

Model: ASW06kH-T1

PV input port	Max. PV input power	9kW
	Max. PV input voltage	dc,1000V
	MPPT voltage range	dc,180-850V
	Full Power MPPT voltage range	dc,250-850V
	Max. PV input current	dc,2*13A
Isc PV(absolute maximum)	dc,2*25A	
Battery input port	Rated battery voltage	200V
	Battery voltage range	125V-600V
	Rated battery charge /discharge current	dc,40/40A
	Max. battery charge /discharge current	dc,50/50A
	Battery type	Lithium-ion
Grid output/input port	Rated grid voltage	3W+N+PE,230/400V
	Rated grid frequency	50Hz/60Hz
	Rated output power	6000W
	Max. grid output apparent power	6600VA
	Max. grid output current	ac,9.5A
Backup output port	Max. grid input apparent power	13200VA
	Max. grid input current	ac,19A
	Rated BACK-UP voltage	3W+N+PE,230/400V
	Rated BACK-UP frequency	50Hz/60Hz
	Max. BACK-UP output apparent power	6600VA
General information	Max. BACK-UP output current	ac,9.5A
	Adjustable cos (φ)	0.8ind...0.8cap
	Operating temperature range	-25.....+60℃
	Inverter topology	Non-Isolated
	Ingress protection	IP65
Protective class	I	
Overvoltage category	II(PV),III(MAINS)	

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Model: ASW08kH-T1





PV input port	Max. PV input power	12kW
	Max. PV input voltage	dc,1000V
	MPPT voltage range	dc,180-850V
	Full Power MPPT voltage range	dc,330-850V
	Max. PV input current	dc,2*13A
Isc PV(absolute maximum)	dc,2*25A	
Battery input port	Rated battery voltage	250V
	Battery voltage range	125V-600V
	Rated battery charge /discharge current	dc,40/40A
	Max. battery charge /discharge current	dc,50/50A
	Battery type	Lithium-ion
Grid output/input port	Rated grid voltage	3W+N+PE,230/400V
	Rated grid frequency	50Hz/60Hz
	Rated output power	8000W
	Max. grid output apparent power	8800VA
	Max. grid output current	ac,12.7A
Backup output port	Max. grid input apparent power	17600VA
	Max. grid input current	ac,25.5A
	Rated BACK-UP voltage	3W+N+PE,230/400V
	Rated BACK-UP frequency	50Hz/60Hz
	Max. BACK-UP output apparent power	8800VA
General information	Max. BACK-UP output current	ac,12.7A
	Adjustable cos (φ)	0.8ind...0.8cap
	Operating temperature range	-25.....+60℃
	Inverter topology	Non-Isolated
	Ingress protection	IP65
Protective class	I	
Overvoltage category	II(PV),III(MAINS)	

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Model: ASW10kH-T1

PV input port	Max. PV input power	15kW
	Max. PV input voltage	dc,1000V
	MPPT voltage range	dc,180-850V
	Full Power MPPT voltage range	dc,430-850V
	Max. PV input current	dc,2*13A
Isc PV(absolute maximum)	dc,2*25A	
Battery input port	Rated battery voltage	300V
	Battery voltage range	125V-600V
	Rated battery charge /discharge current	dc,40/40A
	Max. battery charge /discharge current	dc,50/50A
	Battery type	Lithium-ion
Grid output/input port	Rated grid voltage	3W+N+PE,230/400V
	Rated grid frequency	50Hz/60Hz
	Rated output power	10000W
	Max. grid output apparent power	11000VA
	Max. grid output current	ac,15.9A
Backup output port	Max. grid input apparent power	22000VA
	Max. grid input current	ac,31.9A
	Rated BACK-UP voltage	3W+N+PE,230/400V
	Rated BACK-UP frequency	50Hz/60Hz
	Max. BACK-UP output apparent power	11000VA
General information	Max. BACK-UP output current	ac,15.9A
	Adjustable cos (φ)	0.8ind...0.8cap
	Operating temperature range	-25.....+60℃
	Inverter topology	Non-Isolated
	Ingress protection	IP65
Protective class	I	
Overvoltage category	II(PV),III(MAINS)	

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 Model: ASW12kH-T1		 Model: ASW15kH-T1	
PV input port	Max. PV input power	18kW	22.5kW
	Max. PV input voltage	dc,1000V	dc,1000V
	MPPT voltage range	dc,180-850V	dc,180-850V
	Full Power MPPT voltage range	dc,510-850V	dc,620-850V
	Max. PV input current	dc,2*13A	dc,2*13A
Battery input port	Isc PV(absolute maximum)	dc,2*25A	dc,2*25A
	Rated battery voltage	350V	400V
	Battery voltage range	125V-600V	125V-600V
	Rated battery charge /discharge current	dc,40/40A	dc,40/40A
	Max. battery charge /discharge current	dc,50/50A	dc,50/50A
Grid output/input port	Battery type	Lithium-ion	Lithium-ion
	Rated grid voltage	3W+N+PE,230/400V	3W+N+PE,230/400V
	Rated grid frequency	50Hz/60Hz	50Hz/60Hz
	Rated output power	12000W	15000W
	Max. grid output apparent power	13200VA	16500VA
Backup output port	Max. grid output current	ac,19.1A	ac,23.8A
	Max. grid input apparent power	26400VA	30000VA
	Max. grid input current	ac,38.2A	ac,43.5A
	Rated BACK-UP voltage	3W+N+PE,230/400V	3W+N+PE,230/400V
	Rated BACK-UP frequency	50Hz/60Hz	50Hz/60Hz
General information	Max. BACK-UP output apparent power	13200VA	16500VA
	Max. BACK-UP output current	ac,19.1A	ac,23.8A
	Adjustable cos (φ)	0.8ind...0.8cap	0.8ind...0.8cap
	Operating temperature range	-25...+60℃	-25...+60℃
	Inverter topology	Non-Isolated	Non-Isolated
General information	Ingress protection	IP65	IP65
	Protective class	I	I
	Overvoltage category	II(PV),III(MAINS)	II(PV),III(MAINS)
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2. Order

2.1 Date of Purchase Order, Customer's Reference

2021-08-02; 2022-08-02

2.2 Test Sample(s)

- Reception date(s): 2021-08-02; 2022-08-23
- Location(s) of reception: TÜV SÜD Testing Center, D1 building, No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, P.R. China
- Condition of test sample(s): Intact

2.3 Date(s) of Testing

2022-04-01 to 2022-08-22; 2022-08-23 to 2022-10-13

2.4 Location(s) of Testing

TÜV SÜD Testing Center, D1 building, No. 63 Chuangqi Road, Shilou Town, Panyu District, Guangzhou 511447, P.R. China

2.5 Points of Non-Compliance or Exceptions of the Test Procedure

- None

3. Test Results

- Decision rule according to IEC Guide 115:2021, clause 4.4.3, 4.5.1 was applied.

3.1 Positive Test Results

Test specification(s)	Report no. / Rev. No.	Date	Remark
Grid code safety:	64.290.22.3147.01	2022-10-13	

4. Remarks

4.1 General

The user manual has been examined according to the minimum requirements described in the product standard. The manufacturer is responsible for the accuracy of further particulars as well as of the composition and layout.

5. Documentation

- None


6. Summary

The test specifications are met.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch TÜV SÜD Group

Tested by: Wendy Zhao, Jenn Huang *Wendy Zhao Jenn Huang*
printed name, function & signature

Approved by: Iris Zheng *Iris Zheng*
printed name, function & signature



--- End of Report ---