

Quick Installation Guide

Model: ASW3000/3680/4000/5000-S

Language: English

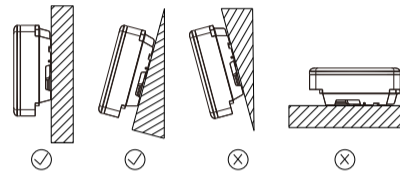


I. Safety Instruction

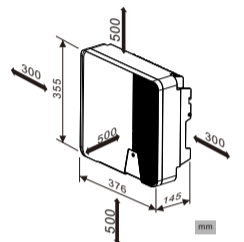
1. The contents of this document will be updated irregularly for product version upgrade or other reasons. Unless otherwise specified, this document only works as guide. All statements, information and suggestions in this document do not constitute any guarantee.
2. This product can only be installed, commissioned, operated and maintained by technicians who have carefully read and fully understood the user manual.
3. This product must only be connected with PV modules of protection class II (in accordance with IEC 61730, application class A). PV modules with a high capacitance to ground must only be used if their capacity does not exceed 1μF. Do not connect any sources of energy other than PV modules to the product.
4. When exposed to sunlight, the PV modules generate dangerous high DC voltage which is present in the DC cable conductors and live components. Touching live DC cable conductors and live components can result in lethal injuries due to electric shock.
5. All components must remain within their permitted operating ranges at all times.
6. The product complies with Electromagnetic compatibility 2014/30/EU, Low Voltage Directive 2014/35/EU and Radio Equipment Directive 2014/53/EU.

II. Mounting environment

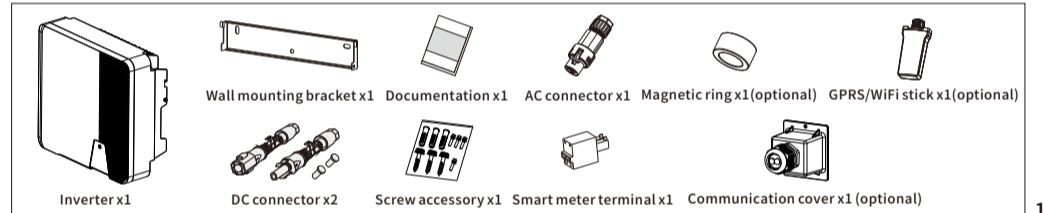
1. Ensure that the inverter is installed out of the reach of children.
2. To ensure best operating status and prolonged service life, the mounting ambient temperature of the inverter should be $\leq 40^{\circ}\text{C}$.
3. To avoid direct sunlight, rain, snow, ponding on the inverter, it is suggested to mount the inverter in places with a top protective roof. Do not completely cover the top of the inverter.
4. The mounting condition must be suitable for the weight and size of the inverter. The inverter is suitable to be mounted on solid wall that is vertical or tilted backwards (Max. 15°). It is not recommended to install the inverter on wall made of plasterboards or similar materials. The inverter may make noise when working.



5. To ensure adequate heat dissipation, the clearances between the inverter and other objects are recommended as follows:

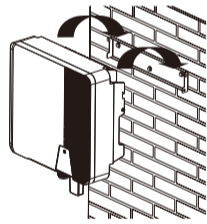
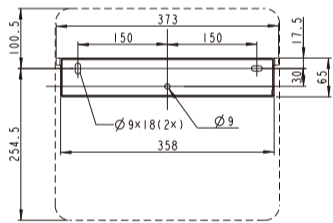


III. Scope of delivery

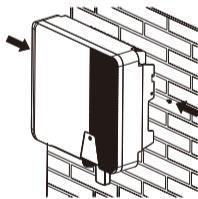
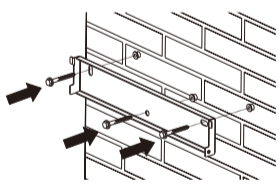


IV. Inverter's mounting

1. Use a $\Phi 10\text{mm}$ bit to drill 3 holes at a depth of about 70mm according to the location of the wall mounting bracket.
3. Hang the inverter to the wall mounting bracket.



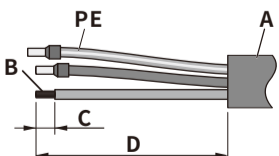
2. Insert wall plugs into the wall and fix the wall mounting bracket to the wall by screwing three self-tapping screws (SW10).
4. Secure the inverter to the wall mounting bracket on both sides using M4 screws. Screwdriver type: PH2, torque: 1.6Nm.



V. AC connection

- DANGER**
- All electrical installations must be done in accordance with all local and national rules.
 - Make sure that all DC switches and AC circuit breakers have been disconnected before establishing electrical connection. Otherwise, the high voltage within the inverter may lead to electrical shock.
 - In accordance with safety regulations, the inverter need be grounded firmly. When poor ground connection (PE) occurs, the inverter will report PE grounding error. Please check and ensure that the inverter is grounded firmly or contact AISWEI service.

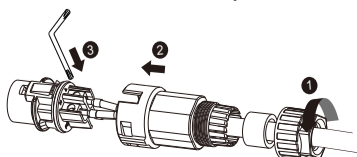
1. AC cable requirements are as follows. Insert the conductor into a suitable ferrule acc. to DIN 46228-4 and crimp the contact.



Object	Description	Value
A	External diameter	10-16mm
B	Copper conductor cross-section	4-6mm ²
C	Stripping length of the insulated conductors	13mm
D	Stripping length of the cable outer sheath	53mm

The PE conductor must be 2mm longer than the L and N conductors.

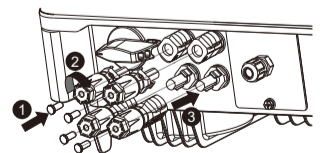
2. Loosen the swivel nut of AC connector. Insert the crimped conductors into corresponding terminals and tighten screws with the accompanied Allen key. Torque: 2.0Nm



VI. DC connection

- DANGER**
- Make sure PV modules have good insulation against ground.
 - On the coldest day based on statistical records, the Max. open-circuit voltage of the PV modules must not exceed the Max. input voltage of the inverter.
 - Check the polarity of DC cables.
 - Ensure that DC switch has been disconnected.
 - Do not disconnect DC connectors under load.

1. Please refer to "DC Connector Installation Guide".
2. Before DC connection, insert the DC plug connectors with sealing plugs into DC input connectors of the inverter to ensure protection degree.

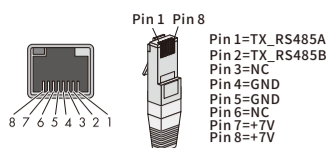


VII. Communication setup

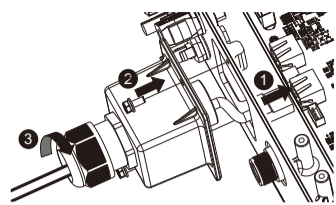
- DANGER**
- Separate communication cables from power cables and serious interference sources.
 - The communication cables must be CAT-5E or higher-level shield cables. Pin assignment complies with EIA/TIA 568B standard. For outdoor use, the communication cables must be UV-resistant. The total length of communication cable cannot exceed 1000m.
 - If only one communication cable is connected, insert a sealing plug into the unused hole of sealing ring of the cable gland.
 - Before connecting communication cables, ensure the protective film or communication plate attached to the communication opening on the inverter is sealed tightly.

1. COM1: RS485(optional)

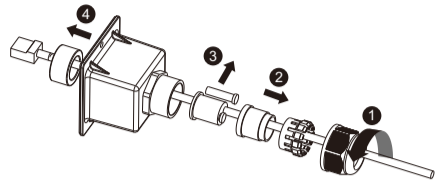
1) RS485 cable pin assignment as below.



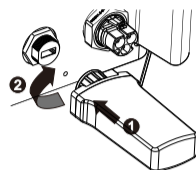
3) Insert the cable into the socket, attach the communication cover to inverter with M4 screws, and tighten the swivel nut. Screwdriver type: PH2, torque: 1.6Nm



2) Loosen the swivel nut of the cable gland on the communication cover, remove sealing plugs and lead the cable through the swivel nut, sealing ring, communication cover and magnetic ring.



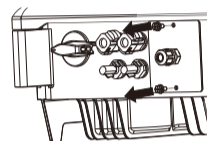
2. COM2: GPRS/WiFi(optional)



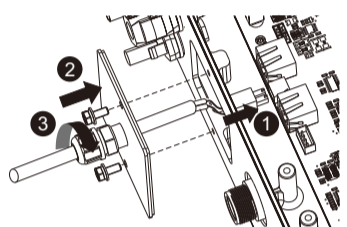
The connection refers to "GPRS/WiFi-stick User Manual".

3. COM1: Smart meter(optional)

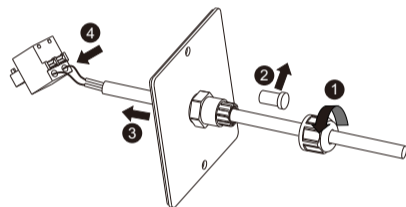
1) Remove the communication plate from the inverter.



3) Insert the smart meter terminal to the socket, attach communication plate to the inverter with M4 screws, and tighten the swivel nut. Screwdriver type: PH2, torque: 1.6Nm.



2) Loosen the swivel nut of the cable gland on the communication plate, remove the sealing plug and lead the stripped cable through the cable gland and communication plate, press the latch of the smart meter terminal and insert the stripped cable accordingly. Make sure the cable is connected firmly.



4) If communication cover used, remove only one sealing plug of the cable gland to thread the cable. Detailed installation process follows above steps.

VIII. Commissioning



Notice

- Check that the inverter is grounded reliably.
- Check that the ventilation condition surrounding the inverter is good.
- Check that the grid voltage at the point of connection of the inverter is within the permitted range.
- Check that the sealing plugs in DC connectors and the communication cable gland are sealed tightly.
- Check that grid connection regulations and other parameter settings meet safety requirements.

- Switch on AC circuit breaker between the inverter and the grid.
- Switch on DC switch.
- When there is sufficient DC power applied and the grid conditions are met, the inverter will start to operate automatically.

IX. EU Declaration of Conformity

Within the scope of the EU directives:

- Electromagnetic compatibility 2014/30/EU (L 96/79-106, March 29, 2014)(EMC)
- Low voltage directive 2014/35/EU (L 96/357-374, March 29, 2014)(LVD)
- Radio equipment directive 2014/53/EU (L 153/62-106, May 22, 2014)(RED)



AISWEI Technology (Shanghai) Co., Ltd. confirms herewith that the inverters mentioned in this document are in compliance with the fundamental requirements and other relevant provisions of the above mentioned directives. The entire EU Declaration of Conformity can be found at www.aiswei-tech.com.

X. Technical Data

Technical Data	ASW3000-S	ASW3680-S	ASW4000-S	ASW5000-S
DC Input				
Max. PV modules power(STC)	4500W	5520W	6000W	7500W
Max. DC input voltage	580V			
MPP voltage range	80-550V			
Max. DC input current	2×12A			
Max. DC input short current	2×18A			
Max. DC input current, per MPPT	12A			
Number of MPPT/strings per MPPT	2/1			
AC Output				
Rated active power	3000W	3680W	4000W	5000W
Max. apparent power	3000VA	3680VA	4000VA	5000VA
Rated grid voltage	220/230V			
Rated grid frequency	50/60Hz			
Max. AC output current	15A	16A	20A	22.7A
Adjustable displacement power factor	0.8 ind...0.8 cap			
Harmonic distortion (THD) at Pac.r	< 3%			
General Data				
Dimensions (W x H x D)	376×355×145mm			
Weight	11kg			
Noise emission (typical)	< 25dB(A)@1m			
DC connection	Plug-in DC connector			
AC connection	Plug-in AC connector			
Communication	GPRS/WiFi, RS485(Optional)			
Display	LED			
Mounting	Wall mounting			
Cooling	Convection			
Operating temperature range	-25...+60°C			
Relative humidity (non-condensing)	0...100%			
Max. operating altitude	4000m(Derating above 3000m)			
Degree of protection	IP65			
Climate Category	4K4H			
Topology	Transformerless			

XI. Contact

If you have any technical problems with our products, please contact our service. We require the following information in order to provide you with the necessary assistance:

- Inverter device type
- Inverter serial number
- Type and number of connected PV modules
- Error code
- Mounting location
- Warranty card

EMEA
Service email: service.EMEA@solplanet.net

APAC
Service email: service.APAC@solplanet.net

LATAM
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<https://solplanet.net/contact-us/>

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