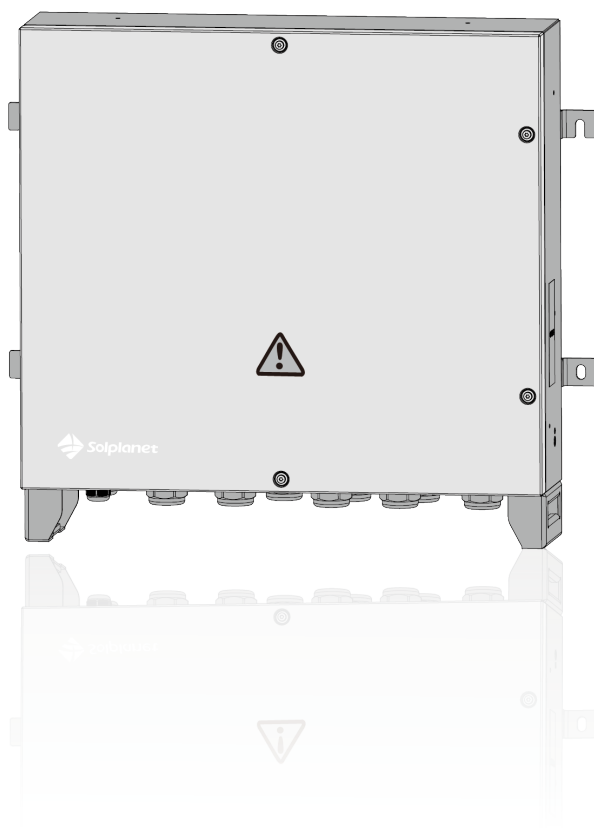


Ai-AMU 2000 (EN)

Quick Installation Guide



1 General Information

This quick installation guide should be read together with the user manual. In case of doubt and uncertainties, the content in the user manual takes precedence over the content in this guide.

The contents of this guide may be updated or revised due to product development and continuous improvement. The information in this guide is subject to change without notice. The latest version of this document and the user manual for installation, commissioning, configuration and decommissioning are to be found in PDF format at www.solplanet.net.

2 Safety

2.1 Intended Use

The Aiswei sub-array management communication unit is an outdoor cabinet, which is equipped with Aiswei Ai-Logger 2000, Anti-PID module, Aiswei ABUS module, insulation monitoring module, Ethernet switch, optical cable terminal box, etc. It manages the photovoltaic sub-array inverter, collects inverter data, and adjusts the inverter operation status. As a key connection node between the inverter and the photovoltaic power station monitoring system, it realizes real-time monitoring and management scheduling of photovoltaic power station data, helping users improve power station management and operation and maintenance efficiency.

Aiswei array management unit has built-in 2-way ABUS and 2-way Anti-PID modules and supports three-winding double-split box transformer access.

This product has been designed and tested strictly according to the international safety requirements and industry standards. As with all electrical or electronical devices, there are residual risks despite careful construction. To prevent personal injury, property damage and to ensure long-term operation of the product, read this section carefully and observe all safety information at all times.

This document does not replace any regional, state, provincial, federal or national laws, regulations or standards that apply to the installation, electrical safety and use of the product.

2.2 Important Safety Instructions

Before installing, operating, or maintaining the equipment, read this document thoroughly and follow all safety instructions (including those on the equipment).

DANGER

Touching the exposed conductors of the ABUS communication port may result in an electric shock hazard!

The communication line from the ABUS communication port is directly connected to the inverter's AC side. Contact with live conductors when the upstream switch is not disconnected will result in a fatal risk of electric shock.

- To use the ABUS communication port (ABUS) feature, install the product must be installed in a restricted area.
- Before installing the communication line for ABUS communication port, the upstream AC circuit breaker must be turned off.
- Do not touch the communication lines and or connection terminals for ABUS communication during normal operation of this the product.

DANGER

Damage to to electrical cables and utility service lines can cause personal injury!

Electrical cables or utility service lines (gas or water) may be mounted externally on walls.

- Ensure no cables or utility service lines mounted on the wall or inside the wall cavity are damaged when drilling.

DANGER

Danger to life due to high voltage of the Ai-AUM 2000 !

Tough voltages are present in the live components of the Ai-AUM 2000. Touching live components results in serious injury or death due to electric shock.

- Wears personal protective equipment when working on the Ai-AUM 2000.
- Do not touch live components.
- Before performing any work, always disconnect the Ai-AUM 2000 from voltage sources and ensure that no voltage is present. Cover or isolate any adjacent live components. Protective covers must always be mounted.

NOTICE

Damage to the product due to electrostatic discharge risk!

Internal components of the product can be irreparably damaged by electrostatic discharge.

- Always ground yourself before handling any component.

3 EU Declaration of Conformity

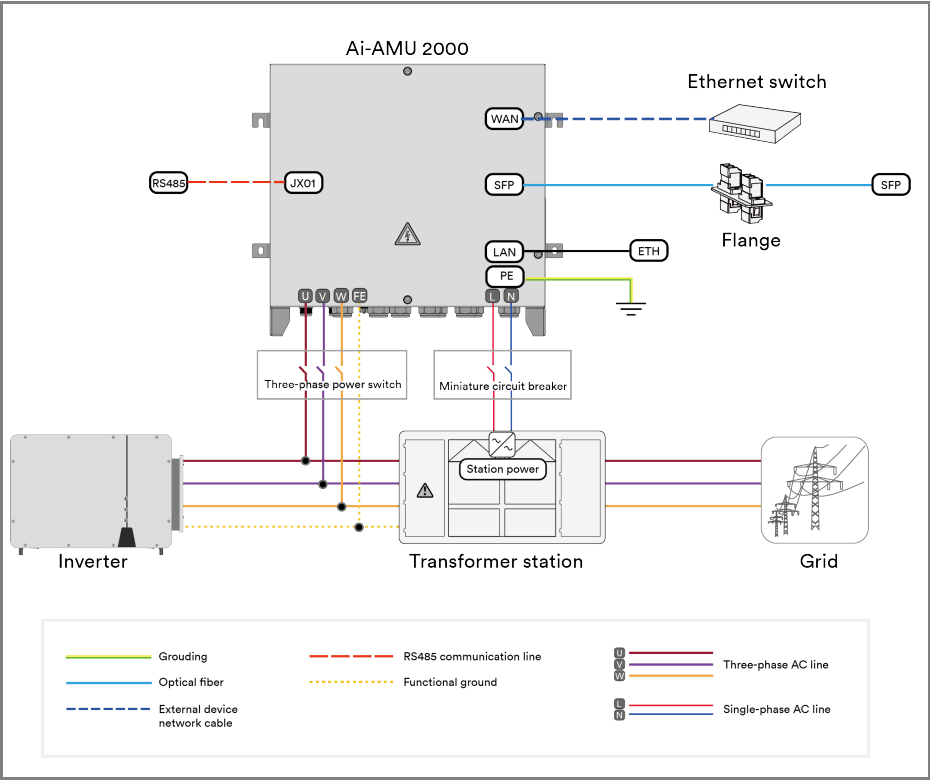
Within the scope of the EU directives

- Radio Equipment Directive 2014/53/EU (L 153/62-106. May 22. 2014) (RED)
- Restriction of the use of certain hazardous substances 2011/65/EU (L 174/88, June 8, 2011) and 2015/863/EU (L 137/10, March 31, 2015) (RoHS) AISWEI Technology Co., Ltd. confirms herewith that the product described in this manual are in compliance with the fundamental requirements and other relevant provisions of the above mentioned directives.

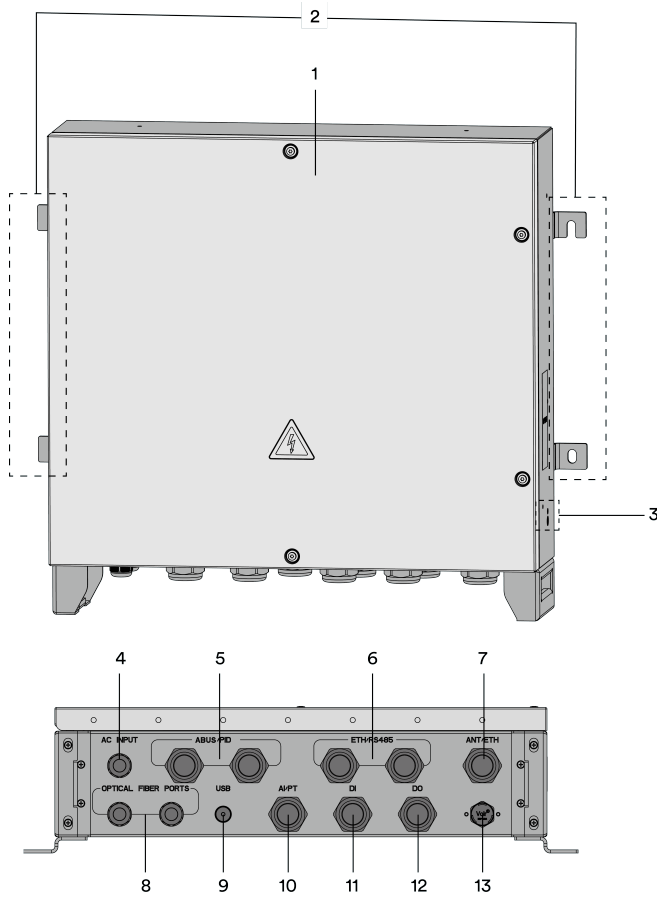


The entire EU Declaration of Conformity can be found at www.solplanet.net.

4 System Structure



5 Overview

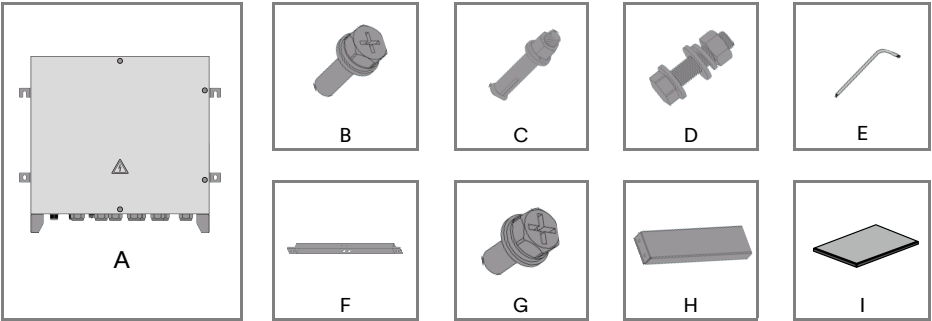


No.	Name
1	Cabinet Door
2	Mounting brackets
3	Grounding point of cabinet
4	Single-phase AC port
5	Three-phase ABUS/PID port
6	Ethernet/RS485 communication port
7	Antenna/Ethernet port

8	Optical fibre port
9	USB port
10	AI/PT signal port
11	DI signal port
12	DO signal port
13	Ventilation valve

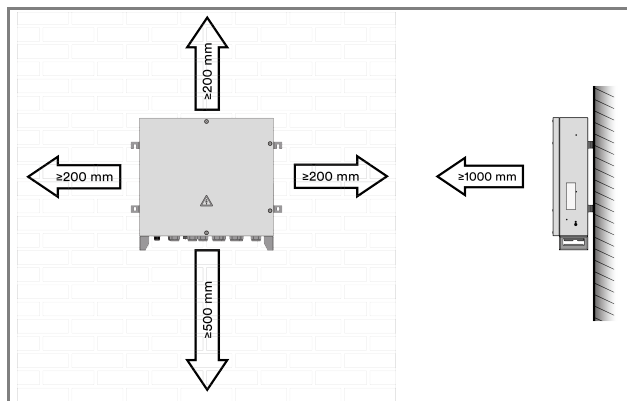
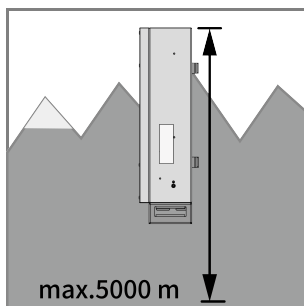
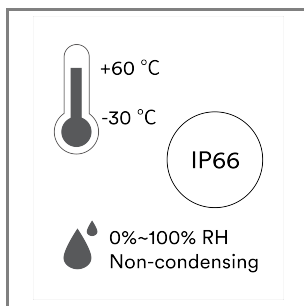
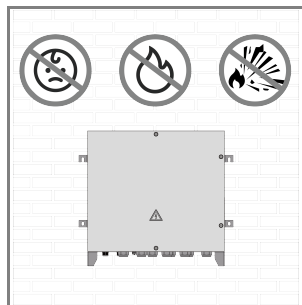
6

Scope of Delivery

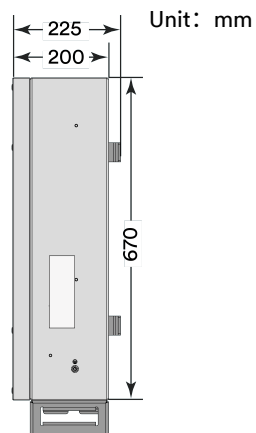
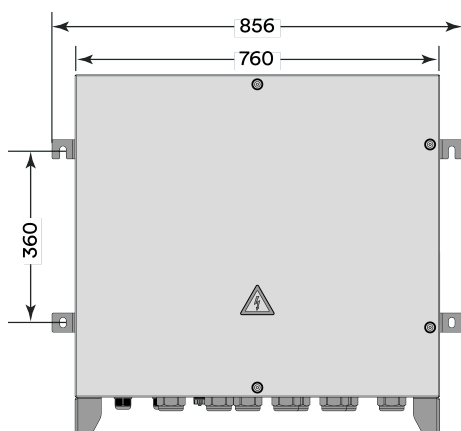


NO.	Name	Quantity
A	Ai-AMU 2000	1
B	M6x16 Screw	2
C	M12 Expansion bolt	4
D	M12 Combination bolt	4
E	Plum spanner	1
F	Pole mounting bracket	2
G	M5x12 screw	5
H	Vertical Connector bracket	1
I	Documentation package	1

7 Mounting Environment



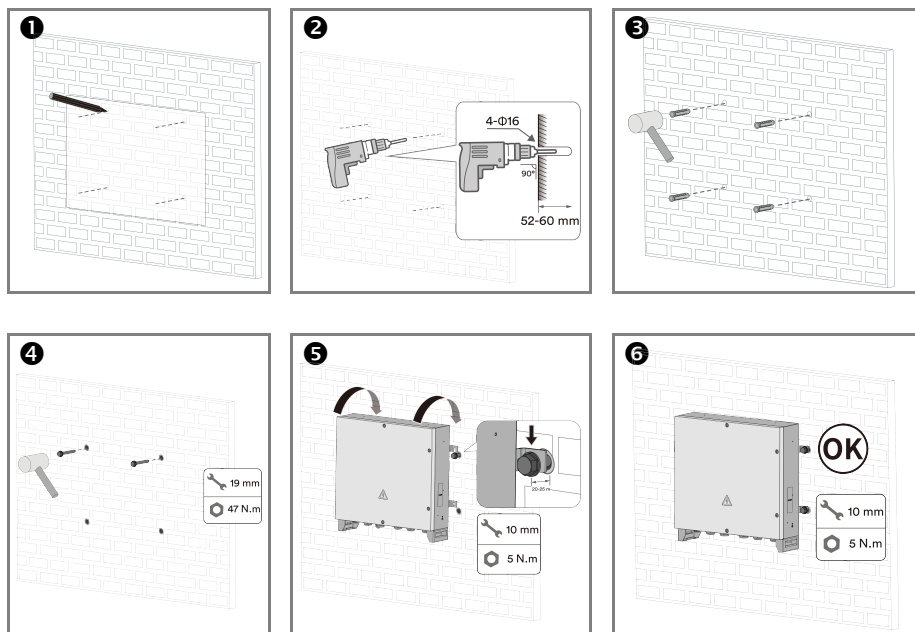
8 Dimensions



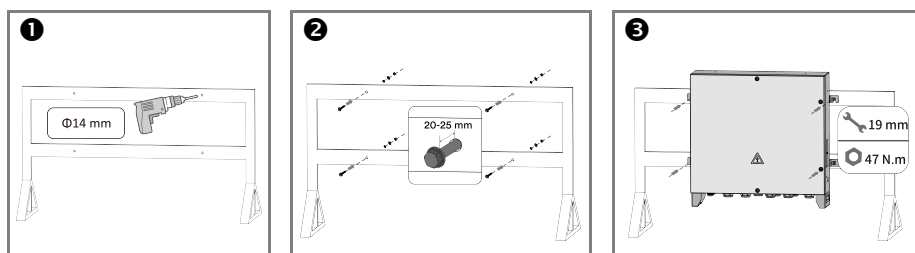
Unit: mm

9 Mounting

9.1 Wall Mounting



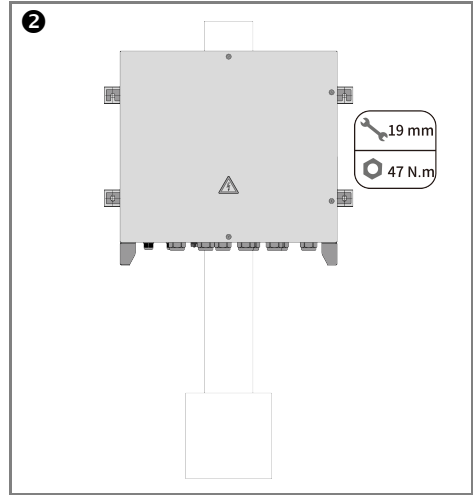
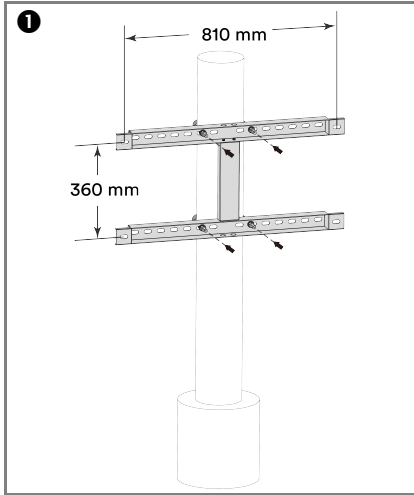
9.2 Frame mounting with anchor bolts



NOTICE

- The frame needs to be prepared by the customer.

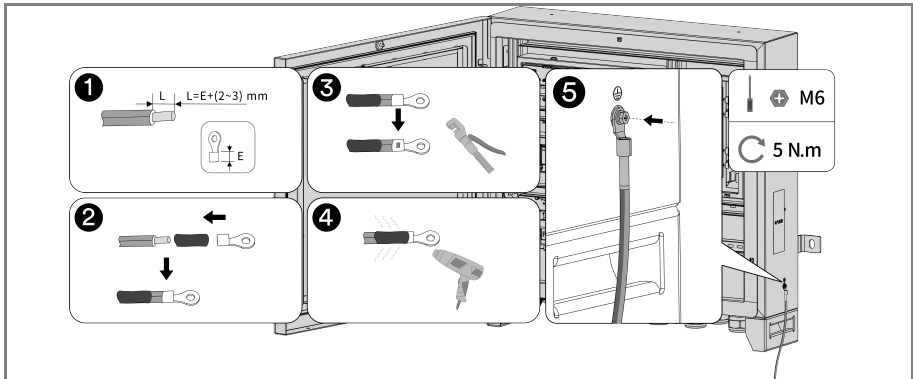
9.3 Pole - Mounting



NOTICE

- The pole needs to be prepared by the customer.

10 Second Protective Grounding

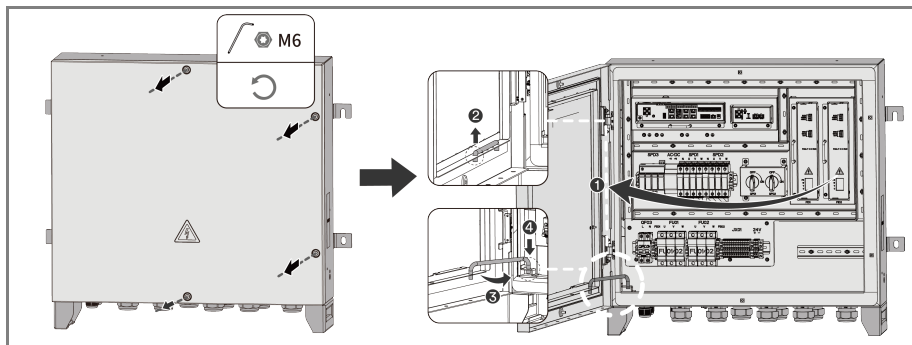


NOTICE

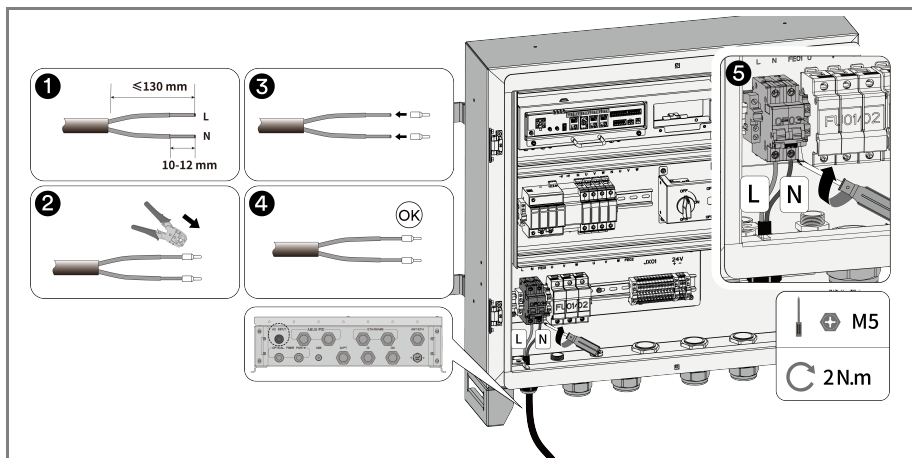
- OT terminals and cables need to be prepared by the customer.

11 Electrical Connection

11.1 Open the Cabinet Door



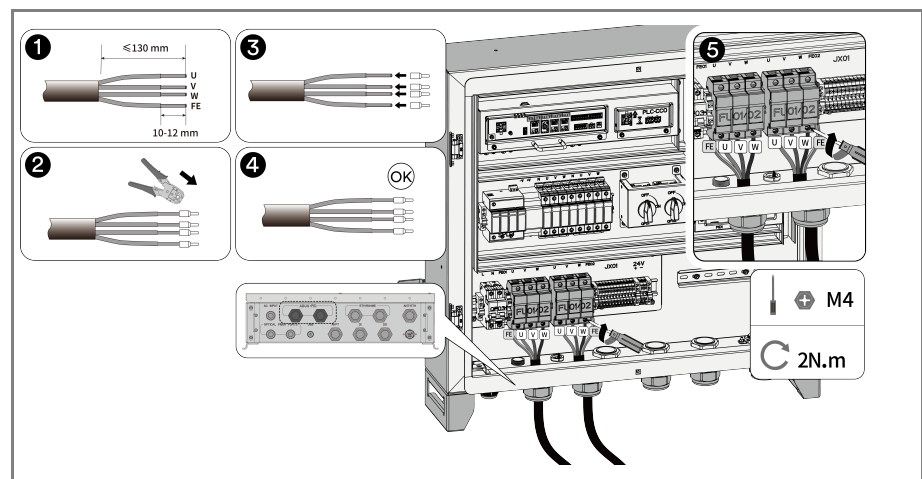
11.2 Connecting the Single-Phase Power Cable



NOTICE

- As shown in the figure, once the wires are prepared, route them through the AC INPUT port and connect them to the lower terminals of the single-phase switch. Connect the Live wire to the left terminal (L) and the Neutral wire to the right terminal (N). Note: For backup power supply connections, this step is not required when using a three-phase power supply under normal operating conditions.

11.3 Connecting the Three-Phase Power Cable



NOTICE

- FE01/FE02: Functional Grounding Wire**

This functional grounding wire must be connected when using the PID suppression function. It is typically connected to the grounding bar of the box-type transformer. Ensuring continuous grounding between the PV panels metal bracket on the PV side of the system and the transformer's grounding bar is essential for effective PID suppression.

NOTICE

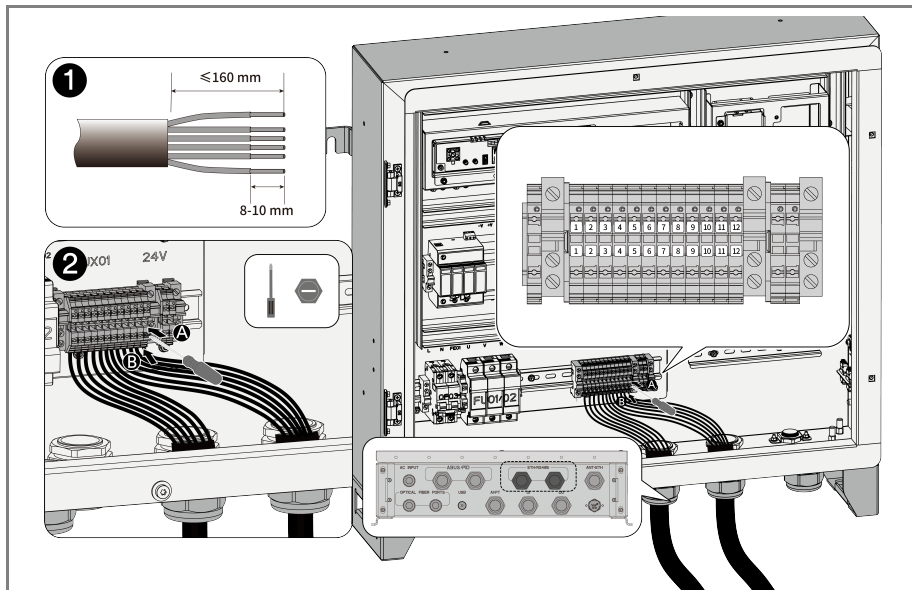
- Three-Phase Grid Input**

The primary three-phase grid input is utilized for both ABUS communication and PID suppression. while the secondary three-phase grid is exclusively used for the second winding grid of the split-winding transformer at the power station. The ABUS communication function on this channel needs to search for sub-devices in the fifth RS485 channel via the Ai-Logger's built-in web interface. Additionally, the primary three-phase grid input also provides power to the Ai-Logger.

11.4 Connecting the RS485 Communication Cable

Port	Terminal Number	Definition	Port	Terminal Number	Definition
RS485-1	1	RS485-1A	RS485-4	7	RS485-4A
	2	RS485-1B		8	RS485-4B
RS485-2	3	RS485-2A	RS485-5	9	RS485-5A
	4	RS485-2B		10	RS485-5B

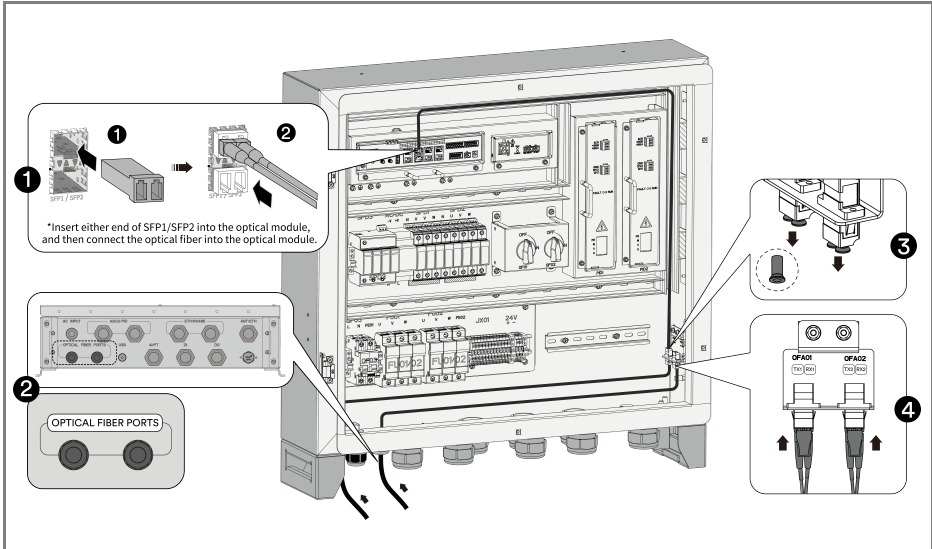
RS485-3	5	RS485-3A	RS485-6	11	RS485-6A
	6	RS485-3B		12	RS485-6B



NOTICE

- As shown in the figure, route the cable through the ETH/RS485 port. Once the corresponding cable is prepared, proceed as follows:
 - Press the terminal block with a small tool
 - Insert the cable into the corresponding port.
- The RS485-5 port, internally connected to the ABUS module, is factory-set to a baud rate of 115200. RS485-6 is designated for PID devices, while the other RS485 ports (except RS485-5) have a default baud rate of 9600.

11.5 Connecting the Optical Fiber



NOTICE

- Optical module needs to be prepared by the customer.
- SFP1 corresponds to TX1/RX1, SFP2 corresponds to TX2/RX2.

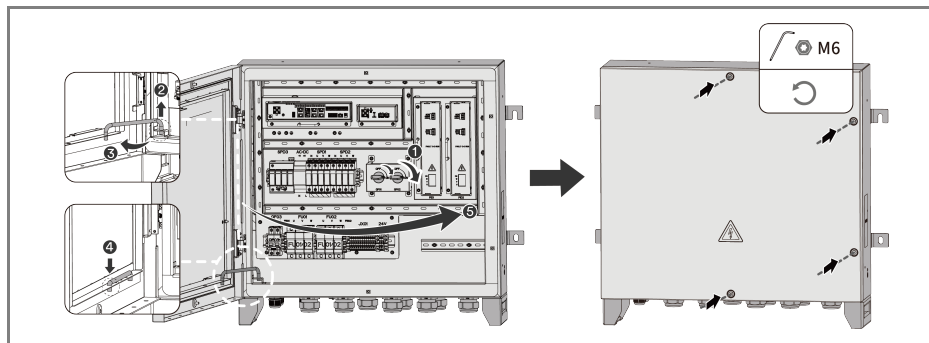


- The optical module is optional, if you configure it manually, you can select a 100/1000Mbps optical module according to the docking port of your optical switch. Optical modules are available in SFP or eSFP packages. The 100 Mbps module supports a transmission distance $> 12\text{km}$, while the 1000 Mbps module supports a transmission distance $\geq 10\text{km}$.
- When inserting the optical module into the SFP1 port, please make sure that the label side is facing upward; when inserting the optical module into the SFP2 port, please make sure that the label side is facing downward.



- To disconnect the fibre optic patch cable, press the cable's release catch.
- When removing the optical module, use the puller to gently pull it outward, ensuring a delay of at least 0.2 seconds between removals.

11.6 Close the Cabinet Door



12 App Download

Download and install the Solplanet app by scanning the QR code below.
For details, please refer to the APP user manual.



Android



iOS

13 Contact

Please contact our Service Department if you have any technical questions about our products.

The following information is needed to provide necessary assistance:

- Product serial number
- Fault code
- Installation location
- Warranty card

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