
IOM424

IO Module

Quick Installation Guide

1. Unpacking and Checking

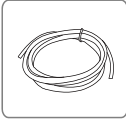
Check the packing list to ensure the integrity of the deliverables. The packing list is as follows.



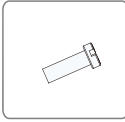
A



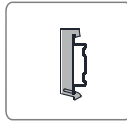
B



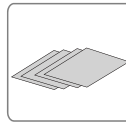
C



D



E



F

No.	Description	Quantity
A	IO module	1
B	M4 screw assembly	2
C	RS485 Cable: 0.5 mm ² x 1.5 m	1
	DC24V Cable: 0.5 mm ² x 1.5 m	1
D	M3 slotted screw	4
E	Clasp	2
F	Documentation: quick installation guide, factory inspection record, packing list, warranty card, certificate of conformity	1

2. Setting Communication Address

Take out the IO module, and set the communication address through the DIP switch on the back. The communication address ranges from 1 to 15.



The bit increases from left to right.

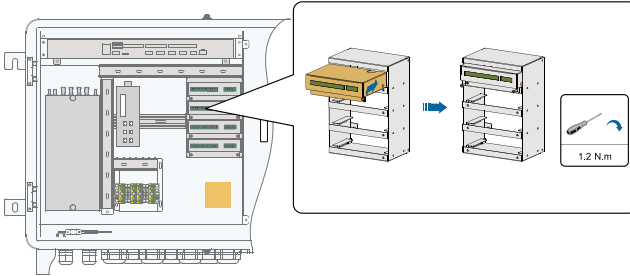
Communication address setup illustration	Binary address	Decimal address
	0001	1 (1x2 ⁰ =1)
	0010	2 (1x2 ¹ +0x2 ⁰ =2)
⋮	⋮	⋮
	1111	15 (1x2 ³ +1x2 ² +1x2 ¹ +1x2 ⁰ =15)

3. Mechanical Installation

- Fixed to the COM100A

Step 1: Take out the IO module and M4 screw assembly.

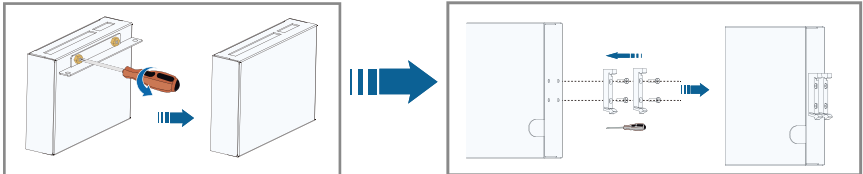
Step 2: Insert the IO module into the reserved area in the COM100A and secure it with M4 screw assemblies.



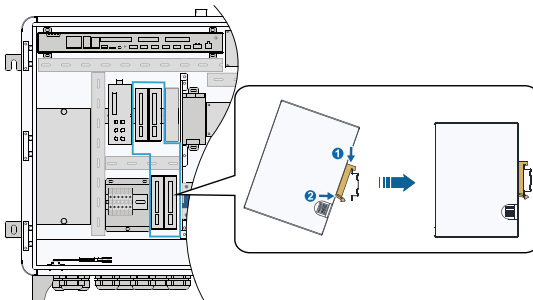
- Fixed to the EMU200A

Step 1: Take the IO module.

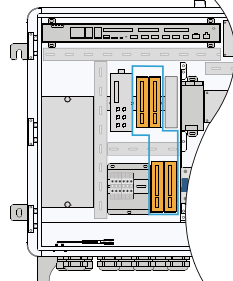
Step 2: Remove the metal plate of the IO module and then install the clasp.



Step 3: Insert the IO module into the reserved area.

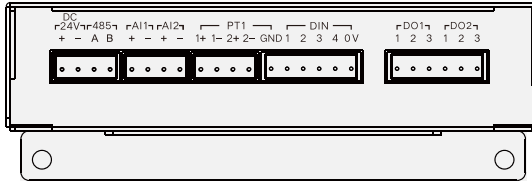


When four IO modules are all installed, they are like:



4. Electrical Connection

4.1 Port Overview



Port	Definition	Recommended cable specification
DV24V	+ 24Vdc power port+	0.5mm ²
	- 24Vdc power port-	
485	A RS485 communication port A	0.5mm ²
	B RS485 communication port B	
AI1	+ Analog input port+	0.5mm ² - 0.75mm ²
	- Analog input port-	
AI2	+ Analog input port+	0.5mm ² - 0.75mm ²
	- Analog input port-	
PT1	1+ PT100 temperature sensor detection port 1+	0.5mm ² - 0.75mm ²
	1- PT100 temperature sensor detection port 1-	
	2+ PT100 temperature sensor detection port 2+	
	2- PT100 temperature sensor detection port 2-	
	GND Grounding	
DIN	1 Passive dry node input port 1	0.5mm ² - 0.75mm ²
	2 Passive dry node input port 2	
	3 Passive dry node input port 3	
	4 Passive dry node input port 4	
	0 V Common terminal, grounding	
DO1	1 Digital output port, NO node	0.5mm ² - 0.75mm ²
	2 Digital output port, NO node	
	3 Common terminal	
DO2	1 Digital output port, NO node	0.5mm ² - 0.75mm ²
	2 Digital output port, NO node	
	3 Common terminal	

4.2 Wiring Procedure

4.2.1 24Vdc Port Wiring

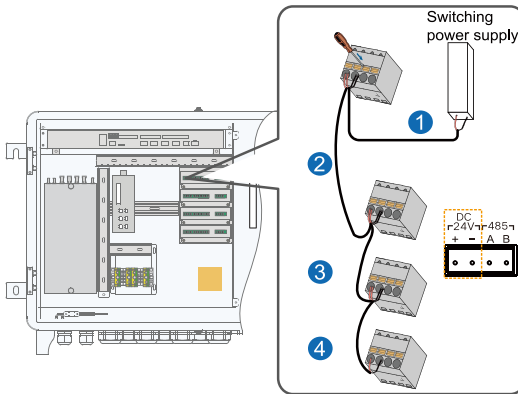
Step 1: Take out the power cable from the deliverables.

Step 2: Strip both ends of the cable.

Step 3: Connect the IO module at the top and the switching power supply.

Connect one end of the power cable to the DC 24V port on the IO module at the top, and the other end to the 24Vdc power supply port of the 220V switching power supply. COM100A or EMU200A.

Step 4: (Optional) Connect the four IO modules to each other.



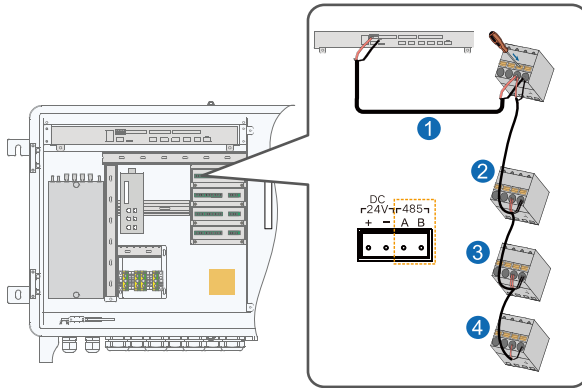
4.2.2 RS485 Communication Wiring

Step 1: Take out the RS485 communication cable from the deliverables, and strip both ends of the cable.

Step 2: Connect the IO module at the top and the data logger.

Connect one end of the power cable to the RS485 port on the data logger in the COM100A or the EMU200A, and the other end to the RS485 port on the IO module at the top.

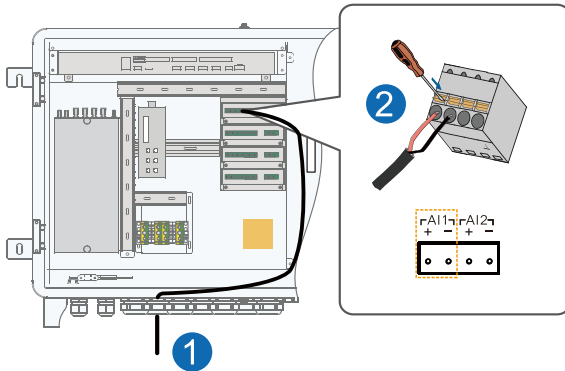
Step 3: Connect communication cables between IO modules.



4.2.3 AI Wiring

Step 1: Lead the analog input signal cable through the waterproof terminals AI1+ and AI1- at the bottom of the COM100A or the EMU200A.

Step 2: Strip the cable and connect it to terminals AI1+ and AI1- on the IO module.



If there are two analog input signal cables, connect them referring to the preceding steps.

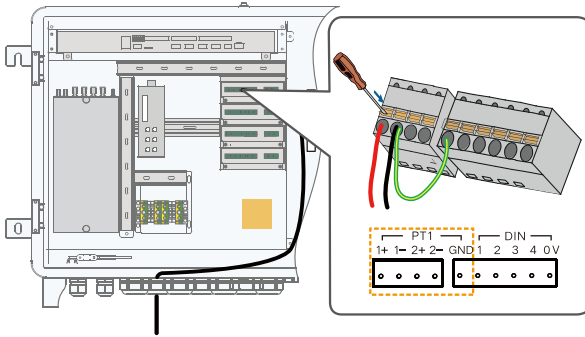
4.2.4 PT100 Temperature Sensor Wiring

Step 1: Lead the signal cable of the PT100 temperature sensor through the PT1 waterproof terminal at the bottom of the COM100A or the EMU200A.

Step 2: Wiring

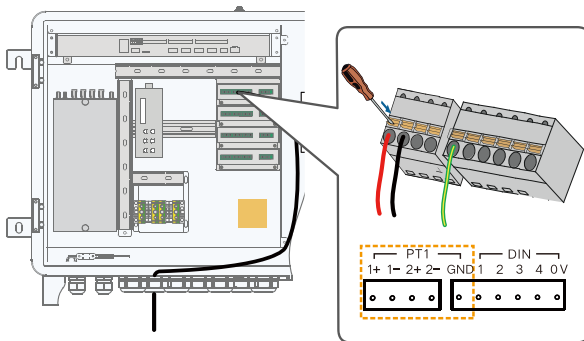
- If two cables are used:

Short connect the GND port to PT100 (1-) with a grounding cable;
Connect the positive end of the PT100 cable to PT100 (1+) port;
Connect the negative end of the PT100 cable to PT100 (1-) port.



- If three cables are used:

Connect the grounding cable to GND port;
Connect the positive end of the PT100 cable to PT100 (1+) port;
Connect the negative end of the PT100 cable to PT100 (1-) port.

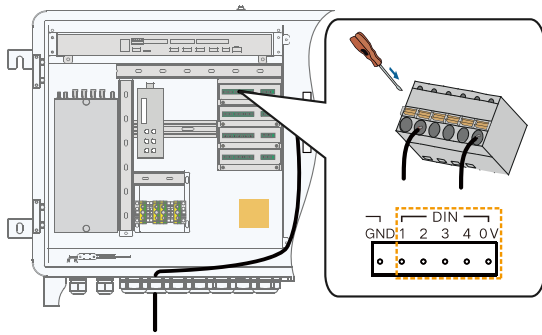


If there are two temperature detection signal cables, connect them referring to the preceding steps.

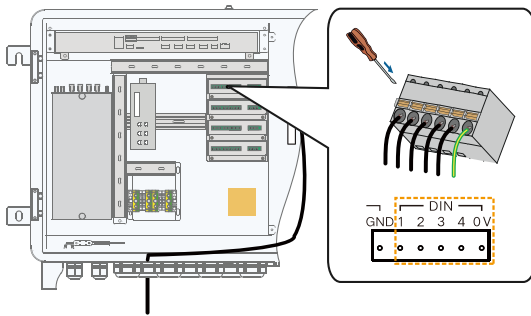
4.2.5 DI Wiring

Step 1: Lead the input signal cable of the dry node through the DI waterproof terminal at the bottom of the COM100A or the EMU200A.

Step 2: (Take connecting to the DIN1 port as an example) Strip the cable and connect it to the DIN1 and 0V terminals on the IO module.



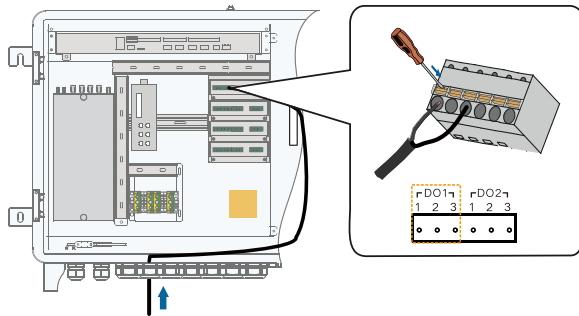
If there are multiple dry node signal cables, connect the multiple grounding cables in parallel and connect the one to the 0 V terminal.



4.2.5 DO Wiring

Step 1: Lead the digital output signal cable through the DO waterproof terminal at the bottom of the COM100A or the EMU200A.

Step 2: (Take connecting to the DO1 port as an example) Strip the cable and connect it to the DO1 terminal on the IO module.



5. Technical Data

Power Supply

Input power Less than 3W

Port

RS485 1

Maximum baud rate: 115200bps

Isolation voltage: 2.5KV

Common mode voltage: 560V

AI 2

0-10V

Accuracy: 0.5%

PT100 2

Accuracy:±2°C

DI 4

A-node type: dry node

Internal power supply voltage: DC24V

Common mode voltage: 560V

DO 2

Upper limit of loads: 250VAC/1A, 30VDC/1A

Isolation voltage: DC3.0KV

Sungrow Power Supply Co., Ltd.
EU/EEA Importer: Sungrow Deutschland GmbH

Web: www.sungrowpower.com
Add: Balanstrasse 59, 81541 München, Germany



More information in the QR code or
at <http://support.sungrowpower.com/>

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Specifications are subject to changes without advance notice.



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