

ioThinX 4500 Series (45ML) Modules Quick Installation Guide

Version 1.2, March 2024

Technical Support Contact Information
www.moxa.com/support

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P/N: 1802045002012



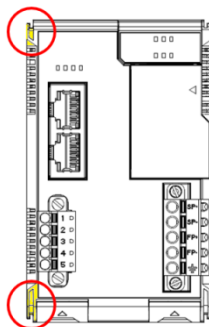
Package Checklist

- 1 x ioThinx 4500 (45ML) module
- 1 x quick installation guide (printed)
- 1 x warranty card

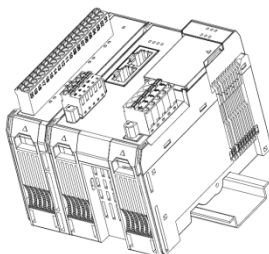
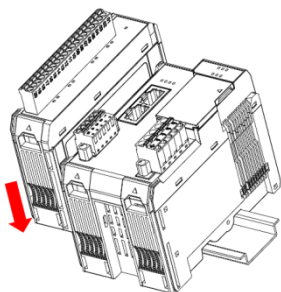
Installation

Installing a 45ML Module on a DIN Rail

Step 1: Align the 45ML module side by side with the head/CPU module, making sure that the upper and lower rails are hooked together.



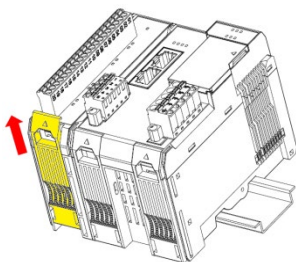
Step 2: After aligning the 45ML module side by side with the head/CPU module, push the 45ML module until it touches the DIN rail. Next, apply more force until the module clips to the DIN rail.



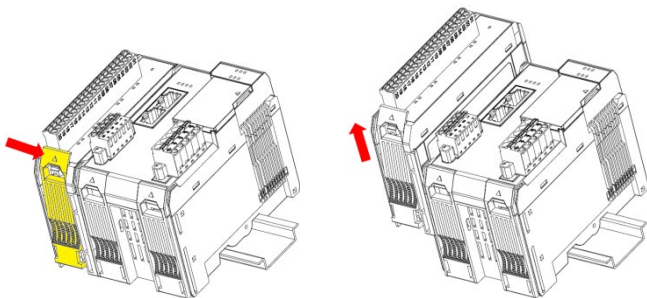
NOTE After the module is firmly attached to the DIN rail, the module connections to the internal bus will be established.

Removing a 45ML Module from a DIN Rail

Step 1: Use your finger to lift the release tab on the lower part of the module.



Step 2: Push the top of the release tab to latch it, and then pull the module out.



NOTE Electrical connections to the internal bus will be disconnected when the 45ML module is removed.

NOTE 45MR modules can be installed on the right side of every ioThinX 4500 series head/CPU module, whereas 45ML modules can only be used with an ioThinX 4500 Series product that has the communication bus installed on the left side of the head/CPU module.

For example, the ioThinX 4510 Series does not support 45ML modules.

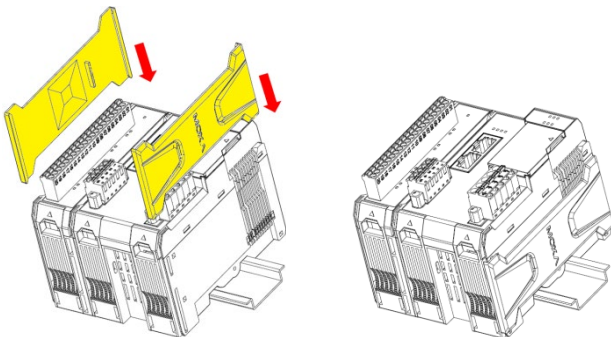


WARNING

Ensure that the power is off before removing modules to avoid damaging the equipment.

Installing the Covers on the First and Last Module

Attach the covers to the first and last module to cover the modules' contacts.





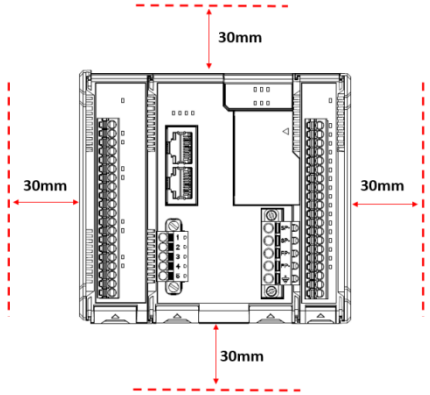
NOTE

Covers must be installed on the first and last modules to protect the device from electrostatic discharge.

Horizontal Installation

Before installing the device, make sure there is enough space between the device and nearby walls, other devices, etc., to ensure proper heat dissipation.

To ensure that the device works properly, we suggest reserving the amount of space indicated in the adjacent figure.



CAUTION

DO NOT install the device vertically. If the device is installed vertically, the fanless heat dissipation design will not perform as intended.

LED Indicators

Labeling	Indication	Description
Status	Status	Green: Module ready Green Slow Blinking: Booting up Red: Module error Red Slow Blinking: Upgrading firmware Off: Power off
Port 1, Port 2, Port 3, Port 4	Serial connection	Green: Transmitting data Amber: Receiving data Off: Disconnected or data is not being transmitted



Module Configuration

Please refer to the *ioThinX 4500 Series User Manual* for detailed instructions.

Specifications

Input Current	Varies per module; please refer to the datasheet
Input Voltage	System power: <ul style="list-style-type: none"> 12 to 48 VDC, via the ioThinX 4533 Field Power: <ul style="list-style-type: none"> 12/24 VDC, via the ioThinX 4533
Operating Temperature	Standard Models: -20 to 60°C (-4 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)

Hazardous Locations Information

Trademark	MOXA®
Model	45ML-5401 (-T)
Rating	System Power: 12 to 48 VDC, 74.1 mA Field Power: 12/24 VDC, 140.4 mA
ATEX Information	  II 3G Ex ec IIC T4 Gc UL 20 ATEX 2412X Ambient Range: -40°C ≤ Tamb ≤ 75°C (-T models) Ambient Range: -20°C ≤ Tamb ≤ 60°C (other models without -T)
Address of Manufacturer	No. 1111, Heping Rd., Bade Dist. Taoyuan City 334 Taiwan
Hazardous Locations Certifications	EN IEC 60079-0:2018 EN IEC 60079-7:2017 EN IEC 60079-15:2019

Special Conditions of Use

- The equipment shall only be used in an area with a pollution degree 2 or lower as defined in EN IEC 60664-1.
- The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with EN IEC 60079-0.
- For surge protection, connect the DIN rail to earth ground.
- Cables rated for a minimum temperature of 120°C must be used for the Power Supply Terminal.
- We suggest using the following cable types for wiring:
 - 45ML-5401:
AWG 16 to 24