

# **ioThinX 4500 Series (45MR) Modules Quick Installation Guide**

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**Technical Support Contact Information**  
**[www.moxa.com/support](http://www.moxa.com/support)**

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**P/N: 1802045001012**



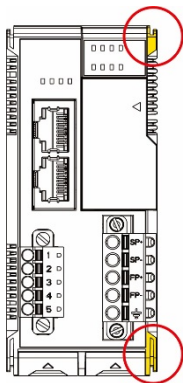
## Package Checklist

- 1 x ioThinx 4500 (45M) module
- 1 x quick installation guide (printed)

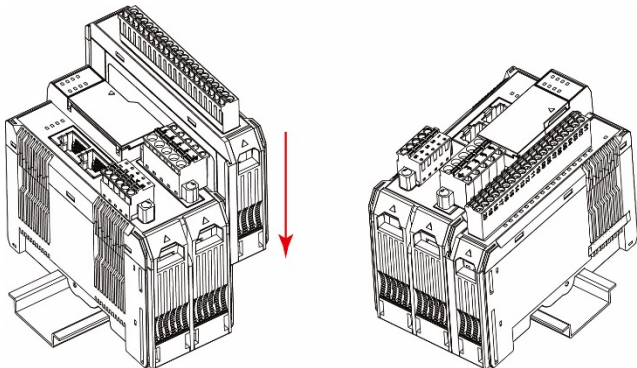
## Installation

### Installing a 45M Module on a DIN Rail

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



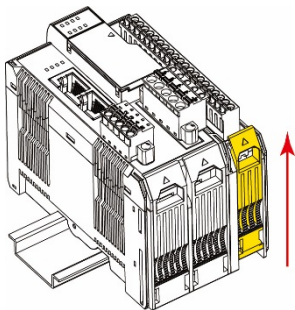
**Step 2:** Align the 45M module side by side with the head/CPU module and then push the 45M module until it touches the DIN rail. Next, apply more force until the module clips to the DIN rail.



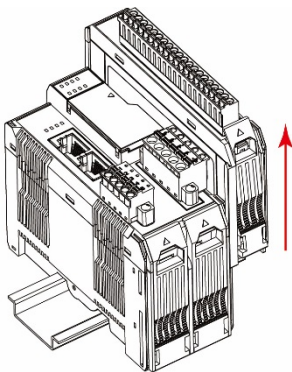
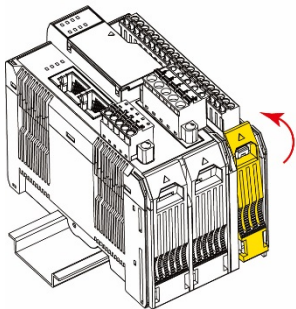
**NOTE** After the module is firmly attached to the DIN rail, the module connections to the internal bus will be established.

## Removing a 45M 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 for the internal bus will be disconnected when removing the 45M module.

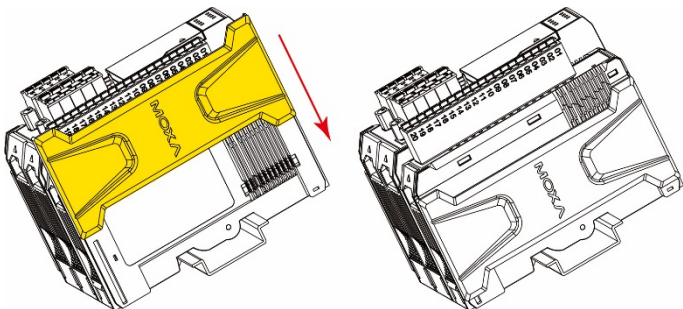


### **WARNING**

Be sure 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.



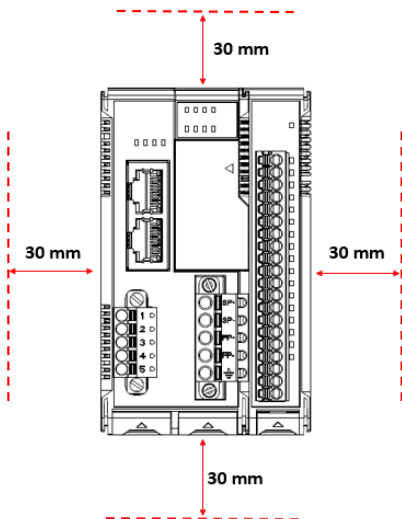
### NOTICE

Be sure to attach the covers to provide electrostatic discharge protection.

## Horizontal Installation

Before installing the device, make sure there is enough space between the device and nearby items (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 Green Fast Blinking: Locating Red: Module error Red Slow Blinking: Upgrading firmware Red Fast Blinking: Safe mode (output module only) Off: Power off
I/O Channel	Channel Status	Please refer to the ioThinX 4500 Series User's Manual

## Module Configuration

Please refer to the ioThinX 4500 Series User's Manual.

## Specifications

Input Current	Varies per module; please refer to the datasheet
Input Voltage	System power: <ul style="list-style-type: none"><li>• 3.3 V, via the ioThinX 4510/4533, 45MR-7210</li></ul> Field Power: <ul style="list-style-type: none"><li>• 12/24 V, via the ioThinX 4510/4533, 45MR-7210</li><li>• DO modules (45MR-2600/2601/2606) must use an external power supply for field power</li></ul>
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)

## Attention

1. This device is only for indoor use in environments with pollution degree 2.
2. The 45M has a ground pin on the back of the device. For surge protection, connect the DIN rail to earth ground.
3. Cables rated for a minimum temperature of 105°C must be used for the Power Supply Terminal.
4. We suggest using the following cable types for wiring:
  - 45MR-7210:
    - > AWG 12 to 16 for power connections
  - 45MR-2600/2601/2606 Digital Output Terminals:
    - > AWG 16 to 18
  - 45MR-2404 Relay Output Terminal:
    - > AWG 16 to 18
  - All other 45MR modules:
    - > AWG 16 to 24