

# ioThinX 4500 (45ML) Module Series Quick Installation Guide

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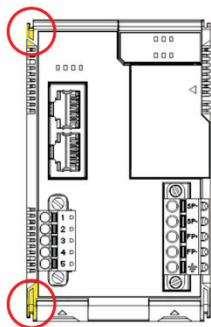
## Package Checklist

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

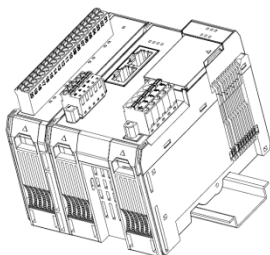
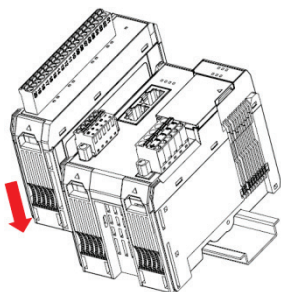
## Installation

### 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.



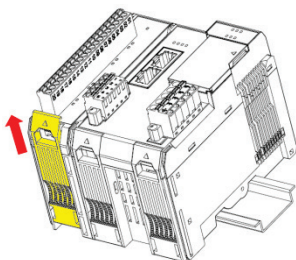
**Step 2:** After aligning the 45ML module side by side with the head/CPU module, push the 45ML module until it touches the DIN rail. Next, apply more force until the module clips to the DIN rail.



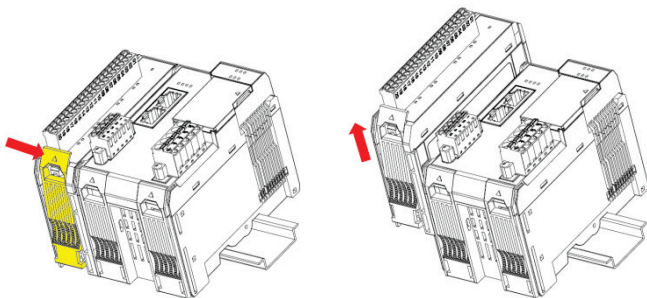
**NOTE** After the module is firmly attached to the DIN rail, the module connections to the internal bus will be established.

### 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 for the internal bus will be disconnected when removing the 45ML module.

**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.

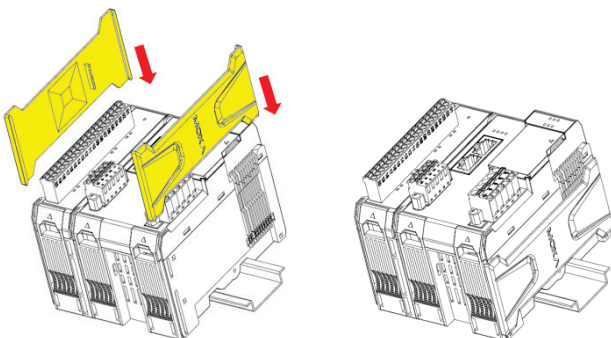


## **WARNING**

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.





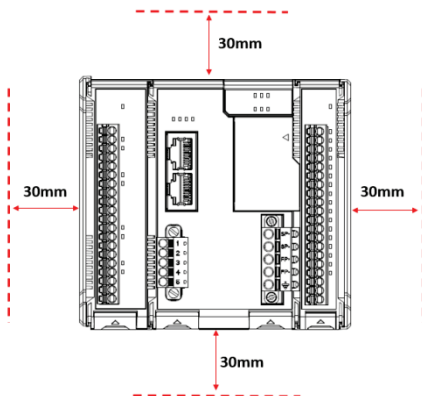
## NOTE

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 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's Manual.

## Specifications

Input Current	Varies per module; please refer to the datasheet
Input Voltage	System power: <ul style="list-style-type: none"><li>• 12 to 48 V, via the ioThinX 4533</li></ul> Field Power: <ul style="list-style-type: none"><li>• 12/24 V, via the ioThinX 4533</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. 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:
  - 45ML-5401:
    - > AWG 18 to 24

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