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M-Relay Quick Installation Guide (Single-phase)

Application model: MR100-S

M-Relay Introduction

M-Relay functions as a physical disconnection device for both single-phase and three-phase grid systems. It ensures secure and reliable isolation, providing a critical layer of safety and compliance in energy distribution and management systems.

Preparation Before Installation

1. Prepare the tools and materials

- Tools: Screwdriver, Multimeter, etc.
- Materials: Power cables, 35x7.5mm punched mounting DIN rail, etc.

Catalog	Description
Power cable	2.5mm ² with cold-pressed terminal
DIN rail	Width: 35 mm, Height: 7.5 mm

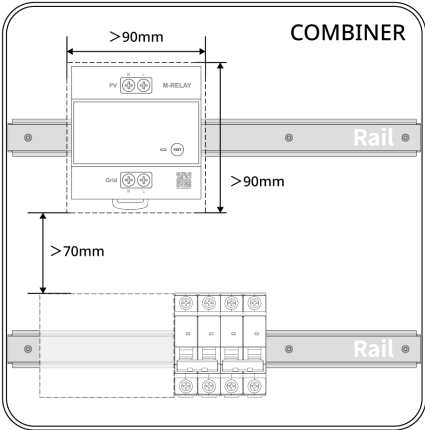
NOTE:

- Confirm that the combiner box is de-energized to prevent any electrical hazards.
- M-Relay should be installed in dry condition, avoiding moisture and dust.
- M-Relay protection level is IP20, please install it in a suitable environment to guarantee the normal operation.

Installation

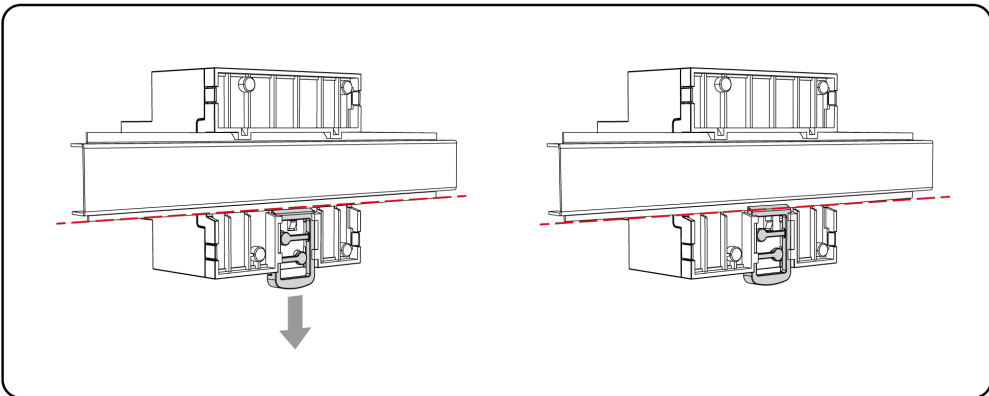
1. Install the DIN Rail

- Ensure the space meets the M-Relay installation requirements as shown in the figure on the right.
- Ensure there is at least 70mm of clearance between the bottom of the M-Relay and other devices.



2. Mount the M-Relay

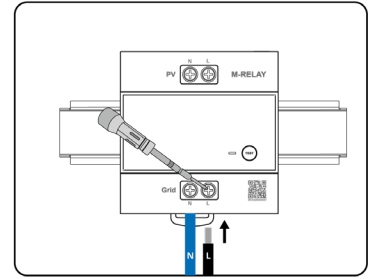
- Pull up the securing clip on the M-Relay.
- Align the relay with the DIN rail inside the combiner until it securely locks into place.
- Release the securing clip.



3. Connect power cables

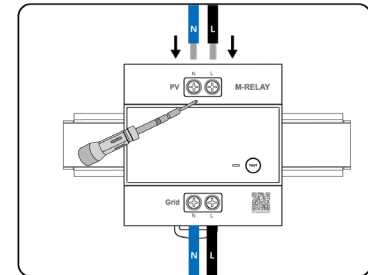
3.1 Wire to PV

- Use 2.5–6.0 mm² cables to connect the power wire (N, L) from the PV system to the terminal (N, L) on the PV side of the M-Relay.



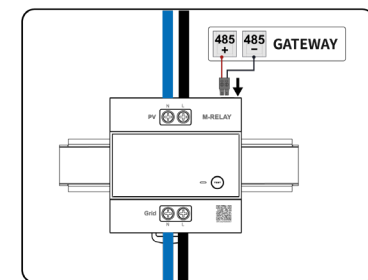
3.2 Wire to Grid

- Use 2.5–6.0 mm² cables to connect the power wire (N, L) from the Grid side to the bus bar.



4. Connect RS485 cables

- Connect the cables from M-Relay to the M-Gateway following the figure below.
- Red line must be connected to the M-Gateway 485+, black line must be connected to the M-Gateway 485-.



NOTE:

- Ensure the connections are correct and secure.
- Tighten the screw by using a screwdriver with a torque of 1.2 N·m wires to prevent the cables from falling off.