MDR Series
Quick Installation Guide

Version 1.2, January 2021

Technical Support Contact Information
www.moxa.com/support

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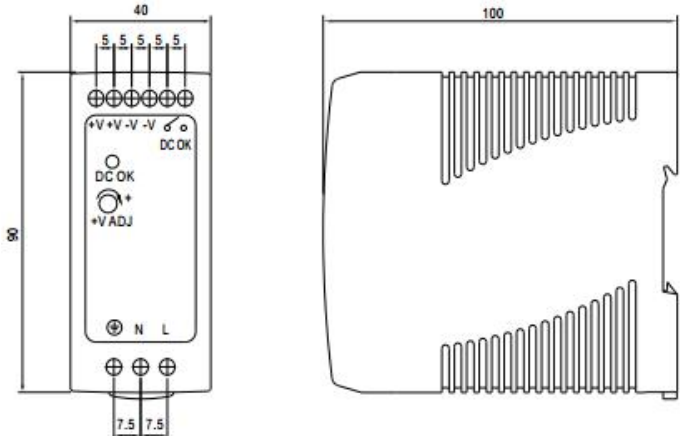
Dimensions



DC OK Relay Contact

Contact Closed	When the output voltage reaches the adjusted output voltage.
Contact Open	When the output voltage drop below 90% of the output voltage.
Contact Ratings (max.)	30 V / 1 A resistive load.

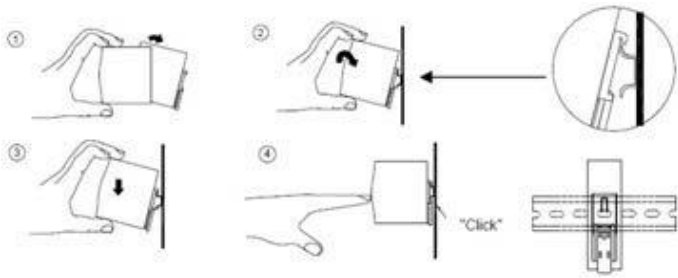
Mounting Instructions

Mounting: Mount only as shown in figure, with input terminals facing downwards to allow sufficient cooling.

Admissible DIN rails: TS35/7.5 or TS35/15.

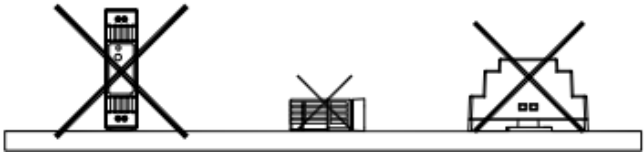
To attach the MDR to the rail:

1. Rotate the MDR backwards, as shown in the figure.
2. Fit the top of the MDR over the top hat rail.
3. Slide the MDR downwards until it hits the stop.
4. Push the bottom of the MDR forward until it snaps into place.
5. Move the MDR back and forth to make sure it is locked in place.



Installation

1. To prevent the unit from overheating, always allow sufficient clearance around the unit for proper ventilation: 5 mm left and right, 40 mm above, and 20 mm below. You should also keep a 10 to 15 cm clearance from adjacent devices that act as a heat source.
2. The appropriate mounting orientation is vertical, with input terminals on the bottom and output on the top of the MDR. Other mounting orientations, such as upside down, horizontal, or table-top, are not allowed.



3. Use copper wire only; the recommended wiring is shown below.

AWG	18	16	14	12
Rated Current (Amps)	6	6-10	13-16	16-25
Lead cross-section (mm2)	0.75	1.00	1.5	2.5
Note: When 5 or more wires are connected to the unit, the current carried by each wire could be 20% less than the current listed above.				

   Make sure that all strands of each wire are properly inserted into the terminal connection, and that the screw terminals are securely fixed to prevent poor contact. If the power supply has multiple output terminals, make sure each contact is connected to wires to prevent stress on a single contact from too much current.

4. Use wire that can withstand temperatures of at least 80°C, such as UL1007.
5. Suggested fuses and the maximum number of the PSUs that can be connected to a circuit breaker at 230 V are shown as below:

Model	Fuse	Circuit breakers	
		C16	D16
MDR-40	T2.5A/L250V	6	13
MDR-60	T2.5A/L250V	4	9

6. The recommended wire strapping length is 6.5 mm (0.255 inch).
7. Use a slotted type 3 mm screwdriver.
8. The recommended torque setting for terminals is 5 kgf-cm (4.4 in-lb)

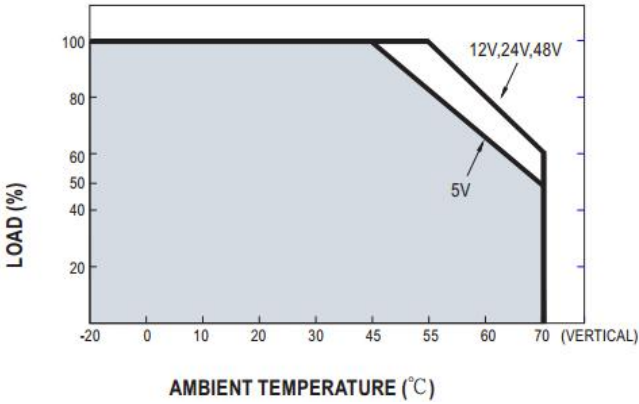
Important Safety Precautions

Before working with a power supply, be sure to read and understand these instructions carefully and completely. You should also follow any notes or instructions on the unit itself.

1. **Risk of electrical shock and energy Hazard:** If the device fails, it must be examined by a qualified technician. Do not remove the DIN-rail power supply casing yourself.

2. **Risk of electric arcs and electric shock (danger to life):** Do not connect the primary and secondary sides together, since doing so could result in life threatening shocks.
3. **Risk of burn hazard:** Do not touch the unit while it is in operation or shortly after it has been disconnected.
4. **Risk of fire and short circuits:** Openings on the product should be protected from foreign objects and dripping liquids.
5. **Pollution level:** Only install the unit in a pollution level degree 2 environment.
6. **Humidity warning:** Do not install the unit in locations with high humidity, or near water.
7. The maximum operating temperature for the MDR series is 70°C.

   Derating Curve



8. The FG (⏚) must be connected to PE (Protective Earth).
9. Output current and output wattage must not exceed the rated values in the product's specifications.
10. Before doing any installation, maintenance, or modification work, disconnect the system from the power source. Make sure that inadvertent connection in circuit will be impossible!
11. For continued protection against risk of fire, replace only with fuses of the same type and rating.