



Sensata Technologies
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Introduction

The BR-DIN Series is a suite of DC circuit breakers that can be used as overcurrent protection/disconnects for charge controllers and DC loads. Each breaker has two mounting slots and two rail clips on the back that allow it to be easily secured to a DIN rail mounting track [provided inside the MP (Magnum Panel) and MMP (Mini Magnum Panel) system enclosures].

BR-DC breakers (e.g., BR-DC100-DIN) are two-pole parallel breakers—rated at 125V—with two attached front wire terminal connectors at each end. BR-PV breakers (e.g., BR-PV50-DIN) are two-pole series breakers—rated at 250V—with front accessible pressure terminal connectors at one end.



Info: The BR-DIN Series are hydraulic magnetic DC circuit breakers that are 100% rated.



Info: The BR-DIN Series breakers' wire terminal connectors require a solid wire or a wire with a ferrule connector attached. These breakers are rated for conductors with a 60°/75°C insulation temperature rating.



CAUTION: These breakers are polarity sensitive— they must be installed correctly to ensure that they will trip as needed. When the breaker is placed between a PV system and a charge controller, connect the breaker's positive side to the PV controller. When the breaker is placed between a charge controller and the battery bank, connect the breaker's positive side to the battery bank.



CAUTION: The breakers must be mounted in a vertical position to meet the specified trip current and trip delay curve.

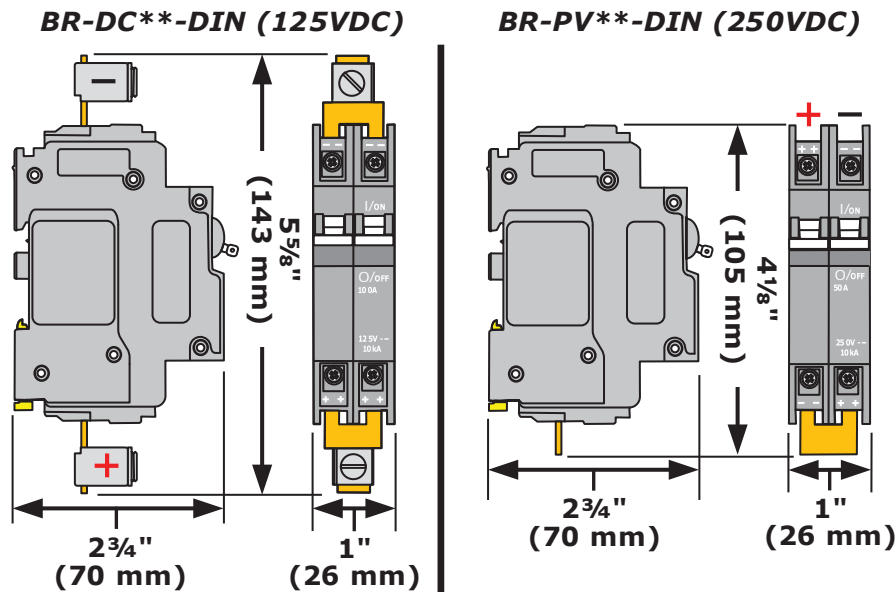


Figure 1, BR-DIN Series Dimensions

DC Load Breakers (DIN Rail Mount Type) Instruction Sheet



WARNING: During normal operation, the terminals, busbars, and electrical components inside the MMP/MP enclosure may be energized – DO NOT TOUCH. To be safe, disconnect all power sources before removing the MP/MMP cover.

Installation

1. Remove the front breaker panel cover once all power has been removed from the MMP or MP enclosure system.
2. Position the breaker(s) on the DIN rail mounting track (Figure 2), and slide them all the way to the left end of the DIN rail.

Note: Ensure both DIN rail clips (yellow) on the back of the breaker are in the down position before attempting to attach the unit to the DIN rail.

3. Once the breaker is positioned properly on the DIN rail, push up each DIN rail clip to secure the breaker to the DIN rail (Figure 3).
4. For each breaker installed, remove only those front panel covers that are needed for the width of the breaker. Each breaker uses a 1" opening, which requires removing two knockout slots (1 knockout = 1/2" slot).
5. Ensure each breaker aligns correctly into the knockout spaces by placing the front panel cover over the DC breakers. **Note:** Do not secure the front panel cover until the DC wiring is completed.

The DC breaker is now installed and ready to be wired to the DC circuit.

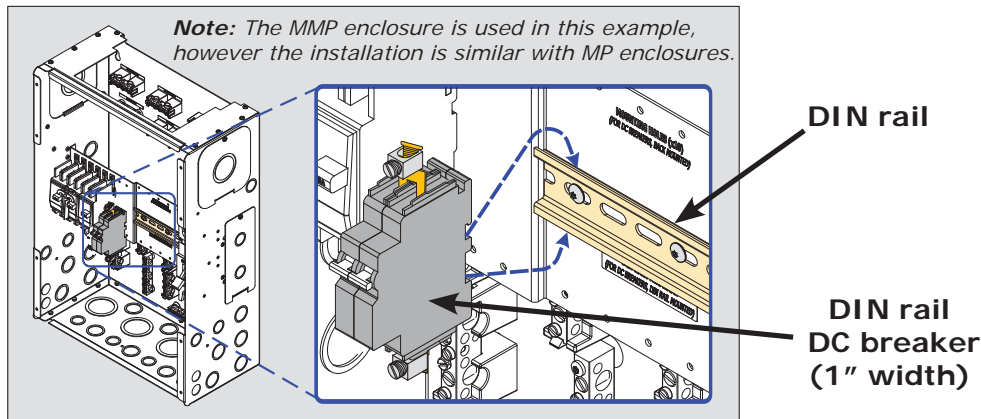


Figure 2, Installing DIN Rail Mounted DC Breakers

Specifications		
Approvals:		
<ul style="list-style-type: none"> • UL489A listed • VDE (EN 60947-2) approved • CE certified 		
Breaker	Wire Size	Torque
BR-DC-DIN	14-1/0 AWG (2.1-53.5 mm ²)	28 in-lb (3.2 Nm)
BR-PV-DIN	18-2 AWG (.82-33.6 mm ²)	20 in-lb (2.5 Nm)

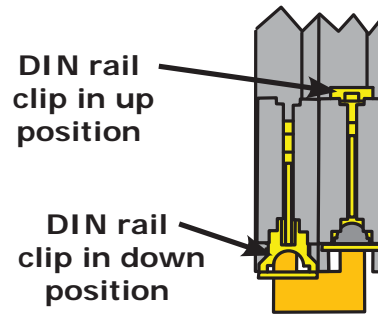


Figure 3, Adjusting the DIN Rail Clips