

Replacing Quad Breaker in the Enphase Enpower R2 Smart Switch

To replace Quad Breaker for Envoy and NFT in the Enphase Enpower R2™ smart switch, read and follow all warnings and instructions in this guide. If you do not fully understand any of the concepts, terminology, or hazards outlined in these instructions, refer installation to a qualified electrician or installer. These instructions are not meant to be a complete explanation of a renewable energy system. All installations must comply with national and local electrical codes. Professional installation is recommended.



DANGER! Risk of electric shock. Always de-energize the Enpower R2 before beginning the following procedure.

The Enpower R2 includes one quad breaker that feeds the neutral forming transformer (40A) and Envoy (20A). Follow the below steps to replace the quad breaker:

- A) Ensure that the Enpower R2 is completely de-energized.
- B) Open the three latches that lock the enclosure door. To release the latch, pull the latch handle forward and then to the right. With all the latches opened, swing open the enclosure door.
⚠ WARNING: Risk of equipment damage. Do not remove the pre-installed solar shield attached to the enclosure door.
- C) Use a Phillips screw driver to loosen the six screws along the periphery of the deadfront. Support the deadfront to keep it from falling while performing the next step.
- D) While supporting the deadfront, use a screwdriver to disconnect the deadfront ground wire from the grounding bar before the deadfront is removed.
- E) Use the two tabs on the front to assist handling the deadfront during the removal. Keep the deadfront and screws handy as you will need them later.
⚠ WARNING: Risk of electric shock. To maintain the warranty, do not modify the deadfront other than to remove or replace filler plates, as needed.
- F) Use a screwdriver to completely loosen and disconnect all the wires from the quad breaker.
- G) Rock the quad breaker to the left to release the breaker, and then remove the breaker.
- H) Install the replacement breaker by rocking it to the left, catching the clips that hold it in place. Then rock the breaker to the right so it is fully seated and secure.
- I) Re-install the wires on the new breaker.
- J) Tighten the breaker connections to 2.8 Nm (25 in-lb).
- K) Flip the breaker to the on position.
- M) Re-install the deadfront, and follow the Enpower QIG instructions (step 6) to close and energize Enpower.

Required practices when torquing connections:

- Always follow NEC 2017 110.4 (D) dictates.
- Use a calibrated torque tool to achieve the indicated torque values.
- Use tamper-proof torque mark/paint after torquing connections.

Replacing Quad Breaker in the Enphase Enpower R2 Smart Switch

SAFETY

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

This guide contains important instructions that you must follow during installation of circuit Quad Breakers in the Enphase Enpower R2 smart switch.

Safety Instructions

	DANGER: Risk of electric shock. Risk of fire. Only qualified electricians should install, troubleshoot, or replace the Enpower R2.
	DANGER: Risk of electric shock. Risk of fire. Do not attempt to repair the Enpower R2. DO NOT REMOVE THE DEADFRONT -- NO SERVICE-ABLE PARTS. Tampering with or opening the Enpower R2 will void the warranty. If the Enpower R2 fails, contact Enphase Customer Support for assistance at enphase.com/en-us/support/contact .
	DANGER: Risk of electric shock. Do not use Enphase equipment in a manner not specified by the manufacturer. Doing so may cause death or injury to persons, or damage to equipment.
	DANGER: Risk of electric shock. Do not install the BRK-20A40A-2P-240V circuit Quad Breaker without first removing AC power from the photovoltaic system and ensuring that the DC switch on the Enphase Encharge batteries are off. Disconnect the power coming from the photovoltaics and ensure that the DC switch on the Encharge batteries are off before servicing or installing.
	DANGER: Risk of electric shock. Risk of fire. Do not work alone. Someone should be in the range of your voice or close enough to come to your aid when you work with or near electrical equipment.
	DANGER: Risk of fire. Do not allow or place flammable, sparking, or explosive items near the Enpower R2.
	DANGER: Risk of electric shock. In areas where flooding is possible, install the Enpower R2 at a height that prevents water ingress.

Safety and Advisory Symbols

	DANGER: This indicates a hazardous situation, which if not avoided, will result in death or serious injury.
	WARNING: This indicates a situation where failure to follow instructions may be a safety hazard or cause equipment malfunction. Use extreme caution and follow instructions carefully.
	NOTE: This indicates information particularly important for optimal system operation. Follow instructions carefully.

	WARNING: Before installing or using the BRK-20A40A-2P-240V circuit breaker, read all instructions and cautionary markings in this guide and on the equipment.
	WARNING: Do not install or use the BRK-20A40A-2P-240V circuit breaker if it has been damaged in any way.
	WARNING: Do not sit on, step on, place objects on, or insert objects into the Enpower R2.
	WARNING: Do not place beverages or liquid containers on top of the Enpower R2. Do not expose the Enpower R2 to liquids or flooding.
	NOTE: Perform installation and wiring, including protection against lightning and resulting voltage surge, in accordance with all applicable local electrical codes and standards.
	NOTE: Because Encharge is grid forming, you must install signage in accordance with NEC articles 705, 706, and 710.
	NOTE: Using unapproved attachments or accessories could result in damage or injury.
	NOTE: Install properly rated over current protection as part of the system installation.
	NOTE: To ensure optimal reliability and to meet warranty requirements, the BRK-20A40A-2P-240V circuit Quad Breaker must be installed and/or stored according to the instructions in this guide.