

Wiring the Rapid Shutdown Switch with IQ System Controller 2

Overview

The Enphase Rapid Shutdown Switch (EP200G-NA-02-RSD) provides rapid shutdown capability, as required by NEC standard, for IQ8 Microinverters when used with IQ System Controller 2 (EP200G101-M240US01). The Rapid Shutdown Switch and IQ System Controller 2 are certified to the UL1741 PVRSE requirement.

The wiring scheme for the Rapid Shutdown Switch depicted in the installation guide does not apply to some IQ System Controller 2 units manufactured prior to December 8, 2021. Instead, distributors and installers must follow the wiring scheme as described in this document. Note that the incorrect wiring scheme shown in the installation guide does not result in a safety issue, but it will prevent IQ System Controller 2 from exiting the rapid shutdown state and from being commissioned correctly. The installation guides with incorrect wiring scheme have a revision of 140-00236-02 or lower.

Verifying installation

Verify Rapid Shutdown Switch wiring using the following steps.

1. Ensure the Rapid Shutdown Switch is turned ON.
 - a) Check the voltage across the two screws of the NC3 terminal (refer to Figure 1).
 - If the voltage across the pins is ~3.3 Vdc then the switch is NOT wired correctly. Fix the wiring per instructions below.
 - If the voltage across the pins is ~0 Vdc then the switch is wired correctly.
 - b) Check the voltage across the two screws of the NC4 terminal (refer to Figure 1).
 - If the voltage across the pins is ~3.3 Vdc then the switch is NOT wired correctly. Fix the wiring per instructions below.
 - If the voltage across the pins is ~0 Vdc then the switch is wired correctly.

2. Ensure the Rapid Shutdown Switch is turned OFF.

a) Check the voltage across the two screws of the NC3 terminal (refer to Figure 1).

- If the voltage across the pins is ~0 Vdc then the switch is NOT wired correctly. Fix the wiring per instructions below.
- If the voltage across the pins is ~3.3 Vdc then the switch is wired correctly.

b) Check the voltage across the two screws of the NC4 terminal (refer to Figure 1).

- If the voltage across the pins is ~0 Vdc then the Rapid Shutdown Switch is NOT wired correctly. Fix the wiring per instructions below.
- If the voltage across the pins is ~3.3 Vdc then the Rapid Shutdown Switch is wired correctly.

3. Ensure you turn the Rapid Shutdown Switch back ON.

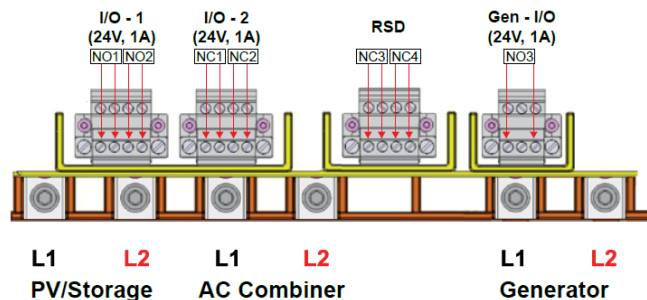


Figure 1: IQ System Controller 2 terminals

Use the following instructions to correctly wire the Rapid Shutdown Switch to the IQ System Controller 2. If you believe that the Rapid Shutdown Switch wiring complies with below instructions, but the problem persists, please contact Enphase customer support.

Wiring the Rapid Shutdown Switch to the IQ System Controller 2

The wiring diagram shown below is CORRECT.

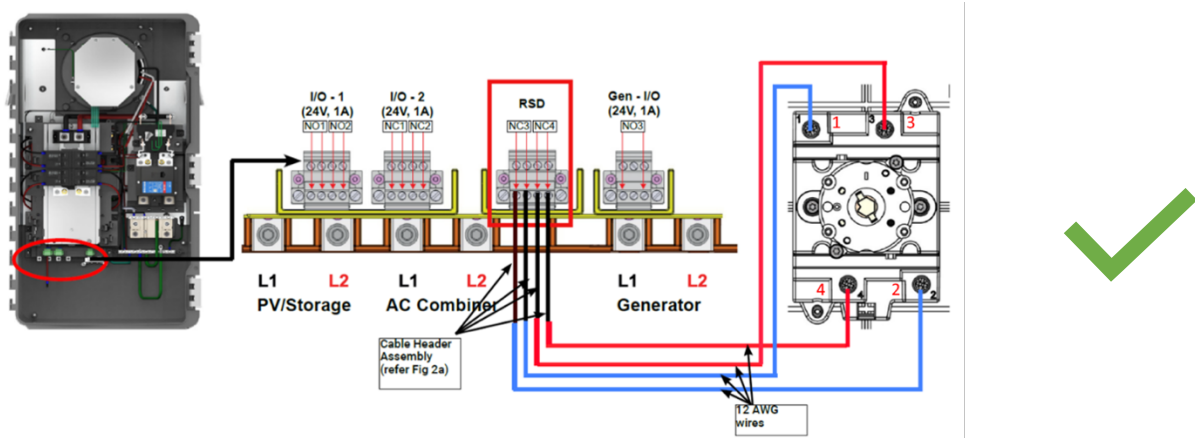


Figure 2: Correct wiring of Rapid Shutdown Switch to IQ System Controller 2 terminals from latest installation guide.

NC3 terminals on IQ System Controller 2 should be wired to terminals labelled 1 and 2 on the Rapid Shutdown Switch and NC4 terminals should be wired to terminals labelled 3 and 4 on the Rapid Shutdown Switch.

The latest IQ System Controller 2 installation guide has been amended to reflect the correct wiring diagram. The Enphase System Shutdown Switch installation guide also shows the correct wiring diagram. The latest installation guides can be found here:

<https://enphase.com/installers/storage/iq-system-controller-2>

The wiring diagram below is INCORRECT.

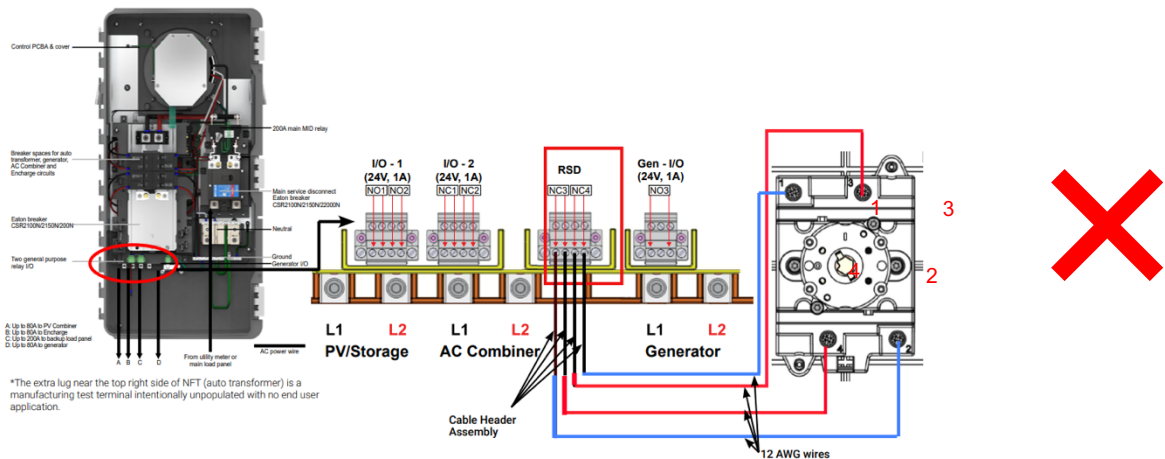


Figure 3: Incorrect wiring of Rapid Shutdown Switch to IQ System Controller 2 terminals from older installation guide.