

# Setting PV power production limit with Tesla Powerwall 2

## Production limit based on voltage input reference

Due to the limitation of charging and discharging power of Tesla Powerwall 2 in backup mode (with no grid available), the maximum amount of PV AC capacity to be installed on the same phase and on the backup side of the Tesla Gateway is 5kVA (kW AC) per Tesla Powerwall 2. Additional PV inverter capacity can be installed on the grid side of the Tesla Gateway 2, but it will not keep running in backup mode. A more effective way of managing larger PV capacity is to set up a voltage reference from the Tesla Gateway 2 auxiliary contactor to the IQ Gateway.

### Tesla Gateway 2 setup

Refer to the Tesla installation manual for the recommended cable used for the aux wiring. Use wire gauge 0.2–1.5 mm<sup>2</sup> to connect to the auxiliary terminals 3 and 4 located in the Tesla Gateway.

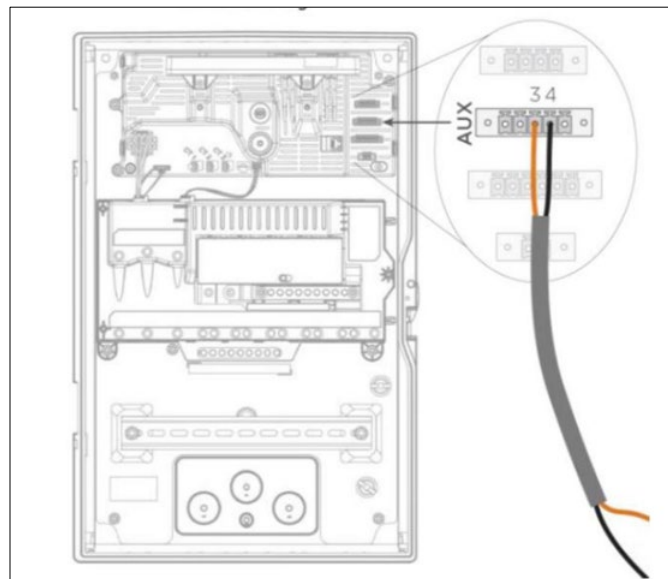


Figure 1: Gateway low voltage relay wiring

To activate the feature in the Tesla commissioning wizard, check the “Open Relay when Off-Grid” box under “GATEWAY LOW VOLTAGE RELAY” on the installation page. This needs to be done under the Tesla setup page.

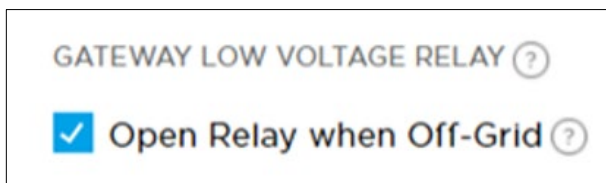


Figure 2: Tesla commissioning wizard

## Enphase setup

To derate the Enphase microinverters during a backup event, the IQ Gateway needs to receive a signal from the gateway. The two signal wires from the Gateway low voltage relay are connected to the IQ Gateway DRM 1/5 port. Connect one of the cables to one of the + (12 VDC) and the other to the Comm port, refer to the following figure.

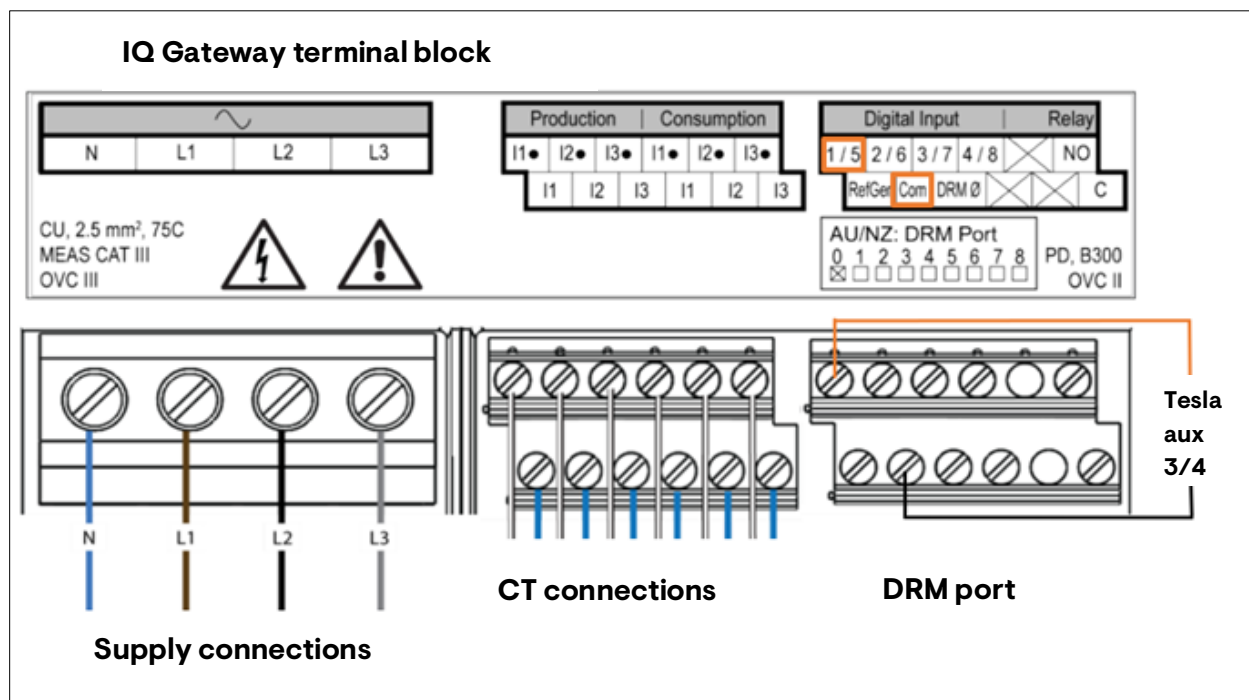


Figure 3: IQ Gateway terminal block

When the relay is closed, the system will produce full power. Enphase can program this to 5 kW AC maximum output when it opens. Once the connection is terminated and the system is online and communicating with the internet, the backup power can be limited by Enphase Installer Portal (Envoy software 7.6.168 or greater is required, contact support if you do not have the following settings).

## Setting up production limit on Enphase Installer Portal

The steps to set up PV microinverter power production are as follows:

1. Log in to the Enphase Installer account.
2. Once logged in, click on the intended site.
3. Click the setting icon as shown.

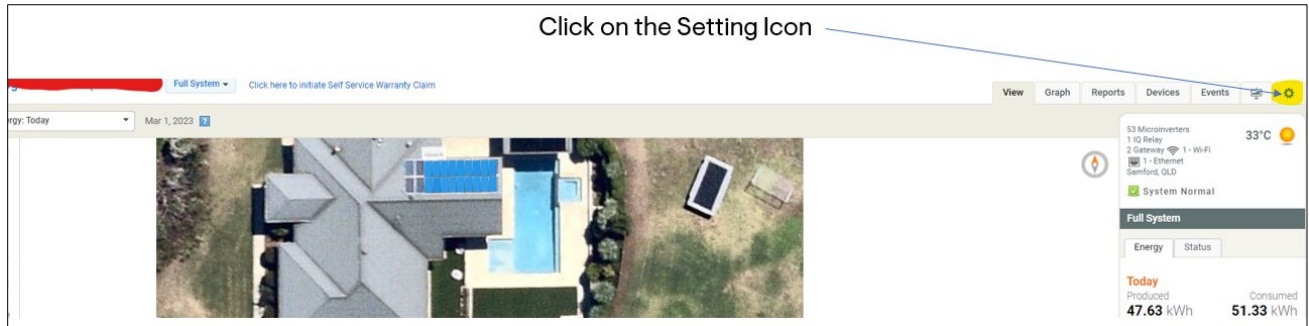


Figure 4: Setting configuration

4. Scroll down and click the “Edit” button of “Power Production Limiting by Gateway”.

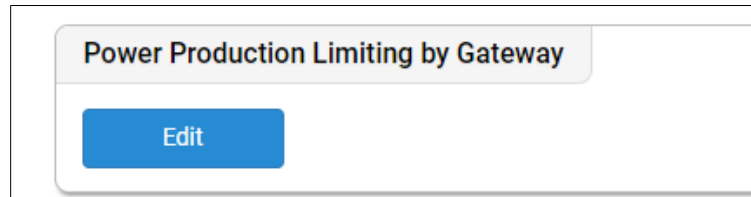


Figure 5: Power production limiting by Gateway

5. In the “Power Production Limiting by Gateway”, set and calculate the specifications as shown in the following figure.
6. Follow the example to set up the production limit to 5 kW.

Figure 6: Power production limiting by Gateway fields

The backup test is recommended to confirm the limitation setting is set up correctly.

If you have any questions, please contact Enphase Support at 1800 006 374 (AU), 09 884 0421 (NZ), or email [support\\_au@enphaseenergy.com](mailto:support_au@enphaseenergy.com).

## Revision history

Revision	Date	Description
TEB-00033-2.0	August 2023	<ul style="list-style-type: none"> <li>Updated “IQ Gateway terminal block” and “Power production limiting by Gateway” images.</li> <li>Updated Envoy software version.</li> <li>Updated Comm port in the “Enphase setup” section.</li> </ul>
TEB-00033-1.0	July 2023	Initial release
Previous releases		

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