# MPPT Solar Charger PV Short Relay Reset

Most of the Solar Chargers that support 150V or more have a protection mechanism to prevent that an internal fault result in a battery over voltage. The type of internal fault referred to is a short circuit between the Solar Charger’s PV Input and Battery output.

In some newer models (see list below) the protection has been improved to make it more robust. The old version automatically reset itself: the protection was released by power cycling the unit. A side effect of the newer protection is that it does not reset itself and needs to be manually reset after power cycling.

The protection consists of a latching relay, which is mounted across the PV Input. When the firmware detects a short between PV inputs and Battery outputs, by monitoring the battery voltage for an over voltage, it engages the relay and as such shorts the PV Input. See errors 80 to 83 descriptions here.

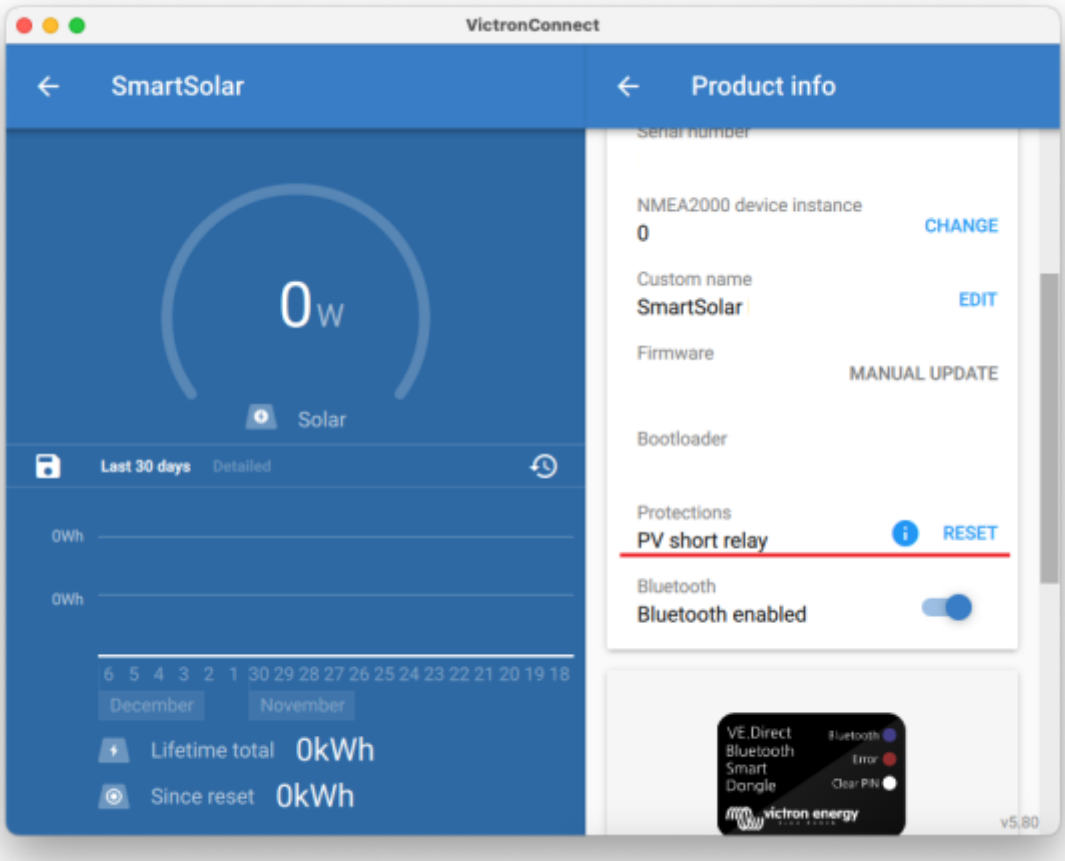
List of Models with newer PV short protection with latching relay:

- SmartSolar VE.Can MPPT 250/100 - serial number HQ2150 and newer

## Reset latching relay

To recover from such failure, the below reset procedure must be followed.

1. Power the solar charger through its battery terminals with a 12V battery or bench power supply set to 12V.
2. Leave the PV Input terminals disconnected.
3. Open VictronConnect and navigate to the Product settings menu. There the PV Short reset feature is shown.




Note that the feature only shows when (a) the connected units features the protection, ie. 250/100 VE.Can model, HQ2150 and later; (b) requires the battery voltage to be between 10 and 15V; © requires VictronConnect v.580 or later and (d) requires firmware version v3.12 or later to be installed on the Solar Charger.

4. Then click the RESET button. It will gray out for a few seconds and return blue. A click might be heard.

For the SmartSolar VE.Can MPPT 250/100 with a serial number between HQ2150 and HQ2250, the reset procedure – unfortunately – often does not work. In this case, contact your dealer for replacing the MPPT under warranty.

## Is my charger faulty if the reset menu is shown?

Not necessarily, as described above, the charger takes into account the PV and battery voltages to decide if the reset menu needs to be shown or not. In case, for example, the charger is connected to a 12V battery and no voltage is detected at the panel terminals (e.g. during the night), the menu will be shown, even if the charger is not faulty. Pressing the reset button in this case won't have any effect.

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