

# MPPT Solar Charger Error Codes

Solar Chargers indicate an error with their LEDs. See the [Toolkit App](#) for the LED codes.

Detailed error codes can be read with a remote panel, such as the Color Control GX or the MPPT Control.

## Error Codes

### Err 2 - Battery voltage too high

This error will auto-reset after the battery voltage has dropped. This error can be due to other charging equipment connected to the battery or a fault in the charge controller. This error can also occur if the battery voltage is set to a lower voltage than the actual battery voltage.

### Err 3, Err 4 - Remote temperature sensor failure

Check if the T-sense connector is properly connected to a remote temperature sensor. Most likely cause: the remote T-sense connector is connected to the BAT+ or BAT- terminal. This error will auto-reset after proper connection.

### Err 5 - Remote temperature sensor failure (connection lost)

Check if the T-sense connector is properly connected to a remote temperature sensor. This error will not auto-reset.

### Err 6, Err 7 - Remote battery voltage sense failure

Check if the V-sense connector is properly connected to the battery terminals. Most likely cause: the remote V-sense connector is connected in reverse polarity to the BAT+ or BAT- terminals.

### Err 8 - Remote battery voltage sense failure (connection lost)

Check if the V-sense connector is properly connected to the battery terminals.

### Err 17 - Controller overheated despite reduced output current

This error will auto-reset after charger has cooled down. Check the ambient temperature and check for obstructions near the heatsink.

## **Err 18 - Controller over-current**

This error will auto-reset. If the error does not auto-reset disconnect the charge controller from all power-sources, wait 3 minutes, and power up again. If the error persists the charge controller is probably faulty. A cause for this error can be switching on a very large load on the battery side.

## **Err 20 - Maximum Bulk-time exceeded**

### **Solar Chargers**

The maximum bulk time protection is a feature that was in the chargers when they were just released (2015 or earlier) and later the feature was removed.

If you do see this error, then update to the latest firmware.

If you then still have the error, perform a reset to factory defaults of the configuration, and reconfigure the solar charger.

### **AC Chargers**

This protection is default enabled on the Skylla-i and the Skylla IP44.

This error is generated when the battery-absorption-voltage is not reached after 10 hours of charging.

The feature of this safety protection is to detect a shorted cell; and stop charging.

## **Err 21 - Current sensor issue**

This error will not auto-reset.

Disconnect all wires, and then reconnect all wires. Also, make sure the minus on the MPPT charge controller (PV minus/Battery minus) is not bypassing the charge controller.

If the error remains, please contact the dealer, there might be a hardware defect.

## **Err 26 - Terminal overheated**

Power terminals overheated, check wiring, including the wiring type and type of strands, and/or fasten bolts if possible.

This error will auto-reset.

## **Err 28 - Power stage issue**

This error will not auto-reset.

Disconnect all wires, and then reconnect all wires. If the error persists the charge controller is probably faulty.

### **Err 33 - PV over-voltage**

This error will auto-reset after PV-voltage has dropped to safe limit. This error is an indication that the PV-array configuration with regard to open-circuit voltage is critical for this charger. Check configuration, and if required, re-organise panels.

### **Err 34 - PV over-current**

The current from the solar-panel array has exceeded 75A. This error could be generated due to an internal system fault. Disconnect the charger from all power-sources, wait 3 minutes, and power-up again. If the error persists the controller is probably faulty, contact your dealer.

### **Err 38, Err 39 - PV Input shutdown**

To protect the battery from over-charging the panel input is shorted.

Possible reasons for this error to occur:

- The Battery voltage (12/24/48V) is set, or auto-detected, incorrectly. Use VictronConnect to disable auto-detect and set the Battery Voltage to a fixed voltage.
- There is another device connected to the battery, which is configured to a higher voltage. For example a MultiPlus, configured to equalise at 17 Volts, while in the MPPT this is not configured.
- The battery is disconnected using a manual switch. Ideally the charger should be switched off before disconnecting the battery, this avoids a voltage overshoot on the charger output. If necessary the voltage trip-level for the PV Short protection can be increased by raising the Equalization voltage set-point (note: equalization does not have to be enabled in this case).
- The battery is disconnected using a Lithium charge relay connected to the "allow-to-charge" output of a BMS. Consider wiring this signal to the Remote terminal of the charger instead. This shuts down the charger gracefully without creating a voltage overshoot.

Error recovery:

- Error 38: First disconnect the solar panels and disconnect the battery. Wait for 3 minutes, then reconnect the battery first and next the panels.
- Error 39: The charger will automatically resume operation once the battery voltage drops below the float level for 1 minute.

If the error persists the charge controller is probably faulty.

### **Information 65 - Communication warning**

Communication with one of the paralleled controllers was lost. To clear the warning, switch the

controller off and back on

## Information 66 - Incompatible device

The controller is being paralleled to another controller that has different settings and/or a different charge algorithm.

Make sure all settings are the same and update firmware on all chargers to the latest version

## Err 67 - BMS Connection lost

The charger is configured to be controlled by a BMS, but it does not receive any control messages from a BMS. The charger stopped charging, as a safety precaution.

Check the connection between the charger and the BMS.

### How to reset the charger, to de-couple it from the BMS

When the charger needs to operate in stand-alone mode again, not controlled by a BMS, it needs to be reset:

- VE.Can solar chargers, go into the setup menu, and change setting 'BMS' from 'Y' to 'N' (setup item 31).
- VE.Direct solar chargers, reset the charger to factory defaults with VictronConnect, and then reconfigure it.

Note that (solar-)chargers automatically configure themselves to be BMS-controlled when they are connected to one; either direct or via a Color Control GX or Venus GX.

## Err 68 - Network misconfigured

The charger detects multiple conflicting network sources trying to take control of the charger.

Applies to SmartSolar MPPTs and SmartSolar MPPTs VE.Can.

The typical reason for the error to show is that the charger is configured to operate in parallel using our [wireless VE.Smart protocol](#); and at the same time it is part of an [Energy Storage System \(ESS\)](#). Or its used in an installation with an intelligent battery. In all those cases, the charger is being externally controlled, and should not at the same time be configured for parallel operation.

Resolution: disable the parallel operation by connecting VictronConnect, going to settings, then "VE.Smart networking" and choose "Leave network".

For SmartSolar MPPT VE.Can only, also make sure its not connected to a [GX Device](#) via both VE.Can and VE.Direct. Either disconnect the VE.CAN cable or the VE.Direct cable.

Once the conflict is resolved the error will disappear and the charger will resume normal operation, usually within a minute.

## Err 114 - CPU temperature too high

This error will reset after the CPU has cooled down. If the error persists, check the ambient temperature and check for obstructions near the air inlet and outlet holes of the charger cabinet. Check manual for mounting instructions with regard to cooling. If error persists the controller is probably faulty.

## Err 116 - Calibration data lost

If the unit does not work and error 116 pops up as the active error the unit is faulty, contact your dealer for a replacement.

If the error is only present in the history data and the unit operates normally this error can be ignored safely. Explanation: when the units power up for the very first time in the factory, it does not have calibration data and an error 116 is logged. Obviously this should have been cleared, but in the beginning units left the factory with this message still in the history data.

SmartSolar models (not the BlueSolar models): upgrading to v1.4x firmware is a one-way trip, you cannot go back to an older firmware version once you upgrade to v1.4x. Reverting to older firmware gives error 116 (calibration data lost), this can be fixed by re-installing the v1.4x firmware.

## Err 119 - Settings data lost

The charger cannot read its configuration, and stopped.

This error will not auto-reset. To get it working again:

1. First, restore it to factory defaults.
2. Disconnect the charge controller from all power-sources
3. wait 3 minutes, and power up again.
4. Reconfigure the charger.

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Last update: **2019-07-05 06:43**

