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 (12, 24 48V) is set to a lower voltage than the connected battery.

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.

Note that this error was introduced in v1.36. So when doing an update, it might look like the firmware update caused this issue; but it doesn't. The Solar charger was then already not performing 100% before the update; updating to v1.36 or later merely made the issue more visible. The unit needs to be replaced.

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 its maximum voltage setting (normally Equalisation or Absorption voltages), for 250V versions or float voltage for the other units. It can also takes a minute to reset the fault.

If the error persists the charge controller is probably faulty.

Err 40 - PV Input failed to shutdown

If the charger is unable to turn off the PV input, it will go into a safe mode in order to protect the battery from over-charging or having a high voltage on the battery terminals. In order to do that, the charger will stop charging and disconnect its own output. The charger will become 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.

This Error only shows when there is solar power available and thus the Solarcharger is ready to initiate charging. It does not show at night. And in case there is a permanent problem, the error will raise in the morning and clear at night, and so forth.

Check the connection between the charger and the BMS.

How to reconfigure the charger to standalone mode

Our Chargers and Solarchargers automatically configure themselves to be BMS-controlled when they are connected to one; either direct or via a GX Device. And that setting is semi-permanent: power cycling the charger will not reset it.

Here is what needs to be done to make the charger operate in stand-alone mode again, ie. not controlled by a BMS:

- 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.

Err 68 - Network misconfigured

Applies to SmartSolar/BlueSolar MPPTs VE.Can (FW version v1.04 or higher) and SmartSolar VE.Direct MPPTs (FW version v1.47).

The charger detects multiple conflicting network sources, with the same priority, trying to send the same information to the charger. VE.Can and VE.Direct interfaces have both the same priority level, and BLE (using VE.Smart Networking) has a lower priority.

Having a higher priority level means that, if the same information (e.g. Battery voltage sense) is being received from both VE.Can and BLE (using VE.Smart Network) by the charger, the information on VE.Can will be used and the one coming from BLE will be ignored.

Now, if the same information is being received from two interfaces that has the same priority level (as VE.Can and VE.Direct), the charger does not know how to prioritize those, so then error 68 will be triggered.

To clear the error on the SmartSolar/BlueSolar MPPTs VE.Can, make sure the disconnect the VE.Direct or VE.Can cable from the charger. Once the conflict is resolved the error will disappear and the charger will resume normal operation, within a minute. Note: Connecting a Solar charger on both VE.Can and VE.Direct is not supported.

To clear the error on the SmartSolar VE.Direct MPPTs update the FW version to v1.48 or higher.

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. (top right in Victron Connect, click on the three dots)
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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