Inverter / Charger Error Codes

Most products indicate an error condition by blinking their LEDs. See the Toolkit App for the LED codes.

Detailed error codes can be read with Victron Connect or 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.

Solar Chargers

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 10 - Battery voltage too low

The inverter will shut down when the DC input voltage drops below the low battery shutdown level. After a minimum delay of 30 seconds, the inverter will restart if the voltages rises above the low battery restart level.

After three restarts followed by a low battery shutdown within 30 seconds of restarting, the inverter will shutdown and stop retrying. The LEDs will signal low battery shutdown. To restart the inverter, switch it Off, and then On, or recharge the battery: as soon as the battery has risen and then stays above the Charge detect level for 30 seconds, it will switch on. See the Technical Data table (product datasheet or manual) for default low battery shutdown and restart levels. The levels can be changed with the VictronConnect App.

Err 11 - Battery high ripple voltage

High DC ripple is usually caused by loose DC cable connections and/or too thin DC wiring. After the inverter has switched off due to high DC ripple voltage, it waits 30 seconds and then restarts.

After three restarts followed by a shutdown due to high DC ripple within 30 seconds of restarting, the inverter will shutdown and stops retrying. To restart the inverter, switch it Off and then On.

Continuous high DC ripple reduces the inverter life expectancy

Err 14 - Battery low temperature

The charger is stopped to avoid charging LiFePO4 batteries at low temperature as this damages the cells.

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 heatsinks or fan inlets.

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

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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 27 - Charger short circuit

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.

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 29 - Over-Charge protection

This error will auto-reset. To protect the battery from over-charging the battery is disconnected. A possible cause is an over-sized PV array configuration, if there are too many panels in series the battery voltage cannot be reduced any further. Consider wiring more PV panels in parallel to reduce the voltage.

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.

Err 41 - Inverter shutdown (PV isolation)

PV panel isolation resistance too low. This error will not auto-reset. Check the installation and restart the unit using the power-switch.

Err 42 - Inverter shutdown (Ground Fault Circuit Interrupt)

The ground leakage current exceeds the allowed 30mA limit. This error will not auto-reset. Check the installation and restart the unit using the power-switch.

Err 43 - Inverter shutdown (Ground Fault)

The voltage difference between Neutral and Ground is too high.

Inverter or Multi (not connected to the grid):

- The internal ground relay is activated but the voltage over the relay is too high. The relay might be damaged.

Multi (connected to the grid):

- The ground wire in the installation is not present or not connected properly.
- Line and Neutral are swapped in the installation.

This error will not auto-reset. Check the installation and restart the unit using the power-switch.

Err 50, Err 52 - Inverter overload, Inverter peak current

Some loads like motors or pumps draw large inrush currents in a start-up situation. In such

circumstances, it is possible that the start-up current exceeds the over current trip level of the inverter. In this case the output voltage will quickly decrease to limit the output current of the inverter. If the over current trip level is continuously exceeded, the inverter will shut down: wait 30 seconds and then restart.

The Inverter can supply more power than the nominal power level for a short time. If the time is exceed the inverter stops.

After three restarts followed by another overload within 30 seconds of restarting, the inverter will shutdown and remain off. To restart the inverter, switch it Off, then On.

If the error persists reduce the load on the AC out terminal by switching off or disconnecting appliances.

Err 51 - Inverter temperature too high

A high ambient temperature or enduring high load may result in shut down to over temperature. Reduce load and/or move inverter to better ventilated area and check for obstructions near the fan outlets.

The inverter will restart after 30 seconds. The inverter will not stay off after multiple retries.

Err 53, Err 54 - Inverter output voltage

If the battery voltage is getting low and a large load is applied to the AC output the inverter is unable to maintain the proper output voltage. Re-charge the battery or reduce the AC loads to continue operation.

Err 57 - Inverter ac voltage on output

There is already AC voltage on the AC out terminal before switching on the inverter. Check that the AC out is not connected to a mains outlet or to another inverter.

This error will not auto-reset. Check the installation and restart the unit using the power-switch.

Err 55, Err 56, Err 58 - Inverter self test failed

The inverter performs diagnostic tests before it activates its output. In the case that one of these tests fails an error message is displayed and the inverter does not turn on.

First try to restart the inverter, by switching it Off, and then On. If error persists the inverter 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.

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).

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

To clear the error on the SmartSolar/BlueSolar MPPTs VE.Can, update the software. If the error persists, it will be because the charger is connected with both a VE.Direct cable and on VE.Can. That is not supported. Remove one of the two cables. The error will disappear and the charger will resume normal operation, within a minute.

Background

Error 68 indicates that 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 have the same priority level (as VE.Can and VE.Direct), the charger does not know how to prioritize those, causing error 68 to be triggered.

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.

Please do report this to your Victron dealer and ask him to escalate it to Victron; as this error should never happen. Preferably include firmware version and any other specifics (VRM URL, VictronConnect screenshots or similar).

Err 200 .. Err 255 - Internal error

Internal diagnostics failure. First try to restart the device, by switching it Off, and then On. If error persists the device is probably faulty.

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