# VictronConnect changelog and beta releases

During beta-testing of a new VictronConnect release, its details will be listed at the top of this page. Once released officially, all beta release notes are condensed into one full release note.

See also the victronconnect.

Please report bugs and give feedback to these betas via the Disqus comments below. Note that comments are not public by default, and first go to a moderation queue.

# Changelog

### v5.17beta2

### 2019-12-23

### Download links:

- iOS: Join TestFlight https://testflight.apple.com/join/cvufYMEh
- Android ARM64 (Modern phones, try ARMv7 if this doesn't work)\*
- Android ARMv7\*
- Android x86\*
- Windows 7 and higher
- Mac OS X 10.12 and higher

Please report bugs and give feedback to these betas via the Disqus comments below. Please note that comments are not public by default, and first go to a moderation queue.

### <u>Changes:</u>

Fix VRM functionality on Android devices

### v5.17beta1

### 2019-12-21

### **Changes:**

- Add remote monitoring, configuration and firmware updating for VE.Direct products connected to a GX device
  - This feature makes use of the MQTT service so it has to be enabled in the GX device
  - GX device must be configured in VRM
  - Only works with installations for which the VRM user has full control permissions
  - Known issues:
    - Doesn't work on Windows at all

<sup>\*</sup> Android: If you can't open the downloaded file from the downloads list try using a file browser.

- Firmware update checker mechanism doesn't work yet for remote devices and the firmware version is always reported as up-to-date, therefore firmware updates are only possible by manually adding the firmware file to the library.
- File handling is broken on iOS devices, so it is not possible to copy firmware and settings files to VictronConnect.
- Due to the above mentioned issues, it is not possible to perform remote firmware updates on iOS devices.
- To enable, make sure to run Venus OS v2.40 or later and that the VRM Two Way communication setting is on, in Settings → Services.
- Warning: Do not change settings on remote devices if you are not sure that all devices including the target (eg MPPT) is running latest firmware version.
   Please use the VRM remote firmware updates to check it.. Reason for this warning is that the version check doesn't work as it should yet when connected remotely. Will be fixed before release.

#### BMV-712:

- Optimise the firmware file format to improve the update speed
  - No changes related, version is kept as v4.03.

### **Smart Chargers:**

Add re-bulk current setting

#### Inverter RS:

• Add initial support for Inverter RS.

### VE.Bus Inverter/Chargers:

Add missing name/model description for some MultiPlus models

### v5.16 (Released officially)

#### 2019-12-20

### **Changes:**

- Fix GX devices discovery on macOS (UPnP)
- Fix Windows 7 is reported as unsupported Operating System

### v5.15 (Released officially)

### 2019-12-12

### Changes:

• Fix an issue that freezes VictronConnect when connecting to a BMV-712 or SmartSolar and there is a Bluetooth interface firmware update available

### v5.14 (Released officially)

#### 2019-12-10

### **Changes:**

- Guide the user when a product is not found:
  - Show a button on the device list page which links to a troubleshoot page with the most common connection issues.
- Make it clear that product is using latest firmware
- Show built-in firmware if there is a firmware update available
- Advice to remove bond when resetting PIN code by using PUK code; Otherwise, if using an invalid bond the puk reset process will fail
- Add SOC to battery settings so now it is possible to manually set it.
- Add storage settings to battery presets
- Check device OS and warn if it is not supported by VictronConnect
- Do not show default PIN code warning if there is a mandatory update available
- Fix trends sometimes don't restore the stored trend views
- Do not show the default PIN security warning when there is a mandatory update available
- Show devices in the devices list even when connection is not possible because are already connected to another phone/computer. Compatible devices:
  - VE.Direct dongles released in v2.17 for SmartBMV, VE.Direct SmartSolar,
     PhoenixInverterSmart and VE.Direct external dongle; released in v2.18 for VE.Can SmartSolar.
  - SmartLithium batteries released in v1.17
  - Smart Battery Sense released in v1.04
  - IMPULSE-II Smart chargers since v3.09
  - Phoenix Smart Charger since v3.08

### MPPT Solar Chargers:

- Add a text to advice to remove the jumper in VE.Direct port when changing load output operation mode.
- Fix available options on RX Functions for MPPTs. Small models have all 4 options, bigger models do not have a load output.

### Smart Chargers:

- Add settings support for IP65 24/13 & 12/25 models
- Add firmware v3.14 for Blue Smart IP22/IP65/IP67 Chargers:
  - Added option to disable BLE off recovery time of 30s for security reasons. This means that
    for the Blue Smart IP67 Charger a bluetooth killswitch is introduced, because there is no
    way to re-enable bluetooth once disabled. For both the Blue Smart IP22 and IP65 the
    MODE button can be used to perform a bluetooth reset and re-enable bluetooth.

### Phoenix VE.Direct Inverters:

- Add firmware v1.19 update for 800/1200VA models:
- Fix for 800/1200VA VE.Direct-Inverters: Power-up fails at a low battery voltage

### VE.Bus Inverter/Chargers:

• Add firmware v467 for MultiPlus-II

### VE.Direct Bluetooth Smart Dongle:

- Add firmware v2.23. This firmware was already available for rev2 dongles, this is for the first version of the dongle:
  - Support for device off reason when attached to Inverter.
  - Support apparent power when attached to Inverter.
  - TX power for advertisement increased.
  - Add default PIN code detection support.
  - Bonding info is removed when pincode changes.
  - Support mA resolution for SmartBMV battery current
  - Several small stability fixes
  - Advertising with own product ID started if no successful VeDirect communication was possible within 20 seconds (fallback to be able to update dongle at all times).

### IMPULSE-II Smart IP65 Chargers:

- Add firmware v3.15:
- Limit charging below 17.4V:
- Trigger a low battery voltage error
- Open the output relay
- Set the charge voltage to 24V
- Limit the charge current to 1A

### v5.13 (Released officially)

### 2019-10-28

### Changes:

### VE.Bus Inverter/Chargers:

- Update MultiPlus-II firmware to latest version (v466):
  - New gridcode for France (VFR 2019)
  - Two special gridcodes added for AS/NZS4777. These should be used in systems where the Neutral In and Out are externally tied together.

### v5.12 (Released officially)

### 2019-10-28

### **Changes:**

- Fix firmware version is not shown in all the cases when the update is completed
- Fix "update succeeded" message is wrongly displayed when trying to update using an invalid file
- Various user interface fixes and improvements

#### VE.Smart network:

- Change the way that a VE.Smart network information is presented:
  - Show devices that are in range for the connected product
  - Devices in range signal strength

### Smart Battery Sense:

• Add firmware update v1.05

### Bluetooth internal and external dongles:

Add Bluetooth firmware v2.23

### MPPT SolarChargers:

- Add MPPT Solar Chargers firmware v1.46:
  - Update marked mandatory only for SmartSolar as these models are affected by the bug described below.
  - Fix bug on the internal temperature measurement that lead to not being able to de-rate the output current due to a high temperature nor triggering the over temperature protection. (Bug introduced on v1.30). This bug is only present in SmartSolar.
- Make 30 day history in demos more accurate
- Add VE.Can MPPT SmartSolar firmware v1.03

### BMV-712:

- Add BMV-712 firmware v4.03 (previously v4.01):
  - Fix an issue that makes the buzzer inaudible

### VE.Bus Inverter/Chargers:

- Add firmware version 465 update
- Charger settings:
  - Add battery temperature compensation setting
  - Fix "Lithium battery" switch state doesn't reflect the actual value of the setting
  - Change hysteresis for Low DC Disconnect and Restart setting
- Fix crash when an invalid firmware update file is selected
- Add errors notification

### Smart Battery Protect:

• Show the correct icon for Smart Battery Protect 48-100

### SmartLithium:

- Add firmware version 1.17 update (previously v1.16):
  - Add cell under voltage pre-alarm threshold setting
  - Add support for BMS Pre-Alarm
  - Add Bluetooth On/Off support. Caution!! Once Bluetooth is disabled it is not possible to enable it again.

### Blue Smart chargers:

• Add firmware update v3.12:

- Update for all Blue Smart Chargers: IP22, IP65(exept Blue Smart IP65 Charger 12/25 & 24/13) & IP67
- Added BLE on/off
  - When BLE is disabled, it will still be temporarily enabled for 30s at power-up. The user can connect within this 30s to re-enable BLE again, perform a firmware update or monitor the device. The connection will remain active when the user connects within the 30s. When the user disconnects, BLE will be disabled.
- Clear bonded devices when the PIN is changed, except the connected device
- Advice default PIN
- Add BLE reset by press and hold the MODE button for 10s
  - Disconnect the active device
  - Restore PIN to default
  - Remove all bonded devices
  - Re-enable BLE
- Prevent VE.Smart communication from lockup
- Add firmware update v3.11 for Blue Smart IP65XL Chargers 12/25 & 24/13

### v5.11 (Released officially)

#### 2019-09-18

Blog post: VictronConnect 5.9 - Solar Charger improvements and much more

### **Changes:**

Fix VictronConnect could not recover properly after an interrupted bluetooth update of the bluetooth microcontroller/dongles in our products.

#### Known issues:

On macOS, a firmware update of Multis, Quattros or other devices with a VE.Bus port may fail. This issue was introduced in VictronConnect v5.9. A new VictronConnect version fixing this is expected in the near future. Meanwhile, there is a workaround.

### v5.10 (Released officially)

### 2019-09-13

### Changes:

### MPPT Solar Chargers:

- Fix an issue with the MPPT battery presets created with VictronConnect v5.8 and older. Those old presets don't include values for the new settings introduced in MPPT firmware v1.42. Because of that, when the user selected and re-applied such "old" preset using VictronConnect 5.9, settings like Adaptive absorption were disabled, while they should be enabled by default.

### v5.9 (Released officially)

#### 2019-09-11

Blog post: VictronConnect 5.9 - Solar Charger improvements and much more

### **Download links:**

- iOS: App Store (Pending of App Store approval)
- Android
- Windows 7 and higher
- macOS 10.10 (OS X Yosemite) and higher|App Store

### **Changes:**

#### General:

- Trends tab remembers last selected graphs for certain product family
- Improve PIN code change process
- Improve information shown when unable to connect to a product
- Fix PIN code reset via PUK code interface issues
- Fix settings files buttons could not appear when VE.Direct connected
- Fix overlapped text in the Inverter/Charger details page on Windows 10
- Show a warning when using Default PIN via BLE
  - Default PIN code must be always changed to prevent unwanted connections, now we advise it when default PIN code has not been changed
- Firmware updates are no longer mandatory for basic monitoring:
  - Live data page: This page can be accessed without updating the firmware unless the update is highly recommended and marked as mandatory.
  - Setting pages: To view and modify settings it is always necessary to update the product to the latest version included in VictronConnect.
- Do not allow change PIN code to same code
- Update the framework on top of which VictronConnect is built, required to comply with Google Play Store requirements. This will improve the application performance but adds a drawback: We have to drop support for old OS versions, see below.

#### Android:

- Add ARM64bit build: Takes advantage of all the power of modern CPUs. This is also required by Google Play Store.
- Drop support for Android versions older than 5.0(Lollipop).
- Remove unintentional Android "microphone" and "camera" permissions, they are actually never user by VictronConnect.

#### iOS:

• Requires iOS version 11 or newer. Oldest iPhone supported now is iPhone 5s.

### **MPPT Chargers:**

- Include firmware v1.42 (v1.43 for some models) for BlueSolar and SmartSolar chargers:
  - The Lithium battery rotary switch preset has been changed. Absorption time is fixed to 2

Last update: 2020-01-13 00:57

hours, and it will not stop on low tail current.

- The re-bulk voltage was lowered from 13.7V to 13.4V (for all battery types).
- Added four new settings:
  - Adjustable tail current (changeover from absorption to float).
  - Adjustable re-bulk offset voltage (changeover from float to bulk).
  - Adjustable automatic equalization parameters (current / duration).
  - Choose between adaptive- and fixed- absorption time. The adaptive mode is the method that has always been in the algorithm. It adapts the time to the battery voltage as seen in the morning. The fixed absorption time is what it says it is: a fixed time. No multipliers related to voltage in the morning. Setting absorption time to fixed does not disable the tail current mechanism: disable that too to get a 100% fixed absorption time. Note that we advise to not use fixed absorption times for lead batteries.
- Include firmware v1.02 for SmartSolar VE.Can:
  - Synchronized charging with VE.Can. This works the same as with previous models and the Skylla-i.
  - Add ESS support. When connected on VE.Can, the VE.Can device instance must be 0. Just like with the previous BlueSolar VE.Can models.
  - Add BMS support.
  - All new battery charger settings: fixed absorption, tail current, re-bulk offset voltage, max auto equalization time, equalization auto stop and equalization current percentage
  - Support for the Smart Battery Sense and BMV connected via Bluetooth VE.Smart.
- Update built-in presets database to match the new firmware

#### SmartShunt:

Add support for new SmartShunt product

### BMV:

• Fix empty item in the transmitting list is shown in the VE.Smart networking settings page.

### Orion Smart:

- Add firmware v1.02
- Add engine shutdown detection setting
- Fix adaptive mode is not changed when selecting a battery preset

### BlueSmart Chargers IP65:

• Enable PUK code PIN reset when the product supports it

#### Bluetooth:

Fix PIN code change button it shown multiple times on some devices

### **VE.Direct Phoenix Inverter:**

- Add firmware v1.17
  - Add "ECO search time" setting
  - Add option to disable Bluetooth on Smart models
  - Fix wrong AC output voltage being shown in in some cases

### VE.Bus Inverter/Chargers:

- Add latest firmware versions (460 & 463)
- VeBusInverter: Reduce minimum DC Input low restart voltage (24V/48V)
  - The minimum DC Low Restart has been lowered for 24V models from 21.8 to 20.6, and from 43.6 to 41.2 for 48V models. Not for 12V units, due to hardware limitations.

### IMPULSE-II chargers:

Add charge cycles history

### v5.8 (Released officially)

### 2019-07-18

### Notes:

When viewing the permissions of the Android version of VictronConnect, it shows "microphone" and "camera". This is unintentional and they are actually never user by VictronConnect. On Android versions >= 6, the individual permissions can be enabled/disabled and the "microphone" an "camera" permissions can stay disabled. These permissions are removed in version 5.9beta2.

### **Changes:**

### Inveter/Chargers:

- Add settings and firmware updates for Inverter/Chargers connected via MK3-USB:
  - Firmware version 459 is included in the app and the correct file for the connected product is automatically selected when updating.
  - Only basic settings are included, Virtual Switch and Assistants are not supported
  - Only single unit systems are supported

#### Orion Smart:

Add support for Orion Smart converters

#### GX devices:

- Support Maxi GX and other future GX models
- Make possible to connect to a GX device even if the model is not recognised.

### Smart Battery Sense:

Include firmware v1.04 update

### Blue Smart Chargers:

Update the link pointing to the manual shown when a firmware update fails

### Bluetooth products:

Add Bluetooth disable option for products that supports it, available in the product info page

• Add instructional videos of how to remove the device pairing, required after a PIN code change

### **VE.Can MPPT:**

- Include firmware v1.02
  - Synchronized charging with VE.Can. This works the same as with previous models.
  - Add ESS support.
  - Add BMS support.

SmartSolar chargers, Smart BMV, Smart Phoenix Inverters & VE.Direct Smart Bluetooth dongle:

- Include firmware v2.19:
  - Disable bluetooth option

### MPPT Solar Chargers:

- Settings now scale accordingly to the selected battery voltage
- Fix presets can be created with incorrect values from a demo product and therefore when loading it on a real product makes the charger enter in error mode having to restore settings and power cycle it.

#### General:

Fix links on firmware update result text doesn't work

### v5.7 (Released officially)

### 2019-05-08

### **Changes:**

• Fix PIN code change button is not shown

### MPPT Solar Chargers:

• Prepare support for future firmware versions

### v5.6 (Released officially)

#### 2019-05-07

### Notes:

• There is an issue in this version; the option to change the PIN code is not available. It is fixed in v5.7.

### **Changes:**

- Fix firmware update retry is not triggered when reconnecting after an unsuccessful firmware update.
- Fix disable Bluetooth toggle is shown twice for some products

- Make trends use user selected temperature unit
- Fix typos in Dutch and German translations
- Internal improvements

#### GX devices:

• Show firmware version when the GX device is running firmware >= 2.30

### v5.5 (Released officially)

#### 2019-05-02

### Download links:

- iOS: App Store
- Android
- Windows 7 and higher
- macOS 10.10 (OS X Yosemite) and higher|App Store

Please report bugs and give feedback to these betas via the Disqus comments below. Please note that comments are not public by default, and first go to a moderation queue.

### **Changes:**

- Add support for Phoenix Smart Chargers
- Add new features highlight on home screen
- Add onboarding, shows to the user a brief description of the available options
- Add a button to disable Bluetooth; currently available for:
  - Smart Battery Protect
  - Smart Lithium batteries
  - ∘ Smart BMV-712
  - SmartSolar Chargers (only when updated to v1.40 or newer, which is not publicly available yet at this moment)
  - Phoenix Smart Charger IP43
- Improve reset pin code by PUK handling
- Fix the "user defined" is shown when certain battery presets are selected
- · Android: Fix crash on devices without Bluetooth
- Small GUI fixes and improvements
- Fix GX log converter day light saving issues.
- Add trend graphics for BMV, MPPT and Smart Battery Sense
  - BMV: voltage, current, power, consumed amp hours, state of charge, starter battery voltage, temperature, mid voltage deviation
  - Smart Battery Sense: voltage, temperature (those two are all this device measures)
  - MPPT: solar voltage, current & power. Battery voltage & current & temperature. Load current (for models that have a load output)
  - It records for max 2 hours; and stops/discards as soon as you disconnect from a device.
- Fix typos and improve wording on various pages
- Set MPPT low-temp cut-off setting resolution to one degree; the previous higher resolution was pointless.
- Add an option to select Fahrenheit as the unit for temperature. To enable, open the main VictronConnect menu, click settings. Here you'll see the version of VictronConnect as well as

the option to change language and temperature unit.

• Fix EasySolar-II GX, MultiPlus-II GX and Generic Venus devices are shown as Unknown devices when discovered over UPnP

### v5.4 (Released officially)

### 2019-03-08

### **Changes:**

#### Smart Lithium Batteries:

- Add firmware v1.16 update:
  - Fix temperature inaccuracies. Between different batteries the accuracy of the temperature measurement varied a lot. In this update; three changes have been made to fix that:
    - The battery will, only once, automatically calibrate the temperature measurement when no balancing have been active for four hours.
    - Added "Battery temperature offset" user setting, range -10°C to +10°C. This can be configured through VictronConnect.
    - Stabilized battery temperature indication.
  - So, after updating to this version; the user has can do two things: wait for the automatic calibration to take place. Or go in and set the Temperature offset immediately. When doing so; the automatic calibration will not take place.
  - Enable custom name

#### Venus devices:

- Add Venus device discovery via UPnP:
  - The device running VictronConnect and the Venus device must be connected to the same local network.
  - Can find a Venus GX when connected to its built-in access point, useful to open remote console and configure network settings.
  - Available functions are:
    - Open remote console
    - Open VRM to visualise data or add the installation to your account when setting it up.
    - See the device IP address

### Android:

Fix toolbar positioning on devices a with tall notch, for example Google Pixel 3XL

### v5.3 (Released officially)

### 2019-02-10

### **Changes:**

Fix English language is not selectable

• Improve Spanish translation

#### Smart Phoenix Inverter:

Show the correct product icon for 1600/2000VA models

### **MPPT Solar Chargers:**

- Include firmware v1.39 update
  - Fix units sometimes failing when reset to defaults on a test bench; with a power supply connected to the PV inputs rather than a real PV array. See MPPT change log for more details.

### BMV Battery monitor:

• Fix "Battery starts synchronized" setting. This is a recently introduced feature in the BMVs; Configuring that feature, #70 START SYNCHRONIZED, on the unit itself worked fine. But in VictronConnect it was not possible to change that setting. Now it works as it should.

#### Peak Power Pack:

- Fix wrong status is shown: it said `On for thirty minutes`; while it should say `On`.
- Add missing alarms
- Fix "OV" is displayed in case of an over voltage.

### v5.2 (Released officially)

### 2019-01-09

### **Changes:**

• Fix page device page is not closed after reconnection timeout

### New products support:

- Smart Battery Protect
- Smart Phoenix Inverter

### **BMV Battery Monitor:**

- BMV 712 Bluetooth firmware update v2.14
- BMV Battery monitor firmware v3.10(BMV 70x) and v4.01(Smart BMV) update
- Add "Battery starts synchronized" setting

### VE.Direct Bluetooth Smart Dongle:

- Firmware v2.15 update:
  - Increased VE.Smart transmission robustness.
  - Start advertising after 20 seconds when no successful VE.Direct communication was possible

### MPPT Solar Chargers:

- Add scrollbar to presets list
- · Fix history totals text overlap
- SmartSolar Bluetooth firmware v2.14 update:
  - Increased VE.Smart transmission robustness.
  - Start advertising after 20 seconds when no successful VE.Direct communication was possible.

### Smart Battery Sense:

- Add firmware v1.03 update
  - Improve Bluetooth range

### VE.Bus Inverter/Charger:

• Fix overload alarm icon is missing

### iOS:

• Fix PIN code can't be changed because the keyboard overlaps the "Accept" button: Now clicking somewhere on the dialog closes the keyboard.

### v5.1 (Released officially)

#### 2018-11-23

### SmartLithium

- Update included firmware from v1.12 & v1.13 to v1.15
  - Add "Allowed-To-Charge minimum temperature" setting
  - By default it disables charge when battery temperature is below 5C.
  - Improved Bluetooth connection
- Fix SmartLithium disappears from the devices list after disconnecting.

### BMV Battery monitor:

• Fix an issue that makes BMV disappear from devices list after disconnecting. This issue only affects to BMV which are configured for VE.Smart networking.

### MPPT solar chargers:

Fix AES time show undefined in the algorithm description

### Phoenix Inverter:

Fix AC output setting limits in demo products

### macOS:

• Fix products on the devices list page are displayed with the default name instead of the custom name.

#### Android:

Improve firmware update robustness

### v5.0 (Released officially)

#### 2018-10-09

### **Changes:**

### Firmware updating:

 Fix issue that can cause VictronConnect get stuck at 93% during a VE.Direct product firmware update

### MPPT solar chargers:

- Added firmware v1.37 update
- Fix Automatic Energy Selector load output mode is not listed (only for SmartSolar)

### BMV battery monitor:

• Fix time remaining displays "0m" when no current is flowing from or to the battery

### v4.9 (Released officially)

#### 2018-08-23

### **Changes:**

### VE.Bus Smart Bluetooth Dongle:

- Added firmware v1.07 update
  - Fixed an issue that makes the page show no values in some situations
- Hide SOC items when battery monitor is disabled
- Added missing Multi's model names
- Fix issues when connected Multi/Quattro firmware version is lower than 415.
- Warn about minimum firmware version

### MPPT solar chargers:

- Added firmware v1.36 update for 250V models
- Load output: User algorithm 1&2 minimum voltage is now 10V for 12V systems.

### BMV battery monitor:

- Added power value reading to the main page
- Fix time to go reported as "Infinite" instead of "0h" when discharge floor SOC level is reached
- Fix high voltage relay setting reports wrong values when editing for a first time in the session

### Blue Smart Charger:

Show correct value for low current setting in demo products

#### Last update: 2020-01-13 00:57

### v4.8 (Released officially)

### 2018-07-05

### **Changes:**

- Add SmartLithium 24V 200Ah demo
- Fix device filtering needs to be set after each scan

#### Mac:

• Fix crash when converting big Venus VRM database files to XLSX

### VE.Bus smart dongle:

Add support for VE.Bus Smart Dongle

### v4.7 (Released officially)

#### 2018-06-09

### **Changes:**

• Fix products settings page is empty after automatic reconnection.

### iOS:

Improve iPhone X support

### Blue Smart Chargers:

- Fix test stage not being shown for Blue Smart IP65 chargers
- Graph tab: Correct battery percentage in absorption stage description

# v4.6 (Released officially)

### 2018-05-29

\* Android: If you can't open the downloaded file from the downloads list try using a file browser.

### **Changes:**

- Improve firmware update robustness
- Add Chinese translation

### MPPT:

- Add firmware v1.33 update for 250V models
  - Further improve PV Short protection.
  - Fix in reporting current/wattage/state when the unit is not charging.

#### macOS:

• Fix issue that makes settings files not being saved if no ".vcsf" extension is manually appended to the filename.

### v4.5 (Released officially)

#### 2018-04-25

### **Changes:**

• Fix French translation for "Switch on before sunrise" in Streetlight settings

### Solar Chargers:

- Add firmware v1.32 update for 250V models
  - Improve power-stage shutdown sequence.
  - Improve / speed-up PV Short protection and introduce error code 39
- Fix PV current value stops updating two minutes after connecting
- Fix oldest day record is not exported to CSV file

### BMV battery monitor:

 Fix temperature alarm and relay settings are always reported as disabled when Fahrenheit unit is selected

### v4.4 (Released officially)

### 2018-03-16

### **Changes:**

- Fix custom name max length for non ASCII characters
- · Add VE.Smart networking settings to demo products
- Update translations
- Fix hardware failure alarm icon
- Fix live data relay icon
- Small user interface corrections and improvements

### Solar Chargers:

- Added firmware v1.30 update, full changelog in https://professional.victronenergy.com
- Added internal bluetooth firmware v2.12 update
  - Add VE.Smart Networking support
- Add low temp cut-off setting, prevents damage in lithium batteries by disabling the charge during low temperature conditions.
- Show battery temperature when available.
  - Temperature is only available when the MPPT is configured in a VE.Smart network where the battery temperature is available.
- Make auto equalization interval the only charge setting that can be modified when a factory

default battery is selected

- Send local time to the MPPT: Helps streetlights functionality to synchronize.
- Fix a bug that keeps streetlights on after sunrise
  - Issue occurs when the "At sunset" setting is modified when the "At sunrise" setting is already set to "Switch on before sunrise".

### BMV battery monitor:

- Added internal bluetooth firmware v2.12 update
  - Added support for VE.Smart Networking
- Fix mid-point deviation unit, it was "V" when it should be "%"

#### SmartLithium:

- Added firmware v1.12 update
- Add "Allowed-To-Discharge cell voltage" setting
- Fix low cell voltage alarm

### VE.Smart dongle:

- Added firmware v2.12 update (only for rev2 units)
- Added support for VE.Smart Networking

### SmartBatterySense:

- Added firmware v1.02 update
  - Added support for VE.Smart Networking (Voltage & Temp)

### PeakPowerPack:

Show confirmation dialog before switching to hibernate

### v4.3 (Released officially)

### 2018-02-08

### Download links:

- iOS: App Store
- Android
- Windows 7 and higher
- macOS 10.10 (OS X Yosemite) and higher App Store

### **Changes:**

- Fix duplicated error message when loading an invalid settings file.
- Allow restoring settings from files created with previous VictronConnect versions

### SmartLithium:

- Disable false low cell voltage alarm
- Rename battery to voltage in right panel

### MPPT Solar chargers:

- Fix save/load settings functionality on BlueSolar 150/100 model
- Add relay state to live data page
- Add an error in one of the history records of the demo products
- Rename load output to virtual load output on devices without load output
- Add description to day/night detection settings
- History graphs:
  - Hide Bluk, Absorption or Float segments when the state was not reached
  - Improve bar length on days without production
  - Add scrollbars
  - Add mouseover to bars and buttons
  - Fix daily records values are partially hidden on some small screens, for example iPhone 5
     & iPhone SE
  - Fix text overlapping due to translations

#### **Phoenix Inverters:**

- Fix save and load settings icons are disabled when using VE.Direct cable
- Add mode setting, mode now can be switched between on, off and ECO
- Add support for future models
- Add firmware v1.14 update for 800VA models

### Blue Smart Chargers:

• Improve Bluk state description when Li-ion battery is selected

### Windows & Mac:

- Add scroll bars to device list and settings pages
- Add mouseover effect to the refresh button in the device list page
- Rename "CCGX log converter" to "Venus log converter"

### v4.2 (Released officially)

### 2018-01-07

### **Download links:**

- iOS: App Store
- Android
- Windows 7 and higher
- macOS 10.10 (OS X Yosemite) and higher|App Store

#### Changes:

Windows: Fix auto-update of VictronConnect

iOS: No changesmacOS: No changesAndroid: No changes

Note that in v4.0 and v4.1 the auto-update was not working in Windows hence fixed in v4.2, so

Windows users will need to manually download and install this new version. There is no need to first uninstall it; simply download the new version and install it. This will automatically replace any existing install.

### v4.1 (Released officially)

### 2018-01-07

### **Changes:**

- 1. MPPT Solar Charger history page:
  - 1. Fix on historical graph, PMax is displayed in 'kWh' instead of 'W'
  - 2. Fix yield counter reset button missing
- 2. BMV
  - 1. iOS only: fix pressing the plus and minus symbols on the clear value also changed the set value at times when it shouldn't.
  - 2. Fix Tail current is shown as if its in Amps (current), while actually it is in percentage.
  - 3. Fix discharged & charged Energy units mix up
  - 4. Fix Missing "Sync to 100%" and "Zero current calibration" buttons
- 3. Windows & macOS:
  - 1. Fix device settings windows for the BMV are all blank.
  - 2. Fix saving mppt 30 day history to csv doesn't work.

And our thanks to Damon, Claudio, Justin, Rob, Andre, and others that helped find those bugs so quickly after the release.

### v4.0 (Released officially)

### 2018-01-05

### **Changes:**

- Completely redesigned user interface
  - Context help for some settings
  - Improved user experience
  - Smoother navigation
  - Tablet layout
  - Responsive layout on desktop platforms
  - Orientation locked to portrait on phones, and MPPT history can go fullscreen & landscape.
- Added translations: Dutch, French, German, Italian and Spanish. By default the system language is chosen
- Improve firmware update robustness when updating through VE.Direct

### SmartLithium:

- New firmware update v1.07
  - Internal improvements

### MPPT solar chargers:

- · Improved history page with graphs
- Added user battery presets library
- Included firmware v1.29 update
- Show the actual state when performing an automatic equalization

#### Android:

- Minimum required version is Android 4.1
- Dropped support for Android ARMv5
- Notify that the location services are disabled when needed (Bluetooth & Android > 5) and guide the user to the Android location settings page.
- Improved USB OTG connection, fixes firmware update failures and random crashes.
- Fix first connection attempt after introducing the PIN code fails

### Windows:

• Dropped Windows XP & Vista support, minimum required version is now Windows 7. The previous version, which can be used on XP, will remain available on our software downloads page.

#### macOS:

• Minimum required version is now Mac OSX 10.10 (Yosemite)

### v3.3 (Windows only)

#### 2018-01-05

### **Changes:**

No changes added, this is a transition version to prevent VictronConnect being updated to v4.0 on Windows XP / Vista.

### Windows XP / Vista:

This is the latest version as support for XP / Vista is dropped in v4.0.

### Windows 7 and higher:

When updating from v3.2 this version will be installed and v4.0 update will be automatically requested.

### v3.2 (Released officially)

### 2017-08-14

#### **Changes:**

\* Always show "Restore factory defaults" button when supported. Button is not shown when

VictronConnect doesn not support settings files for the product. \* Enable manual firmware updates for Bluetooth products. \* Show "Stay close to the device" when updating bluetooth connected devices

### Windows & Mac:

• Fix command confirmation dialog, command is not sent when accepted. This issue affects "Restore default settings" button on all products and "Store settings" for Phoenix inverters.

### BMV:

Fix save/load settings buttons not displayed on BMV700

### Settings files:

Add support for the new SmartSolar 75/10, 75/15, 100/15, 100/20, 100/30, 100/50, 150/35 & 150/100.

#### Demos:

 Add SmartSolar 75/10, 75/15, 100/15, 100/20, 100/30, 100/50, 150/35 & 150/100 to the demo library

### Blue Smart Chargers:

- Fix low current mode toggled when opening app from background. If the app is connected to the charger, the charger is in low current mode and the app is sent to background and then opened again the low current mode toggles to normal mode.
- Show the proper firmware error messages when the update fails
- Improve firmware update error message including a link to Victron Live troubleshooting.
- Include firmware v3.0 update.
  - Internal improvements
  - For some models the update might take a little longer, as the the hardware shuts down and it takes a little while to recover from this (approx. 10-15 seconds).

### v3.1 (Released officially)

### 2017-08-01

### **Changes:**

- Add settings files feature. This enables saving the product settings to a file and then load it later
  in the same or another product. Besides this, a setting file can be also opened as a demo and
  use it for diagnosis as it contains a snapshot of the product at the moment the file was saved
  including history records.
- Add demo products feature. A demo product can be used to:
  - Learn and show the options available for different products.
  - Create a specific setup, save that and send it to a customer so they can put it in their device.
  - Besides loading products from the standard library, it is also possible to load it from a saved file.
  - Use this to review settings made to your installations, make changes and then send them

to whoever is at the site so they can apply them.

- Allow filtering of the device list
- Change menu items width to page width
- Feedback when a setting is correctly stored in the device
- Fix "Unsupported firmware version" error when opening BlueSolar & SmartSolar demos
- Fix "Show PIN code" option on PIN code change page
- Fix "Show PUK code" option on PIN code reset page

### Windows & Mac:

Left panel: Improve position of the connected product

### BlueSolar & SmartSolar MPPT chargers:

- Fix automatic equalisation interval setting is disabled when "Use default charge settings" is selected
- Add an option to disable the charger.
- Include firmware v1.27 update
  - Add StreetLight night and day detection delay setting
  - Add inverted load on/off mode for Rx port function
  - Remove automatic battery voltage detection option:
  - Automatic battery voltage detection is only done once @ power-up. If the battery voltage is present (>7V) the detected battery voltage is stored and further automatic detection is disabled. If the battery voltage is absent (<7V) the unit operates as a 12V model, automatic detection remains active (@ next power-up).</li>
  - Add manual equalization for some models. Excluded models:
    - BlueSolar 75/50
    - BlueSolar 150/35 rev1
    - BlueSolar 75/15
    - BlueSolar 100/15
    - BlueSolar 100/30
    - BlueSolar 100/50
    - BlueSolar 75/10

### Blue Smart Charger IP22:

Fix an issue that disables night mode or low current mode when reconnecting

### SmartLithium:

• Enable reset PIN by PUK code

#### Android:

• Fix text field, dialogs and buttons rendering issues on devices running Android 7

#### Windows & Mac:

Left panel: Improve position of the connected product

### v3.0 (Released officially)

### 2017-07-05

### **Download links:**

- iOS: App Store
- Android ARMv7
- Android ARMv5
- Android x86
- Windows XP and higher
- Mac OS X 10.8 and higher

### **Changes:**

• Add manual firmware updates for Bluetooth

### SmartLithium batteries:

- SmartLithium firmware v1.06 update:
  - Fix a problem with internal communication
- Rename "Communication error" to "Internal communication failure".

### v2.9 (Released officially)

#### 2017-06-13

### **Changes:**

- SmartSolar 250/85 & SmartSolar 250/100 firmware v1.25 update:
  - Bug-fix in the mppt tracker control: unexpected drops in energy harvest during a sunny day
  - Parameter change: maximum panel current increased from 50A to 70A

### v2.8 (Released officially)

#### 2017-05-16

### **Changes:**

### Windows & Mac

• Fix an issue that makes that in certain conditions the latest edited setting is not sent to the product when leaving the settings page.

### MPPT Solar Chargers:

- Include firmware v1.24 update for Smart Solar 250/100 and 250/85
  - Bug-fix in the battery voltage setting: the voltage always read as AUTO even if it is manually selected. Keep in mind that updating the mppt 250/100 or 250/85 from

# v1.23 to v1.24 will change the voltage setting to 'AUTO', make sure to set the battery voltage to the correct voltage after updating.

| Phoenix Inverters: | Pho | enix | Inver | ters: |
|--------------------|-----|------|-------|-------|
|--------------------|-----|------|-------|-------|

- Improve live data page
- Set minimum value for "ECO minimum wake-up power" setting to 15W.

### v2.7 (Released officially)

#### 2017-04-25

**Changes:** 

MPPT Solar Chargers:

• Include firmware v1.23 update

### v2.6 (Released officially)

### 2017-04-20

### **Changes:**

Improve firmware update robustness

### MPPT Solar Chargers:

• Include firmware v1.20 update

# v2.5 (Released officially)

### 2017-04-18

**Changes:** 

### Android:

• Fix devices not listed on some HTC phones (and maybe others)

### General:

- Add support for 120V VE.Direct Phoenix Inverters
- Add support for future new products

# v2.4.2 (Android only, Released officially)

### 2017-04-03

# Last update: 2020-01-13 00:57

### **Changes:**

• Fix firmware update issues on Android 7 devices

### v2.4.1 (Android only, Released officially)

### 2017-03-28

### **Changes:**

• Improve firmware update robustness

### v2.4 (Released officially)

### 2017-03-24

### **Changes:**

VE.Direct Bluetooth Smart dongle:

- New firmware update v2.10
  - Improved communications robustness
  - Add support for new VE.Direct dongle

### SmartSolar MPPT:

- Show the correct icon when updating bluetooth firmware
- Fix battery voltage can't be set to 48V on some models
- New Bluetooth firmware update v2.10

### SmartLitihum batteries:

- Fix cell numbering on live data page
- New firmware update v1.05

### Phoenix Inverter:

• Fix a typo in temperature alarms

### Peak Power Pack:

• Rename "Mover" to "High current output(mover)" in live data page

# v2.3 (Released officially)

### 2017-01-20

**Changes:** 

General:

### SmartLithium batteries:

Add new models

### BlueSolar & SmartSolar MPPT:

- Streetlight: Increase time offset limits from 720 to 900 minutes
- · Add absorption time limit setting

#### Phoenix Inverter:

• Fix a typo in live data page

### v2.2.2 (Released officially, Android only)

#### 2016-12-06

### Changes:

- Fix Google Play filtering issue that made some compatible Android devices appear as not-compatible. Some of the affected phones, but not all:
  - ∘ LG L90
  - ∘ LG Magna
  - Samsung Galaxy A3
  - Some variants of Samsung Galaxy A5
  - ∘ Huawei P8

### v2.2 (Released officially)

#### 2016-12-02

### **Changes:**

### General:

- Add custom names for Bluetooth products, can be set on the product info page
- Add support for future products
- Show hardware version(if available) on the product info page

### Android:

- Improve compatibility with Android 6 devices
- Keep firmware update running in background when a phone call is received during a firmware update.
- Improve compatible devices filtering on Google Play Store specially with some Android 6
  devices. This improvement involves the use of the new Android 6 permission system which
  makes necessary to request access to device location services to be able to scan nearby
  bluetooth low energy devices. You must allow VictronConnect to access to the location services
  when requested if you want to find bluetooth products.

### BMV:

Last update: 2020-01-13 00:57

• Show relay state (Open/Closed) on the live data page

#### Phoenix Inverter:

- Add overload, DC ripple and low/high AC voltage alarms.
- Include firmware v1.09 update

### Blue Smart Charger IP67:

- Include firmware v2.07 update
- Use the same page layout than Blue Smart Charger IP65

## v2.1(Released officially)

### 2016-10-31

### **Changes:**

#### General:

- Increase robustness in case of VE.Direct communication errors
- · Add support for future products

### Android:

• Fix serial port communication errors on Android 6 (OTG + VE.Direct USB cable)

### BlueSolar MPPT:

- Fix a bug on streetlight settings page that made lights don't switch off till sunrise when PWM is disabled and "At sunset, switch lights on for a fixed time" is selected.
- Add constraints to the day/night detection voltages to make sure that night detection voltage is never below the minimum detectable voltage

# v2.0 (Released officially)

### 2016-08-30

### **Changes:**

### General:

- Add reset PIN code by entering a PUK code. This option is accessible by doing a long press on the desired product on the discovery page, right click on desktop. This feature is only available on some products.
- CCGX log to xlsx: Include units in column

#### Android:

 New VE.Direct Smart bluetooth dongle firmware version 2.09 (fixes issues with Galaxy S5 and probably many other phones)

- Improve updating and connecting for Android 6
- Fixed BlueSolar MPPT 30 day history records are not displayed on Android 4.3

### BlueSolar MPPT:

- New v1.19 firmware update included as a mandatory update.
- Add a switch to enable/disable equalisation, no need to set equalization values to 0 anymore.
- Add temperature compensation setting. Check VictronConnect manual to know how it works: https://www.victronenergy.com/live/victronconnect:start#bluesolar\_mppt
- Fixed a bug that made the streetlight functionality stop working after toggling the on/off switch. The problem was that the "Switch lights on at sunset" event is disabled when streetlight functionality is set to off but it is not enabled again till the "At sunset" setting is modified by the user. This fix also detects if the issue is present on the configuration and automatically fixes it when opening the streetlight settings page.

### Blue Smart Charger IP65:

- Improved page layout on desktop platforms
- New v2.03 firmware included:
  - Reduce connection problems, esp. in combination with Android 6
  - Fixes issues with Galaxy S5 and probably some other phones
  - Added identification: LEDs blink for 2 seconds when connecting
- Add support for future Blue Smart Charger models

### v1.9 (Released officially)

#### 2016-07-20

Changes:

### General:

Add support for future products

### Phoenix Inverter:

• Hide "Low battery shut down" setting when dynamic cutoff is enabled.

#### BlueSolar MPPT:

Make possible to select 36 and 48V battery voltage on BlueSolar MPPT 150/35 rev2

### BMV:

Include BMV-70x firmware v3.08 update

### v1.8 (Released officially)

### 2016-07-04

### **Changes:**

#### Last update: 2020-01-13 00:57

#### Phoenix Inverter:

- Include Phoenix Inverter firmware v1.03 update
- Fix Phoenix Inverter "Low battery shutdown voltage" setting is locked and showing "Dynamic"

### v1.7 (Released officially)

#### 2016-06-29

### **Changes:**

#### General:

- New functionality: Convert CCGX log files to .xlsx Excel sheet (only Windows & Mac OS X)
- New functionality: Export 30-day BlueSolar MPPT history as CSV
- New functionality: "Create service report" option generates a diagnostics report for sending it to Victron Energy service in case of any issue.
- Improve dialogs, now all the dialogs are better centred on the screen
- Android: Shorten connecting time during updating
- Fix an issue that makes necessary to scan several times before Peak Power Pack is shown on the devices list when using VE.Direct USB interface(issue introduced in VictronConnect v1.6)
- Fix issue that makes one of the Accept/Cancel buttons sometimes doesn't appear on iOS dialogs
- Remove some unused icons, now the install size is sightly smaller on iOS

#### BlueSolar MPPT:

- Send local time to the MPPT when accessing to the streetlight settings and when switching on streetlight function. This makes the streetlight timer works more accurately prior to the synchronisation with the solar activity.
- Streetlight: Don't hide sunrise options when "Switch on till sunrise" is selected
- Load settings: Add boundaries for high and low voltage levels
- Battery settings: Make possible to set equalisation voltage to 0V

#### Phoenix Inverter:

Add dynamic cutoff settings (dynamic cutoff will be available on the next firmware, v1.04)

### Peak Power Pack:

Fix size of the icon shown in the live data page

### VE.Direct Bluetooth Smart dongle:

• Include new firmware update v2.07 that improves compatibility with Android 6\*

### \*Tested phones

The following phones are tested and working but the update should also fix compatibility with many other Android 6 phones.

- Sony Xperia Z5
- Motorola Moto G 2014

- HTC One M9
- Samsung Galaxy S5 [1] [2]
- [1] There still one issue that randomly makes the connection fail, to make it work again disable/enable bluetooth.
- [2] To make it easier we recommend to use another phone to update the dongle firmware but is also possible to use the Samsung phone to do it, then some extra steps are necessary:
  - Remove the dongle from the paired devices list on the phone bluetooth settings
  - 2. Close VictronConnect
  - 3. Disconnect the dongle from the VE.Direct port and connect again while pressing the clear PIN code button to start the dongle in boot loader mode. Blue and red LED's will blink alternatively.
  - 4. Open VictronConnect and click on the dongle item and start the update process

After entering in boot loader mode you have 30 seconds to connect to the dongle before it goes back to the normal mode. Start the process from step 1 if something fails. After the dongle is updated you might have to disable and then enable bluetooth again.

### v1.6 (Released officially)

#### 2016-06-10

#### General:

• List unrecognised Victron products the device list page. Useful when running an outdated VictronConnect version with new products.

### BlueSolar MPPT:

- Fix "Use default charge settings" item behaviour when switching the rotary switch while battery settings page is displayed.(Only affects to MPPT with rotary switch and fw v1.17)
- Include BlueSolar MPPT firmware v1.17 as mandatory update

### v1.5 (Released officially)

### 2016-05-02

Fixed PIN code change function

### v1.4 (Released officially)

### 2016-04-27

- New feature: Manual firmware updates. Manual firmware update option available on the product info page. Users with a BlueSolar MPPT can test this feature with the new v1.17 firmware available on https://professional.victronenergy.com.
- General small bug fixes and improvements

#### \_\_\_\_\_\_,

Last update: 2020-01-13 00:57

#### iOS:

• Fix issues with dialogs displaying long messages.

#### New firmwares included on this version:

- Phoenix inverter 250 and 375 VA fw: v1.02 (mandatory)
- VE.Direct Bluetooth Smart dongle fw: v2.06(mandatory)
  - Fix issue when connected device update was interrupted, resulting in device not being seen by VictronConnect
  - Show both leds when there is no vedirect device

### v1.3 & 1.3.1(iOS) (Released officially)

### 2016-03-31

- New feature: Firmware updates. Firmware updates are included inside VictronConnect, when connecting to a product with a new firmware available the update page will pop up.
- Included firmwares on this version:
  - VE.Direct Bluetooth Smart dongle fw: v2.05 (mandatory\*)
  - BlueSolar MPPT VE.Direct fw: v1.16 (mandatory\*)
  - Phoenix inverter 250 and 375 VA fw: v1.01 (mandatory\* and fixes bug in changing low battery settings)

#### Phones/Tablets

• Fix the app state handling, now VictronConnect disconnects from the product when the app is sent to the background or when receiving a call.

### Android

• Improved USB OTG support on Android 6 (Marshmallow)

#### BlueSolar MPPT

- Added total yield (system and resettable) to the history page.
- Remove white space displayed on history records for MPPT without load output
- BatterySettings: Only supported voltages are displayed.
- Fix an issue that sends the voltage values automatically when entering to the battery

### **BMV**

Correct maximum starter battery voltage on history page

### Phoenix inverter

- Fix wrong product name displayed
- iOS: Fix product info page doesn't open
- Change power bar color to red when the nominal power is passed
- Display a warning box notifying that the "Store settings" button should be pressed to make the changes permanent

#### Known issues:

- iOS: Wrong splash screen during launch(fixed in v1.3.1)
- \* Products with firmware updates marked as mandatory should be updated to continue using VictronConnect

### v1.2 (Released officially)

#### 2016-03-03

- New platforms: Windows and Mac OS X versions are now available.
- Add action bar to iOS keyboard with a minus (-) button and a "Done" button
- Fix "Clear history" button on MPPT and BMV
- Use different name in each step during the bluetooth dongle firmware update. (VE.Direct BLE dongle (legacy) and VE.Direct BLE dongle 2 (legacy))
- Show Bluetooth/VE.Direct icon depending on the connection type.(Android and MacOS)

#### **BMV**

- Fix an issue that returns a wrong value by setting to zero the alarm/relay temperature settings
- Fix typo in temperature warning message shown on the live data page
- Improve max/min values handling on alarms/relay settings pages

#### BlueSolar MPPT

- Show description of the selected load mode algorithm
- Fix "Clear history" button: it was partially hidden on the history page
- Auto scale yield and consumption unit on the history page from kWh to Wh
- Allow negative values for midnight-point shift on streetlight settings
- Add load current to the live data page
- Fix information box that warns the user that 30 day history is only available since firmware v1.16.

#### Known issues:

- Values doesn't fit controls on systems with the default font size set to large. The temporary workaround to fix the issue is to set the system default font size to normal. (Mac & Windows)
- Phoenix Inverters:
  - 250VA Inverter is displayed as 375VA
  - 375VA Inverter is displayed as 250VA
  - 24V and 48V devices: In combination with Inverter Firmware 1.00 the (alarm) low battery voltage thresholds are displayed wrong and cannot be modified correctly. However the thresholds used by the Inverter are the correct ones, as listed in the user manual of the inverter. Solution: upgrade Inverter SW version to 1.01 or (newer).
  - On iOS only, clicking to the "Product info" button doesn't open the info page.

# v1.1.5 (Released officially)

### 2016-02-02

- Fix BlueSolar MPPT streetlight settings. In versions v1.1.0 up to and including v1.1.4 it seemed like the streetlight settings were stored correctly, but they were not.
- VE.Direct BLE dongle renamed to VE.Direct Bluetooth Smart dongle

### Known issues:

• On iOS it is not possible to set a negative value. Only a problem for BMVs when setting relay and alarm thresholds for temperature.

### v1.1.4 (Released officially)

### 2016-01-28

- Add support for VE.Direct BLE dongles.
- Always go back to device main page on disconnection
- Fix consumption scale for BlueSolar MPPT history records
- Improve dialog style under iOS
- Improve appearance on small screens (<4")
- Correct TextField font
- Disable settings button while connecting
- Fix PWM information box in the streetlight settings page
- General small bug fixes and improvements
- Add new MPPT SmartSolar products
- Improve Blue Smart Charger page on small screens
- Update settings values immediately when restoring to defaults
- Fix "-0Ah" values for the BMV "Consumed Ah".

# **DISQUS**

~~DISQUS~~

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https://www.victronenergy.com/live/ - Victron Energy

Permanent link:

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Last update: 2020-01-13 00:57

