



How to achieve Energy Independence

How to achieve Energy Independence?

- The solution is powered by 50 years of know-how, delivering a wide variety of cutting-edge power solutions
- Our radical focus on R&D results in highly relevant features for various markets and specialist niches, providing peace of mind
- Our unique software offers full remote management, monitoring and unparalleled customization capabilities
- Founded and still run by a family of engineers, we are renowned for our world-class technical support and fast, fair repairs worldwide

Energy. Anytime. Anywhere.



Reliable power
since **1975**

€500M
SALES

Designed in
the Netherlands



Modular and flexible building blocks

We help our customers achieve energy independence and/or commercial profitability with our robust, modular ecosystem, including inverter/chargers, solar chargers, remote management software and advanced integration options.



Victron Energy is by your side

800k
remotely
managed
sites

2500+
highly
trained
dealers

Widespread
repair centres

Millions of
installations

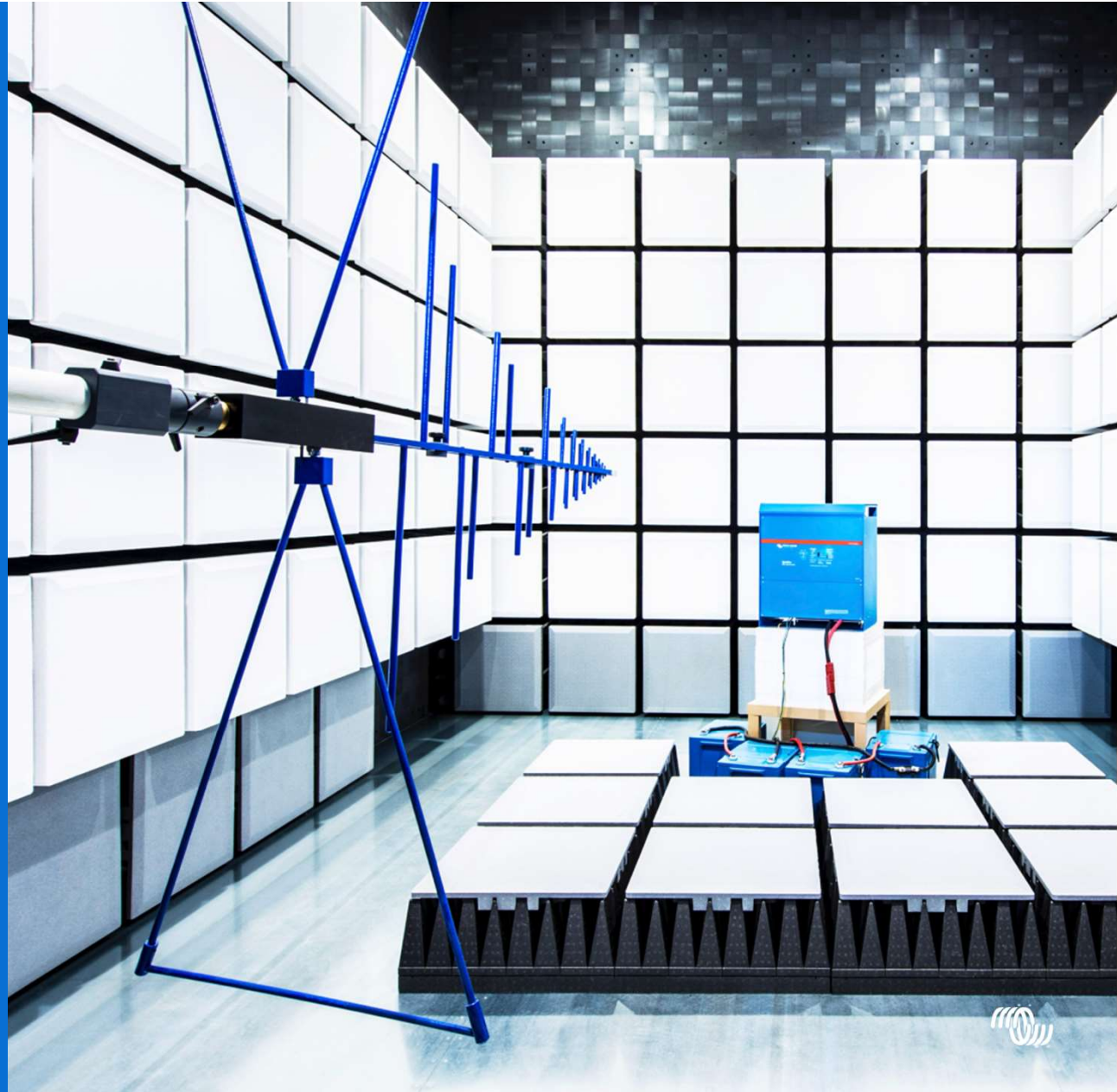
Global reliable
stock supply

Global
support
network



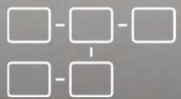
Always innovating

- 1995** Atlas: inverter/charger in one
- 2000** Three phase & parallel
- 2000** PowerAssist
- 2011** BlueSolar MPPT
- 2013** ColorControl GX & VRM launch
- 2014** Lithium batteries
- 2015** Bluetooth Smart & VictronConnect launch
- 2019** SmartShunt, Cerbo GX, MFD integration
- 2020** MultiPlus-II, Venus OS and complete platforms: VictronConnect & VRM
- 2024** Orion XS, Dynamic ESS with Peak-shaving



The modular ecosystem that solves any power challenge

Our robust and scalable ecosystem of flexible building blocks is engineered for maximum performance with the greatest efficiency. Powered by the latest features, they work seamlessly together and can be managed from anywhere in the world.



Flexible building blocks
to master any challenge



Continuous improvements
with new features



The largest range ensures
an ideal fit for any setup

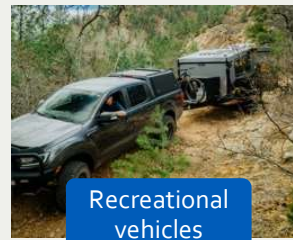
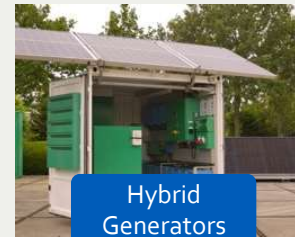
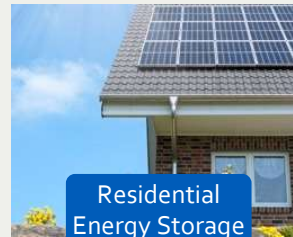
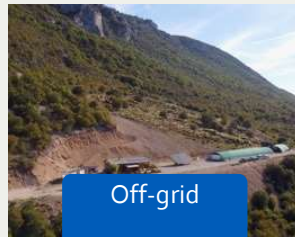
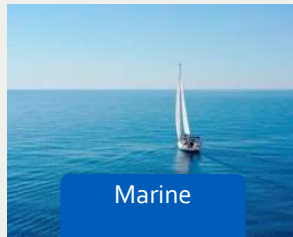


Professional-grade
build quality



Dedicated solutions

With decades of practical experience in each field, our solutions offer highly relevant features for even the most demanding and specialist use-cases.



Worldwide market leader for yachting power systems.

Worldwide market leader in ambulances.



Uninterrupted business. Lower total-cost-of-ownership.

Our family-run business is globally recognised for its unwavering dedication and commitment to delivering cutting-edge and extremely resilient solutions.



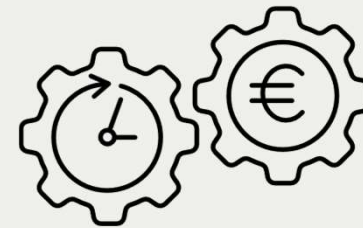
Radical focus on innovation

We consistently deliver new, highly relevant solutions and keep our products up-to-date with the latest features.



Unmatched reliability

Decades of experience and customer feedback ensure unmatched reliability in even the harshest climates.



Cost-effective solutions

The unique combination of durability, advanced monitoring and remote support lowers total cost-of-ownership.



Industry-leading monitoring & remote management

Our VictronConnect app and VRM – Remote management portal deliver a game-changing experience, whether for small systems or entire fleets, operated locally or fully managed remotely.



VictronConnect
app



VRM - Remote
Management portal

1 mln users

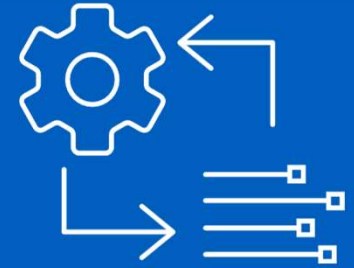


*"VRM is a total game changer,
it significantly reduces expensive on-site visits"*



Imagine it. Build it. Integrate it.

Develop highly sophisticated systems and seamlessly integrate a wide variety of supported hardware and software through our open architecture.



Software integrations

- MFD app
- **Node Red**
- NMEA2000
- SignalK
- Garmin RV
- RV-C
- **Dynamic ESS**
- **Modbus**
- **CAN bus**
- **APIs**

Third party hardware integrations

- Supported lithium batteries
- AC-PV manufacturers
- Digital generator control with FisherPanda, ComAp, DSE, Deif
- WakeSpeed alternator integration



Unlock commercial profitability with customisations

Our cutting-edge customisation and integration capabilities provide substantial business benefits and offer significant cost savings.

VENUS OS

with Node-RED built-in

- Create advanced automation flows based on system data, connected devices, sensors, APIs and online services
- 'Low-code' programming for event-driven applications
- Save significant grid, fuel and maintenance costs



"My competitive edge has significantly improved thanks to their flexible and open software"

Rune Eilertsen, HGSystem ApS



Peak shaving

Significantly reduce utility connection costs by using battery power to shave off high-power peak loads and avoid paying peak rates for incidental peak usage. Peak shaving also ensures business continuity in areas where the grid can't meet demand.



SCAN TO
KNOW MORE



Peakshaving
high-power loads



Avoid paying peak-rates
for incidental peak usage



Intelligent automations

Replace generators as the main power source with solar energy and optimise power usage with Node-RED by creating intelligent automation flows based on system data, inputs and sensors, controlling connected devices such as air conditioning to save significant costs.

Example system

135kVa
CONTINUOUS
OUTPUT POWER

255kWh
PEAK POWER

150kWh
LITHIUM
BATTERIES



SCAN TO
KNOW MORE



Seamless integration
of third-party hardware



Next level customisation
& automation



Fuel reductions

Instantly save up to 80% on generator fuel costs with our hybrid generator concept. Efficiently manage entire fleets remotely and provide proactive maintenance. Calculate your savings with our VRM generator report.

“Reliability means profitability”

Andy Perry, co-founder of Power Saving Solutions UK



SCAN TO
KNOW MORE



Most powerful monitoring
solution on the planet



Intelligent ecosystem actively
optimises performance



Dynamic ESS

Always consume the cheapest energy with our new, free Dynamic ESS feature. It automatically combines grid, battery and solar energy based on day-ahead pricing, predicted usage and solar yield, empowering grid independence and contributing to grid stability.



SCAN TO
KNOW MORE



Automated buying/selling
energy from/to the grid



Works with dynamic, variable-
and fixed day/night tariffs



Greener fleets

Instantly eliminate emissions on green construction sites with our extremely resilient Quattro inverter/chargers & Lithium NG batteries.

Example system

45kVa
CONTINUOUS
OUTPUT POWER

90kVa
PEAK POWER

60kWh
LITHIUM
BATTERIES



SCAN TO
KNOW MORE



The largest range ensures
an ideal fit for any setup



Professional-grade
build quality



More business to you, if your systems turn blue

Our company was built on positive word-of-mouth. Partnering with Victron Energy lets you leverage top-tier tech and support for optimal performance and satisfaction.

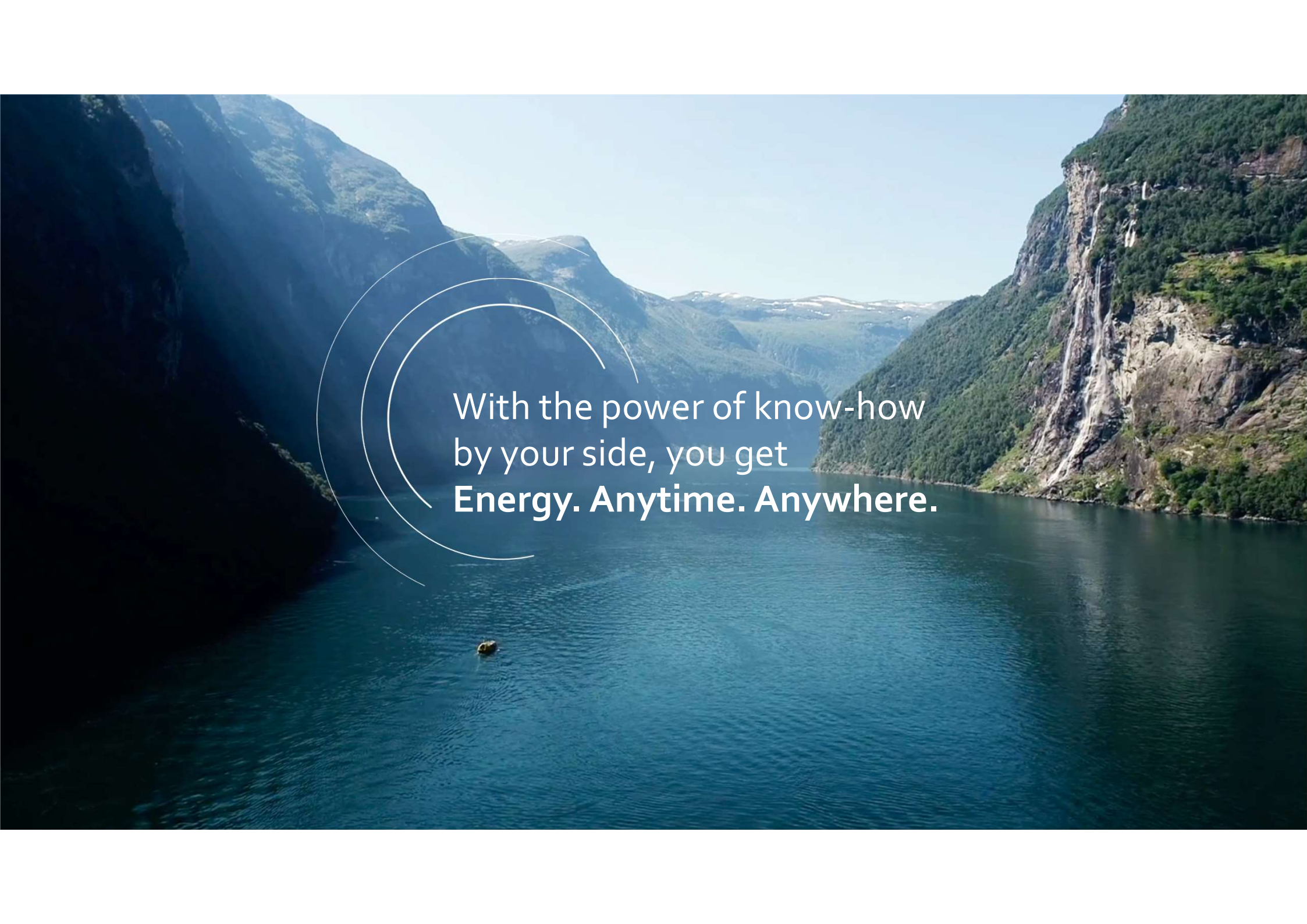
Doing business with Victron Energy leads to:

- Satisfied customers thanks to robust and customisable products
- Remote (fleet) management enabling perfect after-sales service
- Satisfied customers becoming loyal ambassadors
- Returning customers thanks to upgradable, scalable solutions
- Ease of doing business thanks to a streamlined ordering process



Durability + Remote support + Advanced customisation = Lower total cost-of-ownership





With the power of know-how
by your side, you get
Energy. Anytime. Anywhere.



Dynamic ESS



Who is Dynamic ESS For?

For those interested in:

- Taking Control of their own Energy
- Ensuring Uninterrupted Power Supply for Critical Loads
- Energy Trading
- Lowering Grid energy costs
- Contributing to Grid Balancing Efforts
- ✓ Not only for use in Europe!



Differences between ESS and Dynamic ESS

The **ESS** stores surplus (PV) energy for later usage during the day or night.

- The goal is to minimize grid usage regardless of energy tariff fluctuations.

Dynamic ESS aims for optimal usage of energy considering financial factors.

- The battery may be charged from the grid with the lowest tariff and
- Discharged to the load when the grid tariff is higher



*For latest: [see Manual](#)





Dynamic ESS Use Cases

Two use cases:

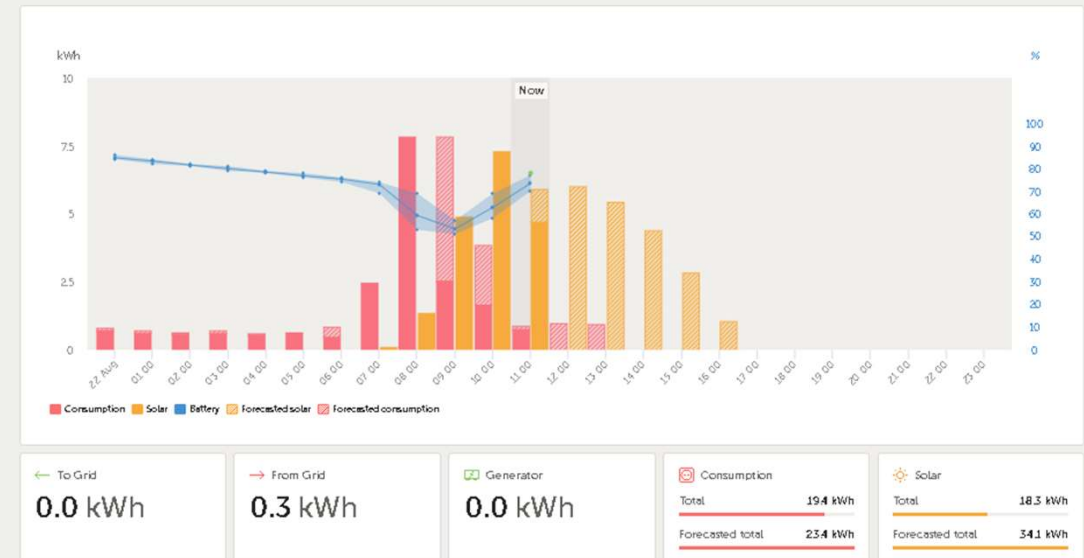
- Customers in Europe with day-ahead prices
- Fixed Tariffs periods: Including day/night/weekday/weekend tariffs



Dynamic ESS logic explained

This information sets the system capacity and is used by the algorithm

- First getting hold of costs/resources:
- kWh price
- Energy providers fee
- Cycle cost of the battery
- Load profile of the system (forecast)
- Solar (forecast)
- Installation criteria



Operating Mode



Green mode

- Only sell surplus solar back to the grid after consumption and battery charging
- Energy in battery is reserved for consumption
- Charge battery when prices are low



Trade mode

- Sells surplus solar back to grid if more profitable
- Energy in battery is used to trade
- Charge battery when it is beneficial for trading



Configuring Dynamic ESS Settings

<

BACK

⚙️

General

🏠

Tags

⚙️

Dynamic ESS NEW

🌐

Location

📍

Geofence

👤

Users

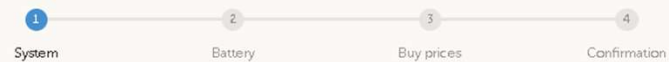
🔔

Alarm rules

Dynamic ESS for Admirals Bar

Reduce your energy costs through dynamic scheduling.

On this page you can configure Dynamic ESS. The higher the accuracy of the values entered, the higher the accuracy of the ESS schedule will be. If you want to know more about Dynamic ESS, visit our [documentation page](#).



System

Dynamic ESS needs to know the limitations of your grid connection to accurately schedule grid usage.

Can you sell energy back to the grid?

☐ Yes ☒ No

Maximum import power * ⓘ

43 kW

Operating mode



Green mode

- Only sell surplus solar back to the grid after consumption and battery charging
- Energy in battery is reserved for consumption
- Charge battery when prices are low



Trade mode

- Sells surplus solar back to grid if more profitable
- Energy in battery is used to trade
- Charge battery when it is beneficial for trading

Back

Next step

Confirmation

Check and edit your configuration before saving it. If you want to know more about Dynamic ESS, visit our [documentation page](#).

System

Can you sell energy back to the grid?	No
Maximum import power	43 kW
Operating mode	Trade mode

Battery

Battery capacity	30 kWh
Maximum discharge power	10 kW
Maximum charge power	25 kW
Estimated battery cycle life	5000
Battery price	R 200000.00
Battery cycle costs per kWh	1.33 R/kWh
Battery balancing	On
Full charge interval	14 days
Do you want to restrict the battery usage?	Yes, enable charge battery from grid restrictions

Buy prices

Buy prices type		Fixed
Different prices for weekdays and weekends?		Yes
Weekdays schedule		
From	To	Prices
00:00	23:59	R 4.50
Weekend schedule		
From	To	Prices
00:00	23:59	R 3.00

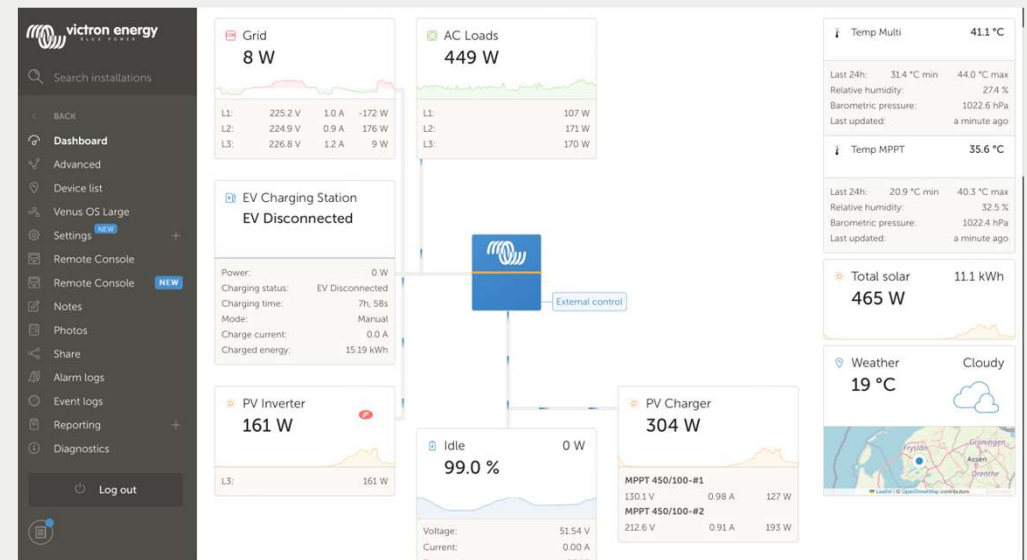
Back

Submit



Dynamic ESS USPs

- No subscription needed - portal/firmware is free of charge
- Self-configurable
- Adaptive to load profile
- Decreases the overall energy cost
- Peak shaving feature is included





Training Overview



Training Showcase

Victron Energy is focussed on providing training, working with its network of customers there are many different events taking place worldwide. Mainly training is provided in English, in some cases translators are used.

- Market focussed training events like: Solar off grid, Energy Storage, Marine, Automotive and more
- Training tours: Mobile tour travelling to provide training to installers
- Classroom based theory and practical product training for small to large groups
- Technical Theory and Hands on training for projects, organisations, tertiary institutes and more
- Advanced product and systems training for larger systems used in Mini grid type applications

All levels of training require students to have application experience, a technical background and a good understanding of electrical conditions in Solar and battery-based systems.



South Africa Training tour 2023

103 Training days provided in 2023



South Africa Training tour 2023



South Africa Training tour 2023



Zimbabwe Training tour 2023



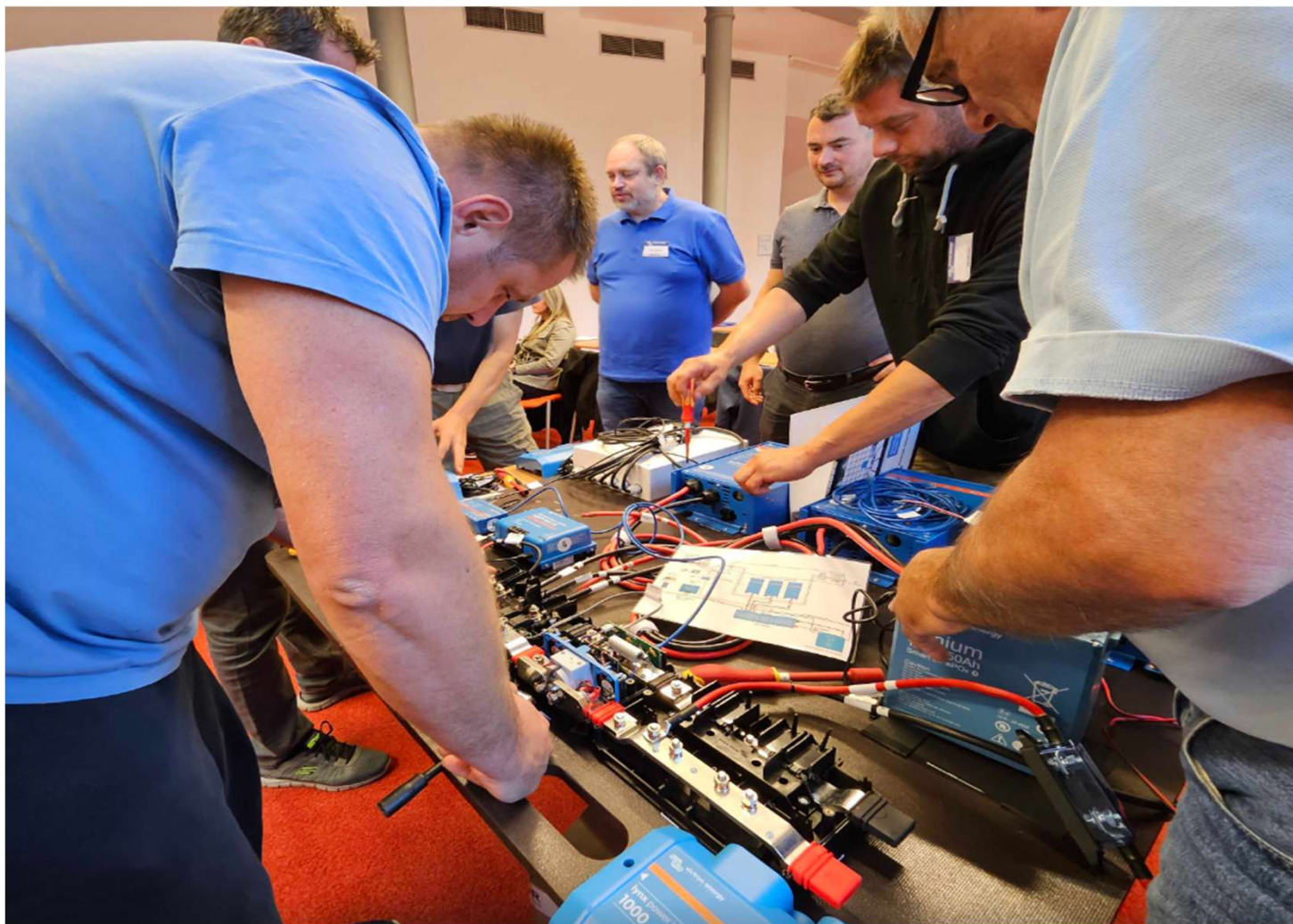
Theory and Practical Training



Hands on and Practical Training



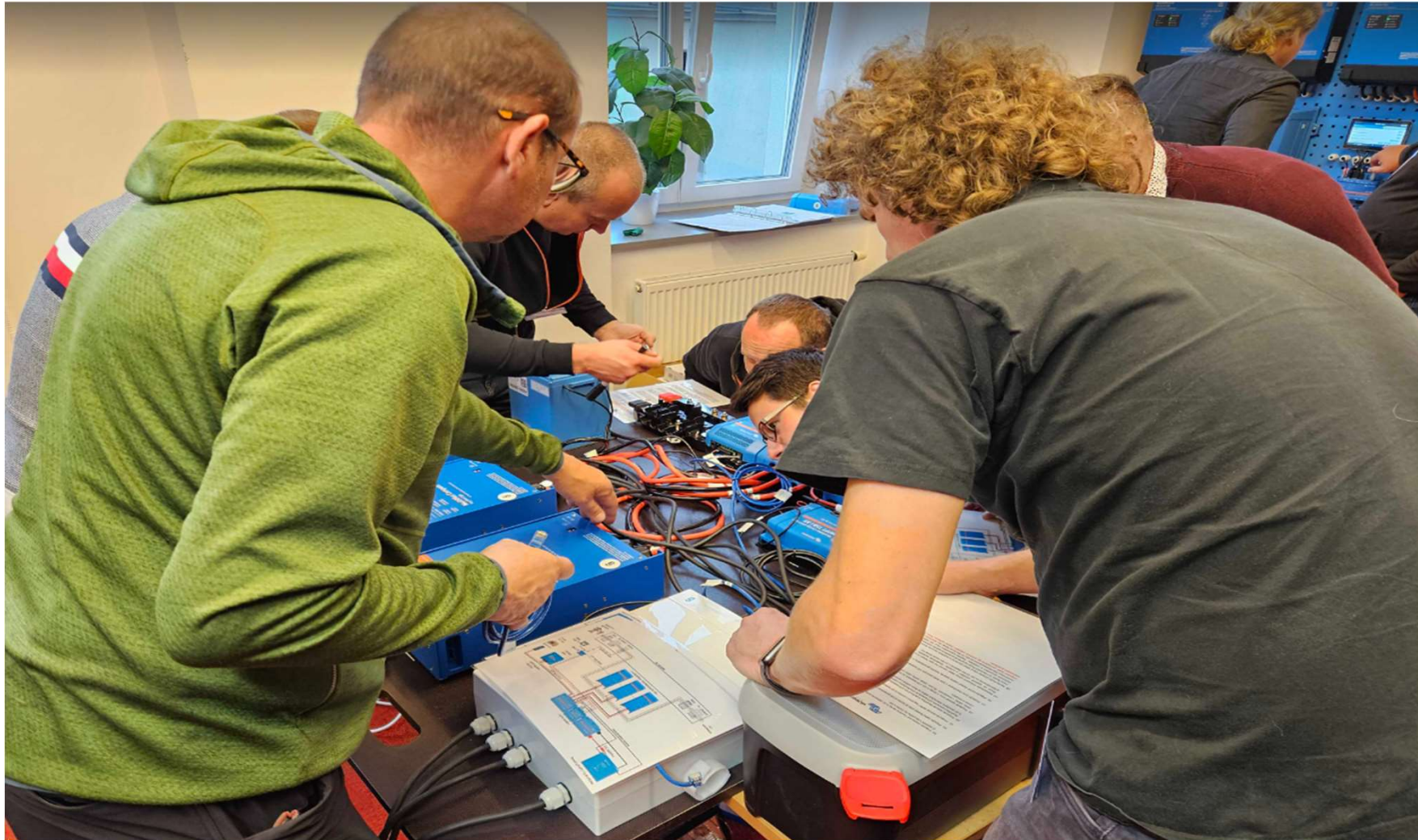
Hands on and Practical Training



Solar systems, design and Installation training



Hands on Installation Training



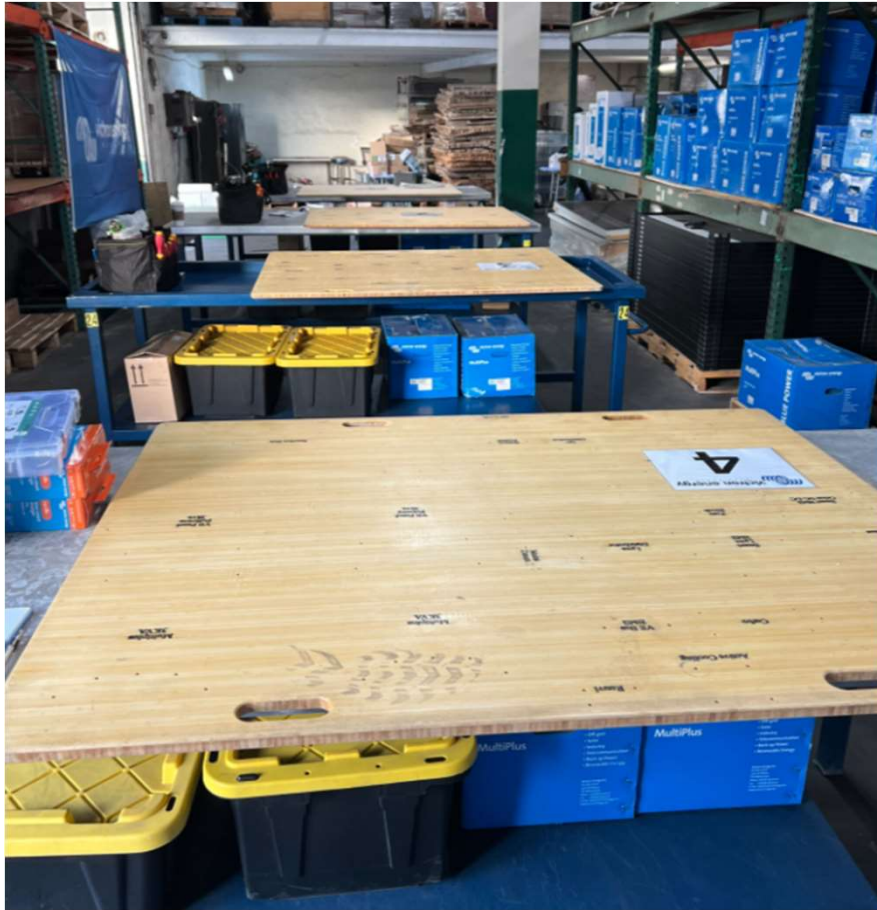
Advanced Energy Storage System and EV Charging training



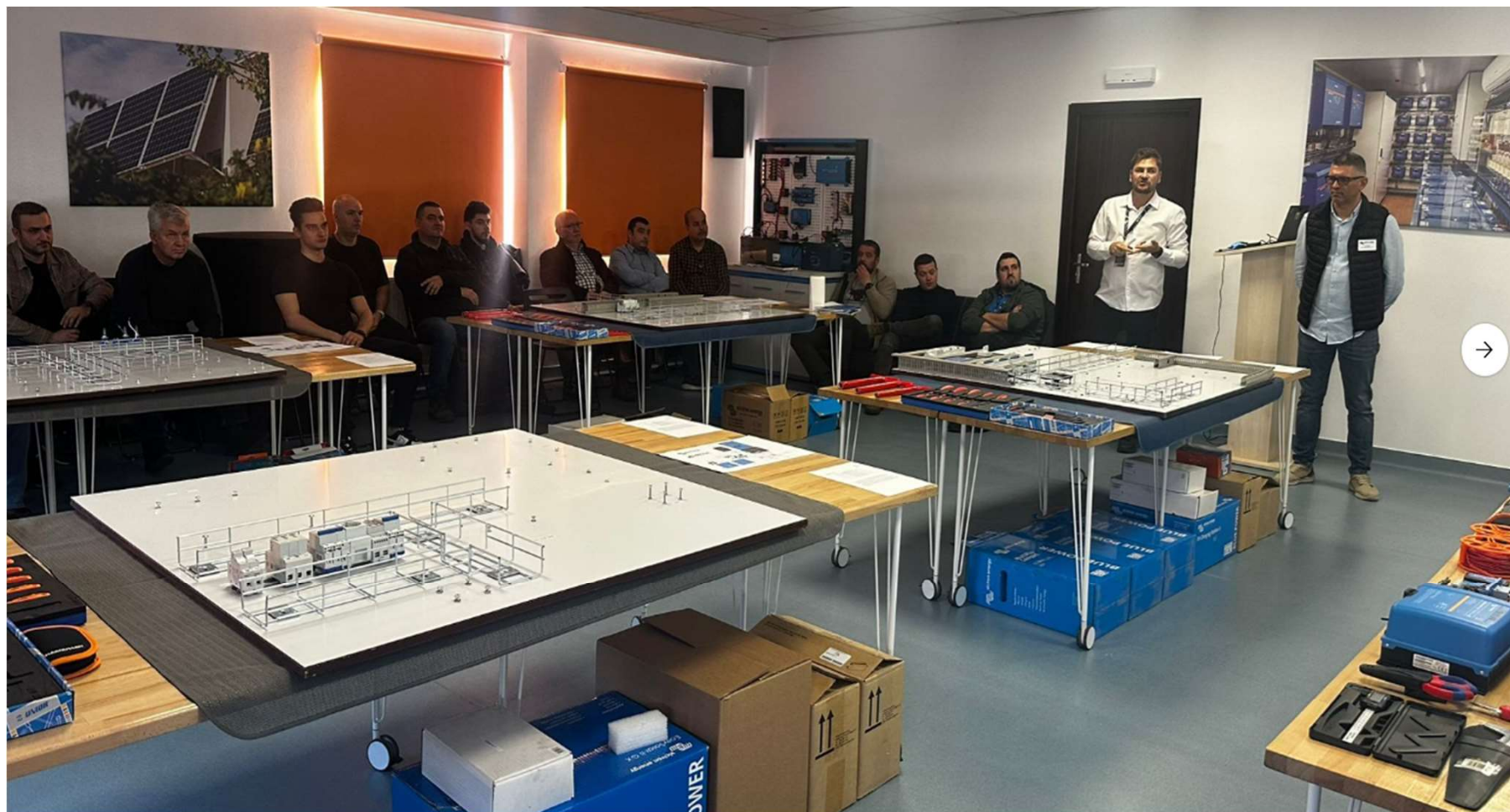
Hands on and Practical Training



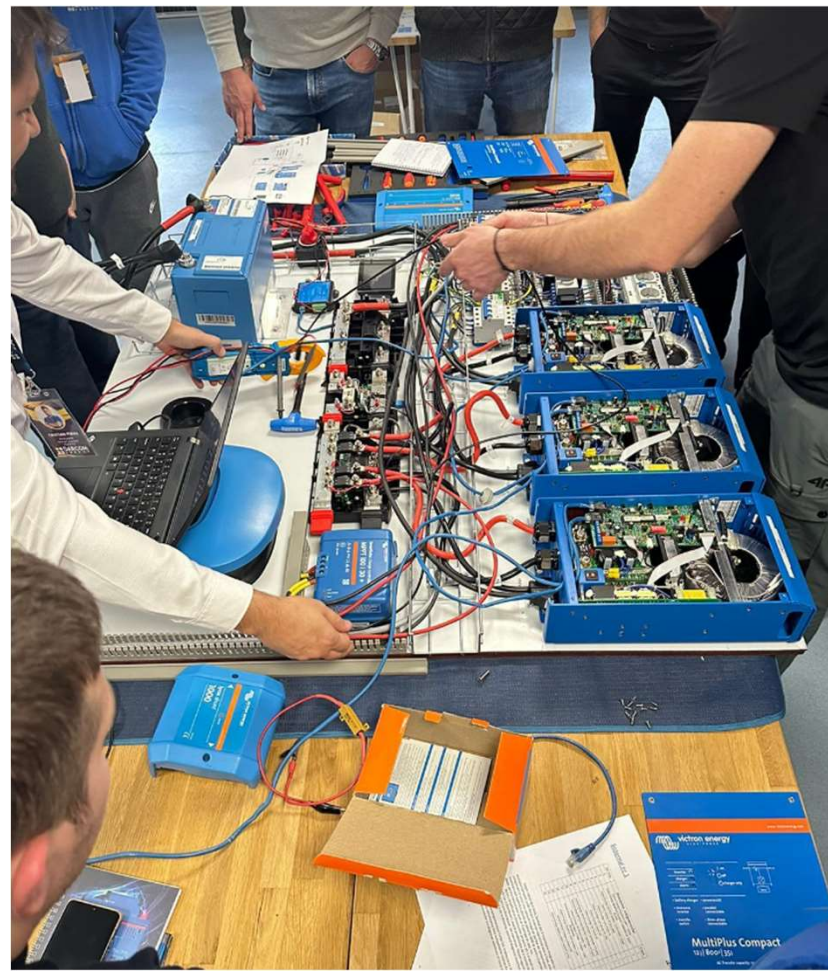
Hands on and Practical Training



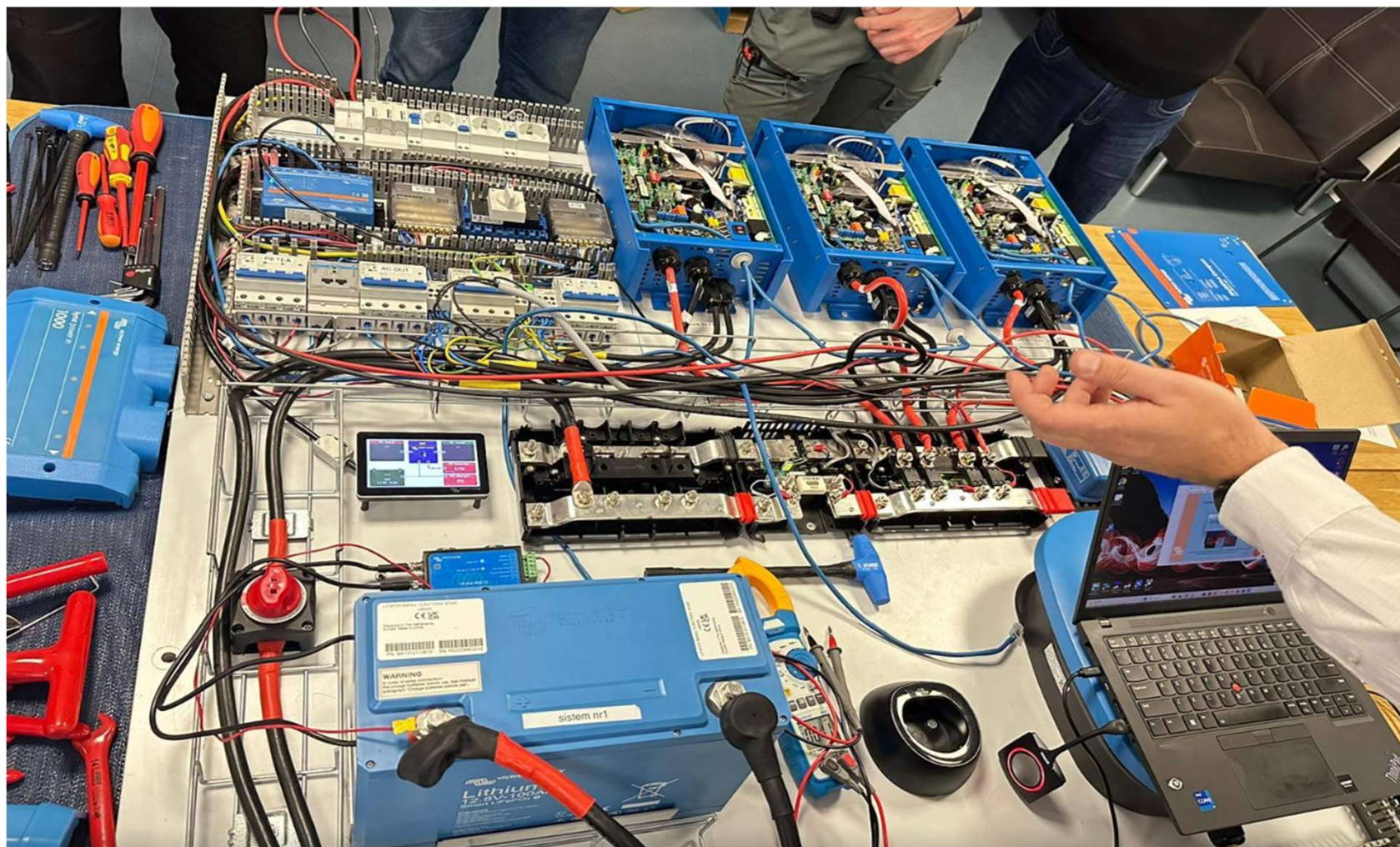
Solar systems, design and Installation training



Solar systems, design and Installation training



Installation and configuration training



Theory and Practical Training



Hands on Practical Training



Solar systems, design and Installation training



Solar systems, design and Installation training





Victron Professional





What is Victron Professional?

This Online resource is main resource for information about Victron products

The Portal contains a wide range of information:

- ❖ Product Videos, Technical videos, Webinar recordings, customer stories(case studies) and more
- ❖ Information page about Victron Live and webinar training events around the world in all languages
- ❖ Online Training Academy
- ❖ Specific product sections – Firmware files, dropbox links with all manuals and datasheets
- ❖ Repair documents



Products

Markets

VRM

E-Order and E-RMA

Victron Professional

Remote CCTV Monitoring

A rapid deployment option for added security.



- ✓ Click on Login
- ✓ Click on Victron Professional



Login

Welcome to the Victron Professional Portal

If you already use E-order you can log in with those credentials here as well.

Email address

Your email address

Password

Your password

[Forgot password?](#)

LOGIN

EMAIL ME A LINK TO LOGIN

No account yet?

[Sign up](#) today and get access to events, online training, and stay updated about the latest developments with regular updated video's and news articles

✓ Click on 'Sign up'



Sign up

Welcome to the Victron Professional Portal

If you already use E-order you can [login](#) with those credentials here as well.

Select your role

☐ End user

☒ **Installer**
I install Victron Energy products.

☐ **Dealer**
My company is a dealer which is buying products from Victron Energy distributors.

☐ **Distributor**
My company is a distributor of Victron Energy.

Email address

example@email.com

Password

Your password

[GENERATE PASSWORD](#)

Country

Select your country

Full name

Company

Language

English

[SIGN UP](#)

Do you already have an account? [login](#)

1. Select 'Installer'

2. Enter all your contact and company details accurately

3. Click on 'Sign up'





Overview

Videos

Blog

Events

Online training

Dropbox

Firmware

Repair docs

Media assets

E-order

Latest news

Developers >

Account overview

Check training ID

UPCOMING EVENTS

Bases d'un systeme victron -Formation pratique s41 -Module 1

France, Sainte Tulle

Oct 10th, 2023 - Oct 11th, 2023



Victron Energy 2-Day Hands-on Training - hosted by FreedomVanGo

United States of America, Jacksonville, FL

Oct 12th, 2023 - Oct 13th, 2023



Komponenten und Anlagen überwachen - eine Komplettübersicht

Webinar

Oct 13th, 2023 - Oct 13th, 2023



Victron Energy Training Tour - Omnisolar

South Africa, George

Oct 16th, 2023 - Oct 17th, 2023



Supervision et autoconsommation - Formation pratique s42 - Module 2

France, Sainte Tulle

Oct 17th, 2023 - Oct 18th, 2023



Now you are ready to go,
Congratulations!

[View all events](#)

LATEST NEWS



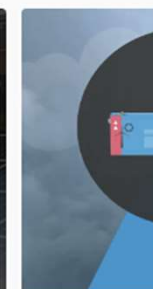
VictronConnect v5.96 - Small image

A new version of the VictronConnect.

This version, as well as other recent versions, most important one are:

Fix issues with firmware updates on the
Fix Bluetooth connection issues on the
Fix login ...

LATEST VIDEOS




André du Rand
Sales

Dashboard

Logout

English

← ↻ 🔒 https://professional.victronenergy.com

**victron energy**
BLU POWER

Overview

Videos

Blog

Events

Online training

Dropbox

Firmware

Repair docs

Media assets

E-order

Latest news

Developers

Account overview

Check training ID

UPCOMING EVENTS

Bases d'un systeme victron -Formation pratique s41 -Module 1

France, Sainte Tulle

Oct 10th, 2023 - Oct 11th, 2023

Victron Energy 2-Day Hands-on Training - hosted by FreedomVanGo

United States of America, Jacksonville, FL

Oct 12th, 2023 - Oct 13th, 2023

Komponenten und Anlagen überwachen - eine Komplettübersicht

Webinar

Oct 13th, 2023 - Oct 13th, 2023

Victron Energy Training Tour - Omnisolar

South Africa, George

Oct 16th, 2023 - Oct 17th, 2023

Supervision et autoconsommation - Formation pratique s42 - Module 2

France, Sainte Tulle

Oct 17th, 2023 - Oct 18th, 2023

LATEST VIDEOS

OFF-GRID
CCTV PODS

Dynamic ESS
Webinar

André du Rand
Sales

Dashboard

Logout

English

Online Training

- Certificates for completion
- No costs involved
- Mobile device ready
- Several types of training available

Basic training +

Theory +

Advanced training +

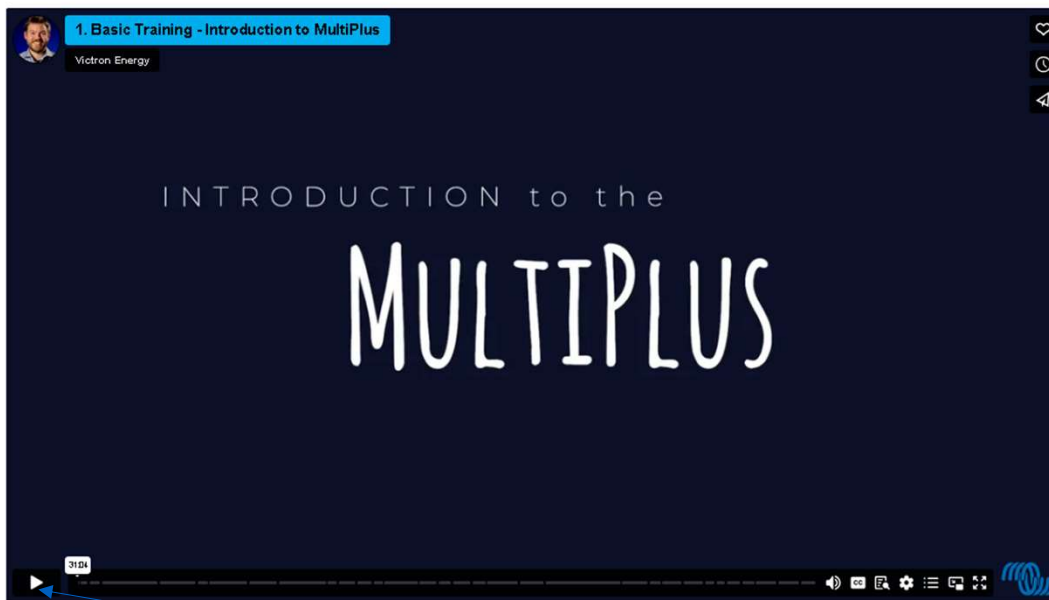
Installation examples +





- Overview
- Videos
- Blog
- Events
- Online training
- Dropbox
- Firmware
- Repair docs
- Media assets
- E-order
- Latest news
- Developers
- Account overview
- Check training ID

- André du Rand
Sales
- Dashboard
 - Logout



1. Introduction to MultiPlus
By Guy Stewart

To change the subtitle language, select CC on the video screen.

[Introduction to MultiPlus Training PDF Presentation Slides](#)

Click here to watch the course content

• **Download the presentation here**

TAKE QUESTIONNAIRE

Chapters

- 1 Introduction
- 2 Inverter Concept
- 3 Some advanced features such as PowerAssist
- 4 Internal Wiring Diagram
- 5 MultiPlus Range
- 6 Small MultiPlus and Connection Overview
- 7 Charger Mode
- 8 Which DC Voltage Multi to Choose?
- 9 MultiPlus Compact
- 10 MultiPlus
- 11 Quattro
- 12 AC Out 2 Options
- 13 MultiPlus-II
- 14 MultiPlus-II GX
- 15 MultiPlus Range Table Chart
- 16 EasySolar
- 17 EasySolar-II GX
- 18 Internal AC Topology of the Range
- 19 Naming Convention
- 20 Accessories
- 21 Connection of Accessories

When ready for the exam click here

Course Chapters, click on the chapter to view it.





- Review results here
- Download certificates
- Click Open to start exams

André du Rand

⚙️

Overview

Groups

Hi, André du Rand!

Everyone

🏠

☰

3.1 - Basic Training - Color Control GX Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
3.2 - Basic Training - Using VRM (Victron Remote Management) Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
4.2 - Basic Training - Maximizing Lead Acid Battery Life Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
5. Basic Training - Connecting MultiPlus-II GX to BYD Managed Battery Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
9.2 - Advanced Training - Three-phase & Parallel installation Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
1. Basic Training - Introduction to MultiPlus Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
8.1 Basic Training - Introduction to AC PV Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
2. Basic Training - Introduction to MPPTs Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>
6.1 - Installation Example - VW Vehicle Solar Course	<div>✔️ Completed</div> <div>Results</div> <div>Certificate</div> <div>Open</div>



Victron Energy Product Training

2024

*Inverter/charger range – **VE.Bus** products*

Multiplus



Quattro

Inverter/chargers										
12 V	500	800	1200	1600	2000	3000	5000			
24 V	500	800	1200	1600	2000	3000	5000	8000		
48 V	500	800	1200	1600	2000	3000	5000	8000	10.000	15.000



Multiplus

Multiplus II

Quattro II

Technical Datasheet

- Get to know the Datasheet
- Product features are linked to white papers
- 'Add on' options are shown
- Technical Characteristics indicate limitations and possibilities

MultiPlus 24/5000/70

MultiPlus Compact 12/2000/50

Color Control GX, showing a PV application

MultiPlus Inverter/Charger
800 VA - 5 kVA
Lithium-Ion battery compatible

Two AC Outputs
The main output has no break functionality. The MultiPlus takes over the supply to the connected loads in the event of a grid failure or when shore/generator power is disconnected. This happens so fast (less than 20 milliseconds) that computers and other electronic equipment will continue to operate without disruption. The second output is live only when AC is available on the input of the MultiPlus. Loads that should not discharge the battery, like a water heater for example can be connected to this output (second output available on models rated at 3 kVA and more).

Virtually unlimited power thanks to parallel operation
Up to 6 MultiPlus can operate in parallel to achieve higher power output. Six 24/5000/120 units, for example, will provide 25 kW / 30 kVA output power with 720 Amps charging capacity.

Three phase capability
In addition to parallel connection, three units of the same model can be configured for three phase output. But that's not all: up to 6 sets of three units can be parallel connected for a 75 kW / 90 kVA inverter and more than 2000 Amps charging capacity.

PowerControl - Dealing with limited generator, shore side or grid power
The MultiPlus is a very powerful battery charger. It will therefore draw a lot of current from the generator or shore side supply (usually 10 A per 5 kVA Multi at 230 VAC). With the MultiControl Panel a maximum generator or shore current can be set. The MultiPlus will then take account of other AC loads and use whatever is extra for charging, then generator or shore supply from being overloaded.

PowerAssist - Boosting the capacity of shore or generator power
This feature takes the principle of PowerControl to a further dimension. It allows the MultiPlus to supply of the alternative source. Where peak power is so often required only for a limited period, the MultiPlus insufficient shore or generator power is immediately compensated for by power from the battery. When the spare power is used to recharge the battery.

Solar energy AC power available even during a grid failure
The MultiPlus can be used on off grid as well as grid connected PV and other alternative energy systems. Loss of mains detection software is available.

System configuring
In case of a stand alone application, if settings have to be changed, this can be done in a matter of minutes using the MultiPlus Quick Configuration and VE.Bus Configurator software.
- Parallel and three phase applications can be configured with VE.Bus Quick Configuration and VE.Bus Configurator software.
- Off grid, grid interactive and self-consumption applications, involving grid tie inverters and/or PV can be configured with Assistants (dedicated software for specific applications).

On-site Monitoring and control
Several options are available: Battery Monitor, MultiControl Panel, Color Control GX or other GX device tablet (Bluetooth Smart), laptop or computer (USB or RS232).

Remote Monitoring and control
Color Control GX or other GX device, Data can be stored and displayed on our VIM (Victron Remote Management) website, free of charge.

Remote configuring
When connected to the Ethernet, systems with a Color Control GX or other GX device can be accessed & changed remotely.

Digital Multi Control Panel
A convenient and low cost solution for remote monitoring, with a rotary knob to set PowerControl and PowerAssist levels.

VE.Bus Smart Dongle
Measures battery voltage and temperature and allows monitoring and control of MultiPlus and Quattro with a smartphone or other Bluetooth enabled device.

Computer controlled operation and monitoring
Several interfaces are available:

Color Control GX and other GX devices
Monitoring and control. Locally, and also remotely on the [Victron Data](#).

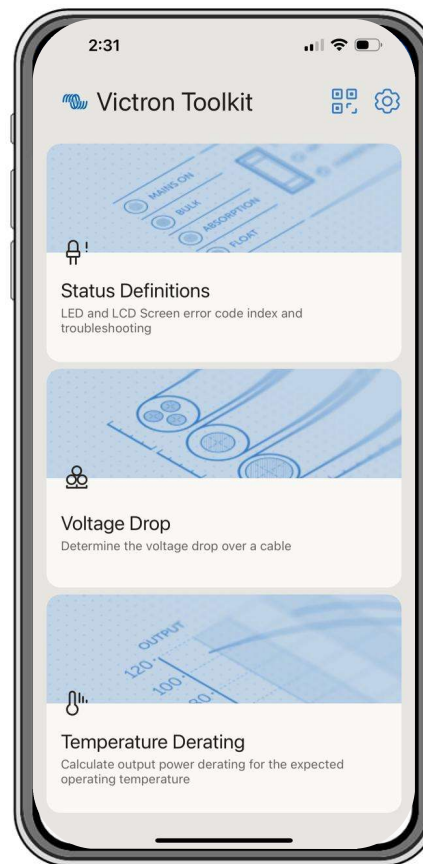
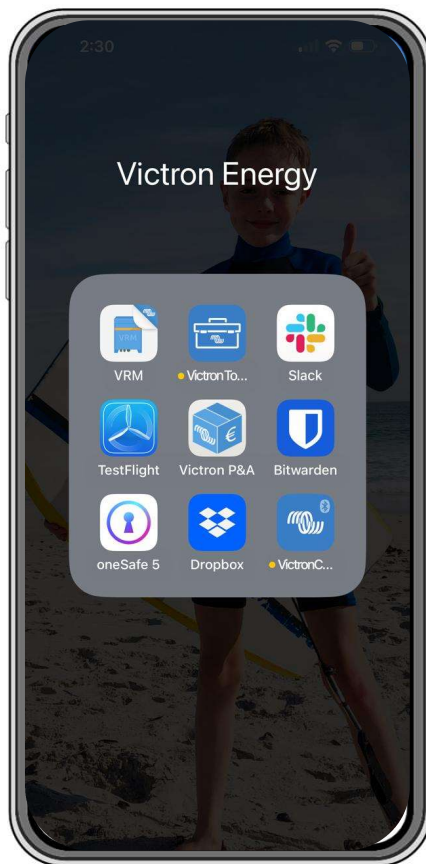
MCA-USB (VE.Bus to USB interface)
Connects the device to a USB port. See [MCA-USB](#) for details.

VE.Bus to CAN interface
Connects the device to a CAN bus. See [VE.Bus to CAN](#) for details.

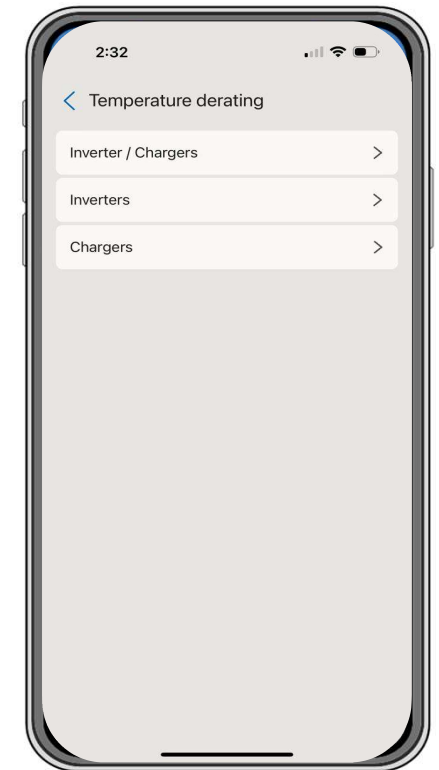
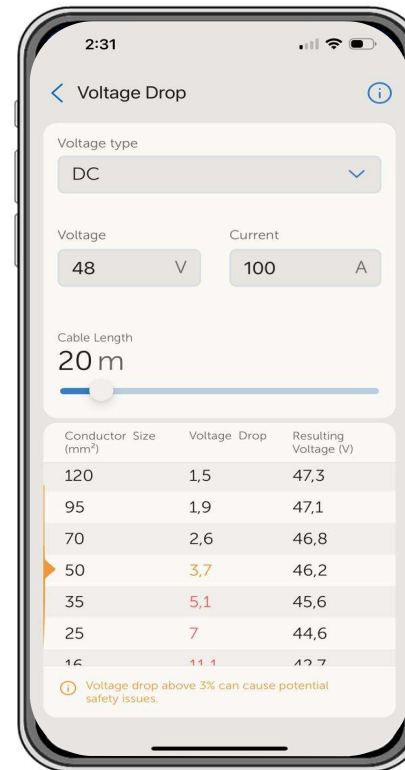
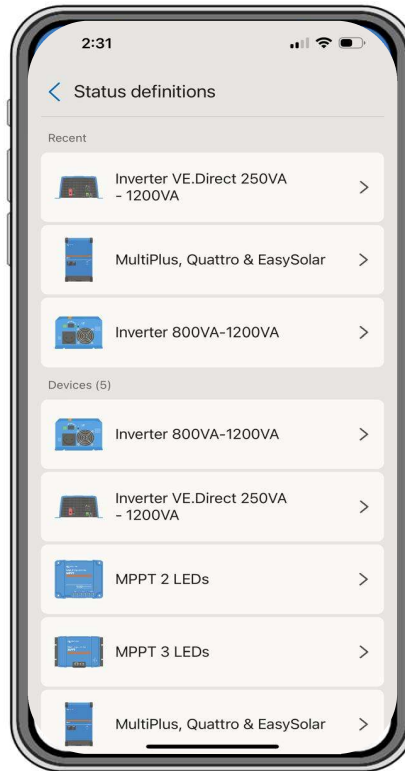
MCA-712 Smart Battery Monitor
Use a smartphone or other Bluetooth enabled device to:
- customize settings,
- monitor all important data on single screen,
- view historical data, and to update the software when new features become available.



LED Status Indication – Victron Tool kit App



LED Status Indication – Victron Tool kit App



All-in-one, Hybrid Products



EasySolar-II GX Overview

This All-in-one Power solution has the following products integrated:

1. A Multiplus-II
 2. A SmartSolar MPPT
 3. A GX Device with 2 x 16 Character display
- The Display provides information about the integrated components and the connected LiFePo4 battery
 - Internal Wifi hotspot is for installers to configure the GX device settings and configure remote monitoring access
 - Communication for Inverter/charger is still VE.Bus



EasySolar-II Overview – GX Device



Models:

48V 3kva

48V 5kva

✓ Can be used in multiple unit systems

1. 2 x 16 Character display

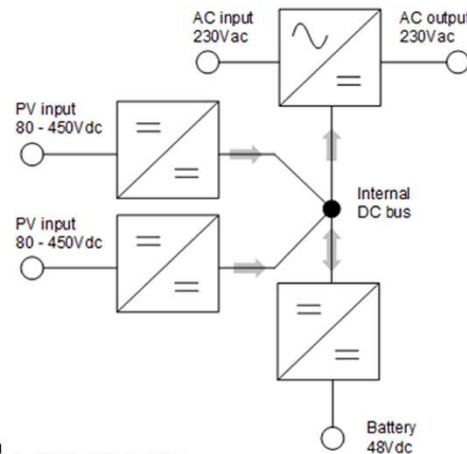
- Solar Power, Voltage and Charge state (if connected)
 - ESS/DVCC reason codes (if active)
 - Solar Daily Yield
 - Inverter/charger charge state (eg Bulk, ESS)
 - Battery State of Charge, Power and Voltage
 - Network IP Address and Connection Type (if connected).
 - AC input and output Power
- ✓ No settings possible from this screen



Multi RS Solar 48/6000 – 450/100

Inverter/Charger with 450VDC 6kWp PV input.

- High efficiency, 96,5 % at 1 kW load
- 11 KG weight
- 120V PV Start up Voltage
- 2 Tracker inside, 2 PV Inputs
- Max short circuit current input 18A
- Very low self consumption
- Can work without batteries also – like a PV inverter



Multi RS Solar 48/6000 – 450/100

1. Monitoring with Product Display

```
Inverter: 41VA 50.0Hz 230V
- Inverting -
```

```
Battery: 1748W 54.12V 32A
26°C 98%
- Bulk -
```

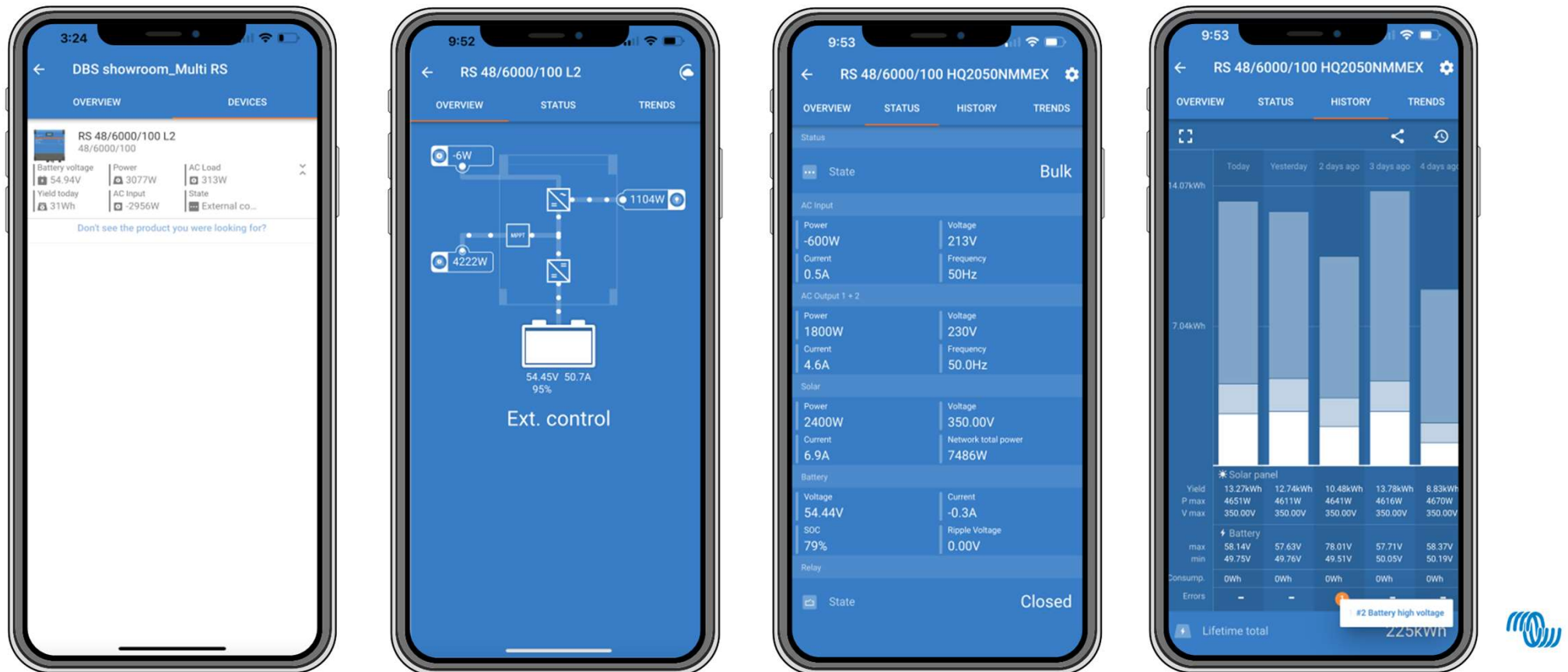
```
AC input: -5000W 50.0Hz 230V
ACIN1 relay closed
```

```
Solar: 1812W 178.9V 10.1A
Today 0.29 kWh
Total 0.3 kWh
```



Multi RS Solar 48/6000 – 450/100

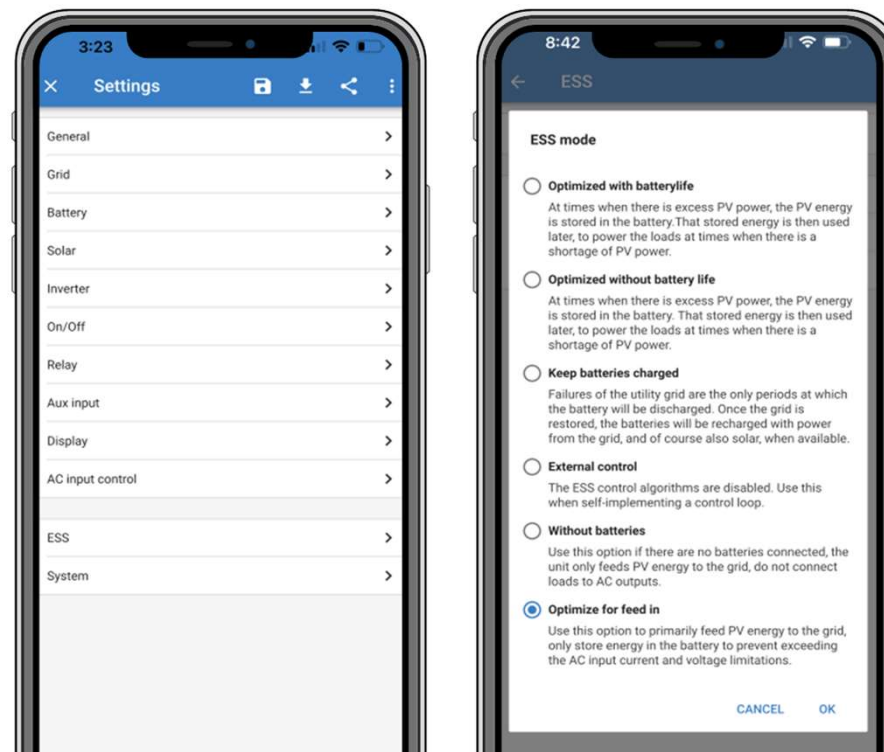
2. Monitoring with VictronConnect



Multi RS Solar 48/6000 – 450/100

Configuration with VictronConnect

1. On site
2. Remotely through connected GX Device



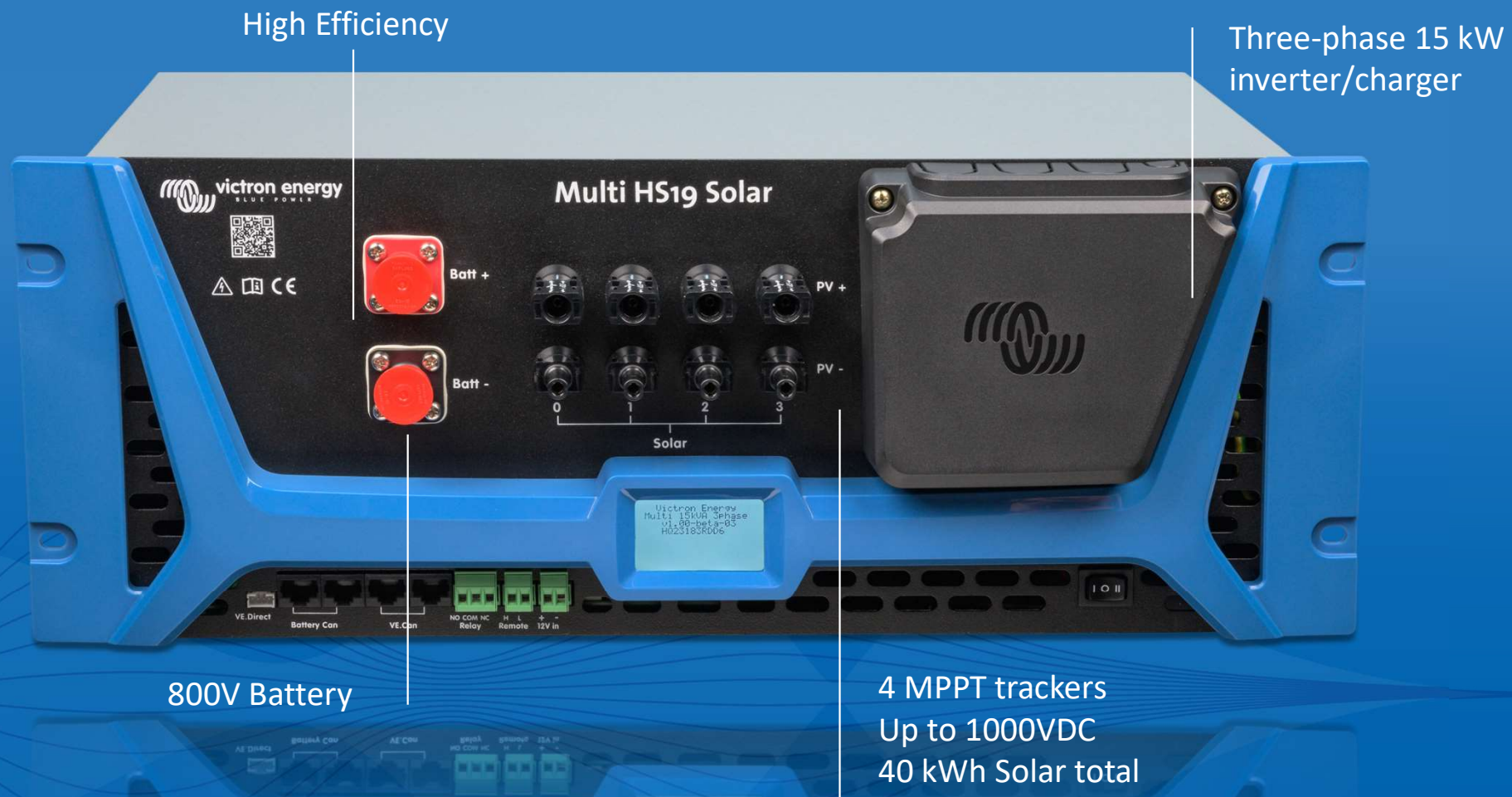
NEW product for 2025 Multi RS

Status & Planning

- Field tests in progress
- Release in Q1 2025
- 19inch rack Mount



Multi HS19 15kW New for 2025



Multi HS19 15kW

- Battery
 - 800V nominal (650 - 1000V)
 - 41A max charge current
- 4 MPPT trackers:
 - 1000 Voc
 - 14 Amps each
 - Approx. 32 kW solar total

- 1 x AC IN & 2 x AC OUT
- 25A RMS/Phase nominal
- 45A Peak AC Current for 3 seconds
- 4U 19" rack mount

Later:

- Parallelable
- External transfer switch (optional)

Status:

- Expected release: late 2024
- ESS certification: still later



Multi HS19 30kW

High Efficiency

Three-phase 30 kW
inverter/charger



800V Battery

4 MPPT trackers
Up to 1000VDC
64 kWh Solar total



Multi HS19 30kW

- Battery
 - 800V nominal (650 - 1000V)
 - 76A max charge current
- 4 MPPT trackers:
 - 1000 Voc
 - 20 Amps each
 - Approx. 64 kW solar total
- 1 x AC IN & 2 x AC OUT
- 50A RMS/Phase nominal
- 90A Peak AC Current for 3 seconds
- 5U 19" rack mount

Later:

- Parallelable
- External transfer switch (optional)

Status:

- Expected release Q2 2025



MPPT Solar Charger range



BlueSolar

75 V	10	15									
100 V		15	20	30			50				
150 V					35	45		60	70		100 VE.Can
250V									70VE.Can		100VE.Can



SmartSolar

75 V	10	15									
100 V			20	30			50				
150 V					35	45		60	70	85	100
250 V					35	45		60	70	85	100



SmartSolar VE.Can

150 V									70	85	100
250V									70	85	100



SmartSolar RS

450 V											100A	200A
-------	--	--	--	--	--	--	--	--	--	--	------	------



MPPT Tools for System Designers and Installers

- Online calculator – Wizard available to size the PV Panel arrangement for MPPT's

Features:

- Uses Geographic location for irradiance
- All PV panels are available to choose from
- Wizard selects the MPPT for you
- Give it a [Try](#)

MPPT sizing calculator

Metric / Imperial

Tracker: 1 +

Solar panels

Solar panel: Victron Energy 175W-12V Mono

Series: 1 Strings: 1

Min temperature: -10.0 °C Max temperature: 60.0 °C

Cable length: 10 m Cross-section: 6.0 mm²

Advanced panel settings: ☐

System

Voltage: 12 V 24 V 36 V 48 V

System location: Almere, Netherlands

Result

SmartSolar MPPT 75/15

Article number: SCC075015060R
PV Connection: Terminals

Bluetooth Smart

Where to buy

System calculations

MPPT max. input voltage	75V
PV min. voltage at 60°C	16V
PV max. voltage at -10°C	27V
MPPT max. output current	15A
PV min. current at 60°C	12A
PV max. current at -10°C	15A
* Power limiting @ low temp.	
PV power ratio	88%

Forecasted daily yield Almere, Netherlands

Daily yield (kWh)

Month	Yield (kWh)
J	0.15
F	0.25
M	0.40
A	0.55
M	0.65
J	0.60
J	0.60
A	0.60
S	0.45
O	0.30
N	0.15
D	0.10

Current graph

Voltage graph



GX Device and Monitoring



GX Device History



Colour Control GX



OCTO GX



MAXI GX



CERBO GX



2013

2017

2018

2018

2019

2019

2020

2023



VENUS GX



CANVU GX



MULTIPLUS-II GX

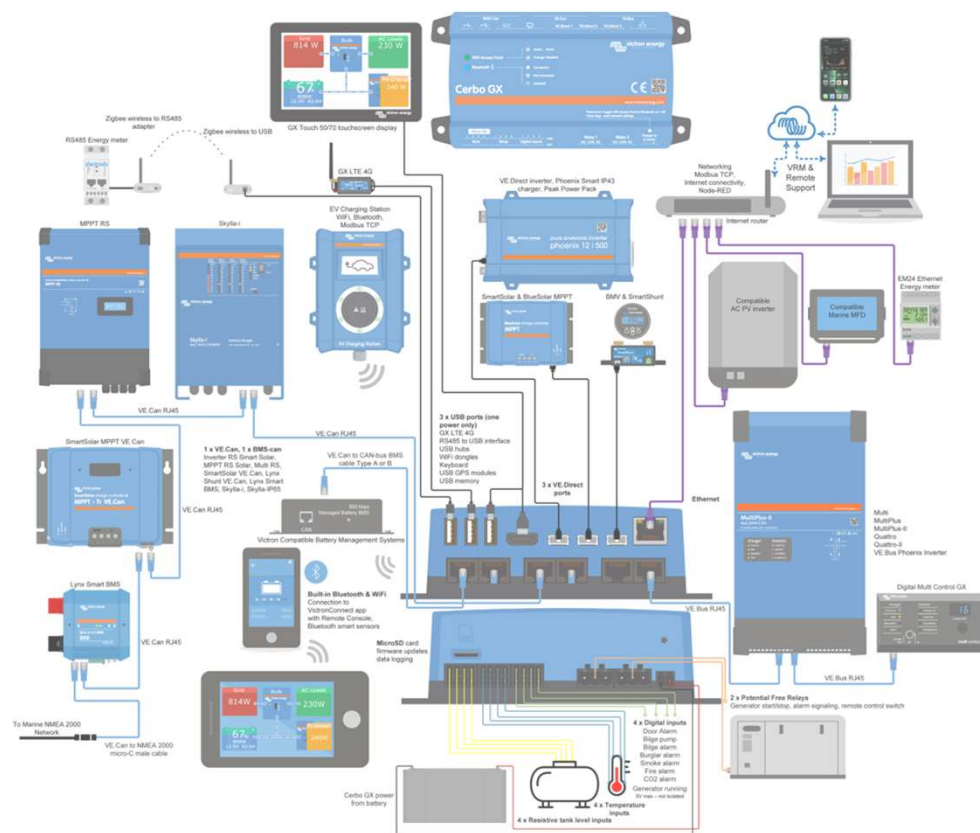


EKRA NO GX



Role of the GX device in Victron Systems

VENUS OS



When added to standard products, the capabilities increases and becomes a system controller

Connects to several 3rd party products for monitoring and control

Uses IOT topologies, MQTT, Node Red and more

Open-source operating software, **Venus OS**

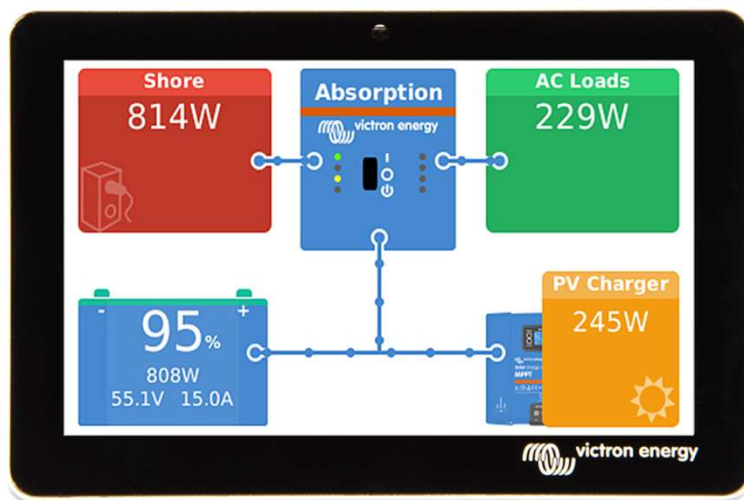
Very successful product with a +10 year track record



GX Device Display Overview

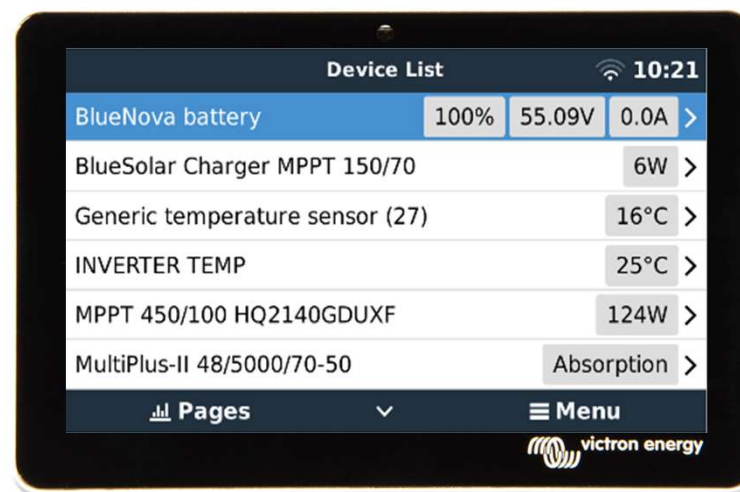
VENUS OS

Overview (Solar)



System overview screen

Device List



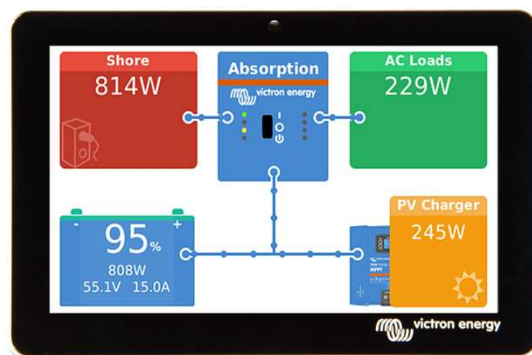
Device list provides settings menu and notifications along with connected devices



GX Device Display Overview Screens

VENUS OS

Solar



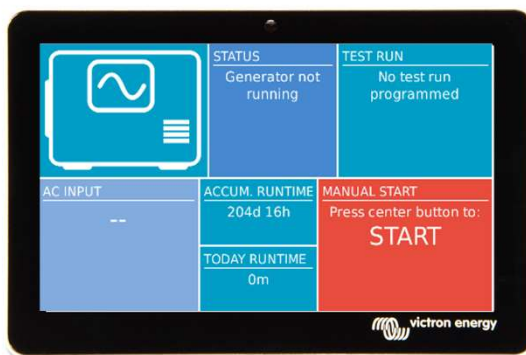
Marine & Automotive



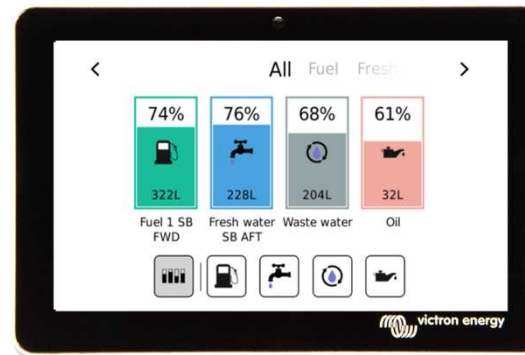
General 'TAB' overview



Generator Control

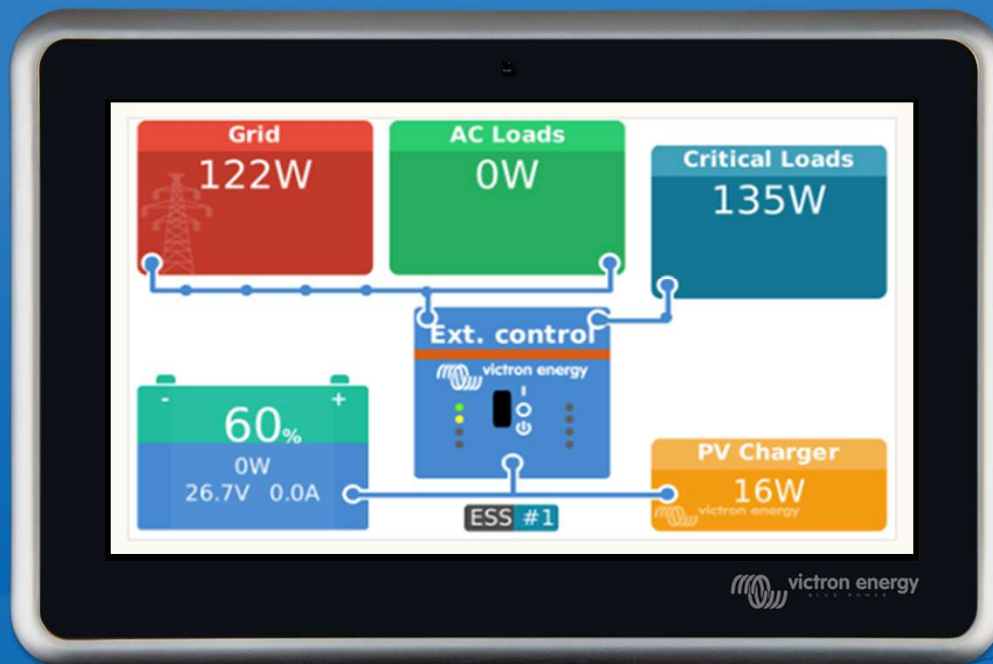


Tanks overview screen

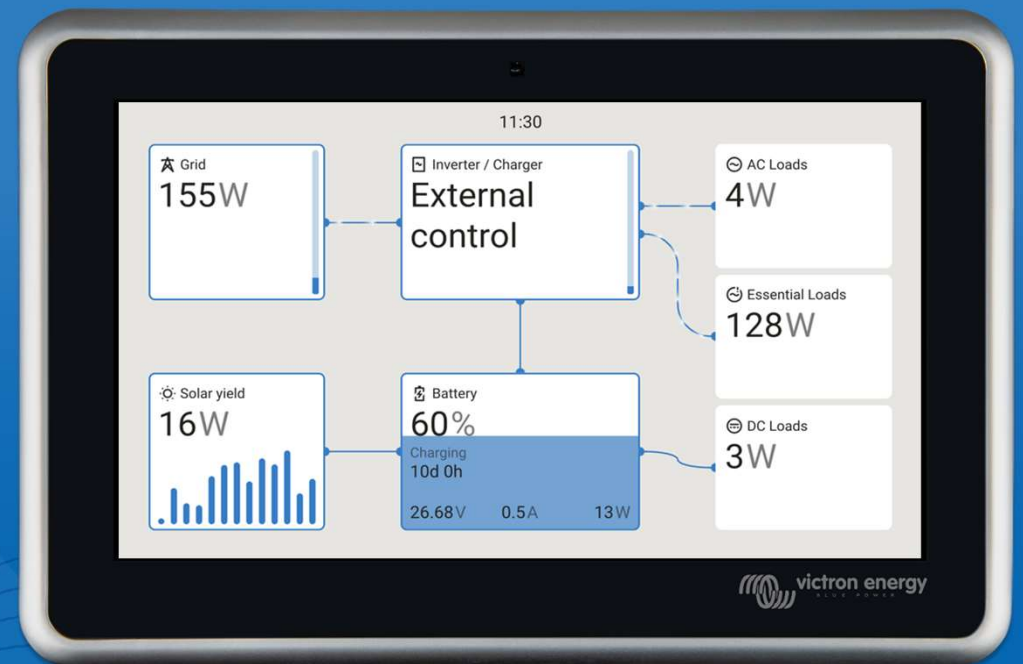


New User Interface

Classic UI



New User interface

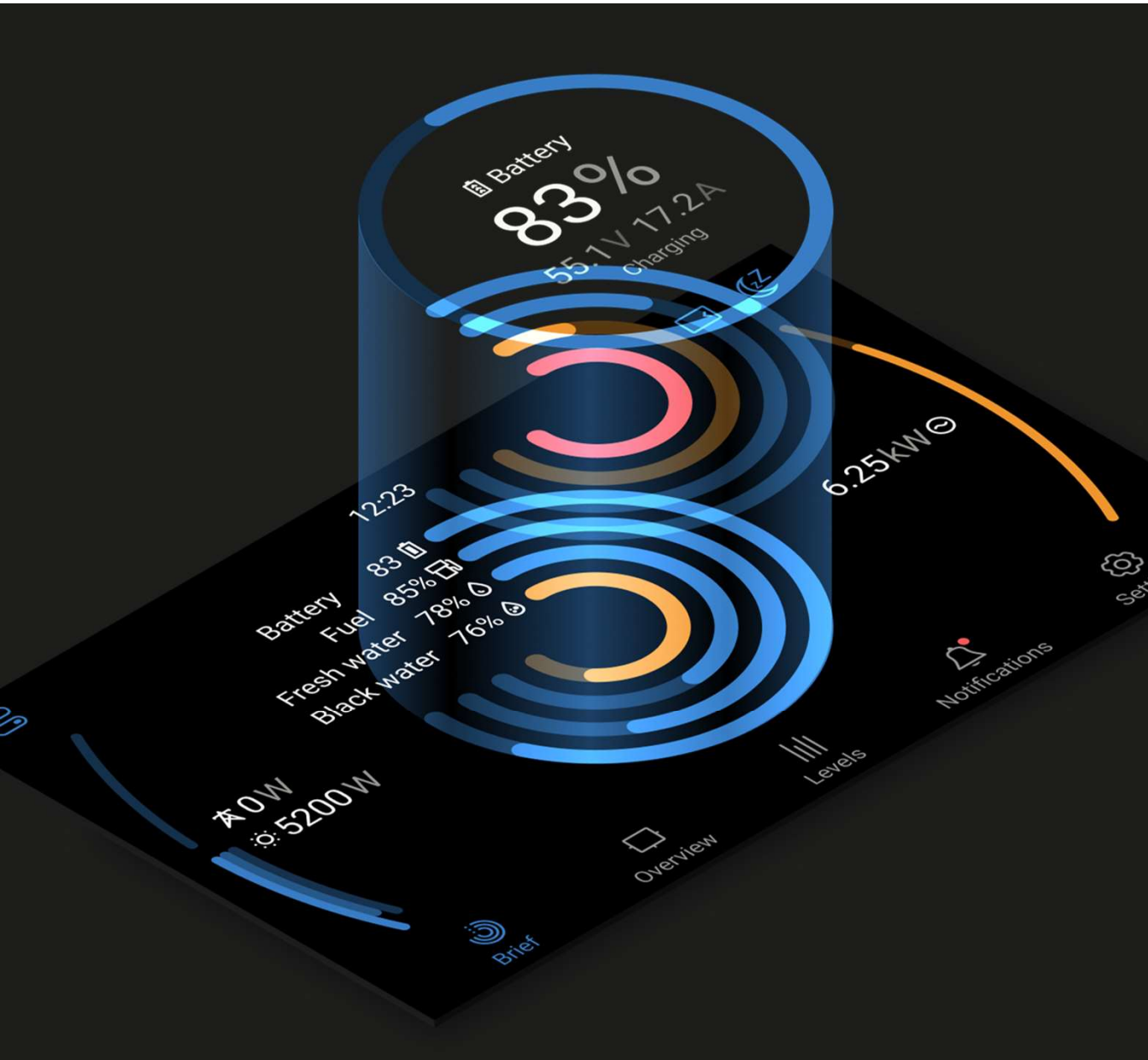




New UI

All the key information you need, presented in a clean and simple layout. The centerpiece is a customisable widget featuring rings, giving you quick access to your system insights at a glance.



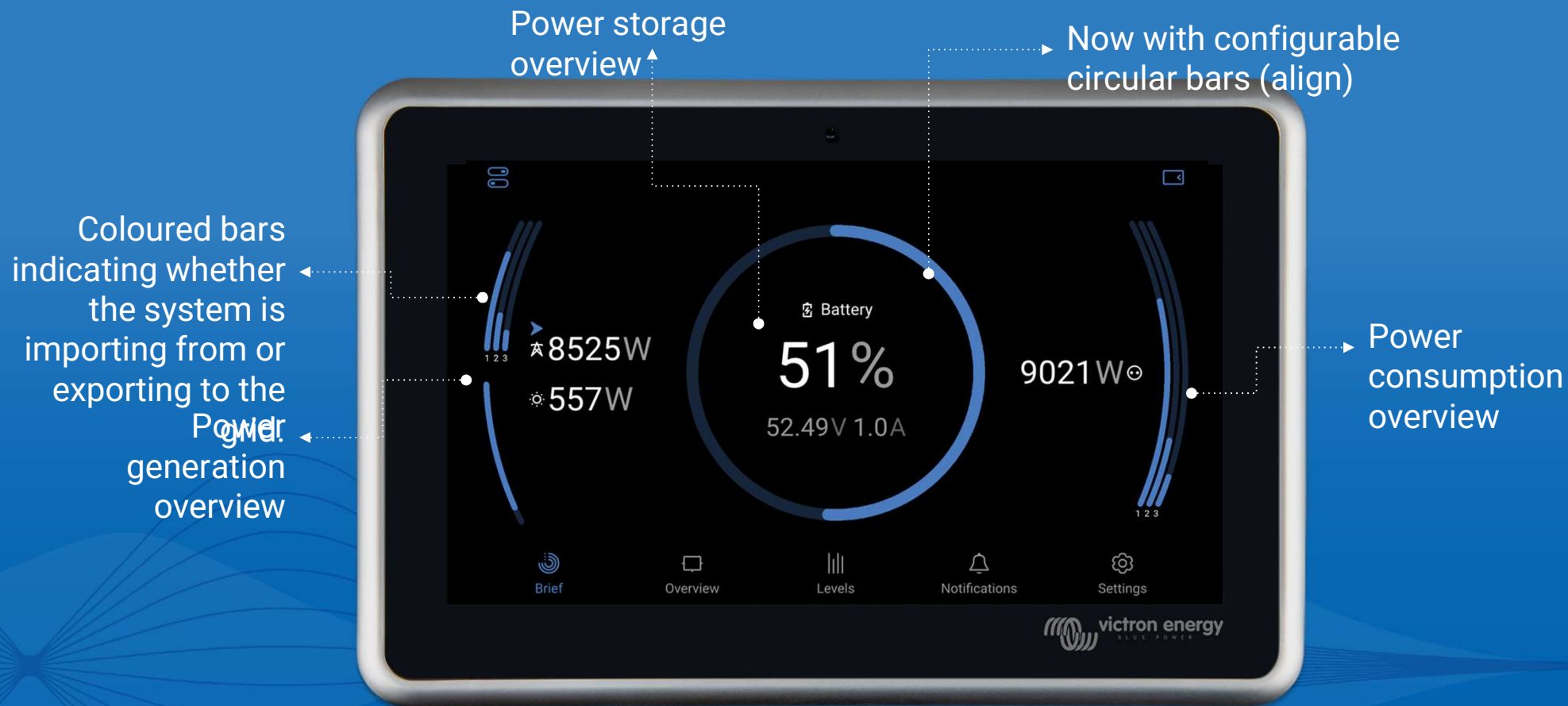


New Brief Page

All the key information you need, presented in a clean and simple layout. The centerpiece is a customisable widget featuring rings, giving you quick access to your system insights at a glance.



New Brief Page Layout



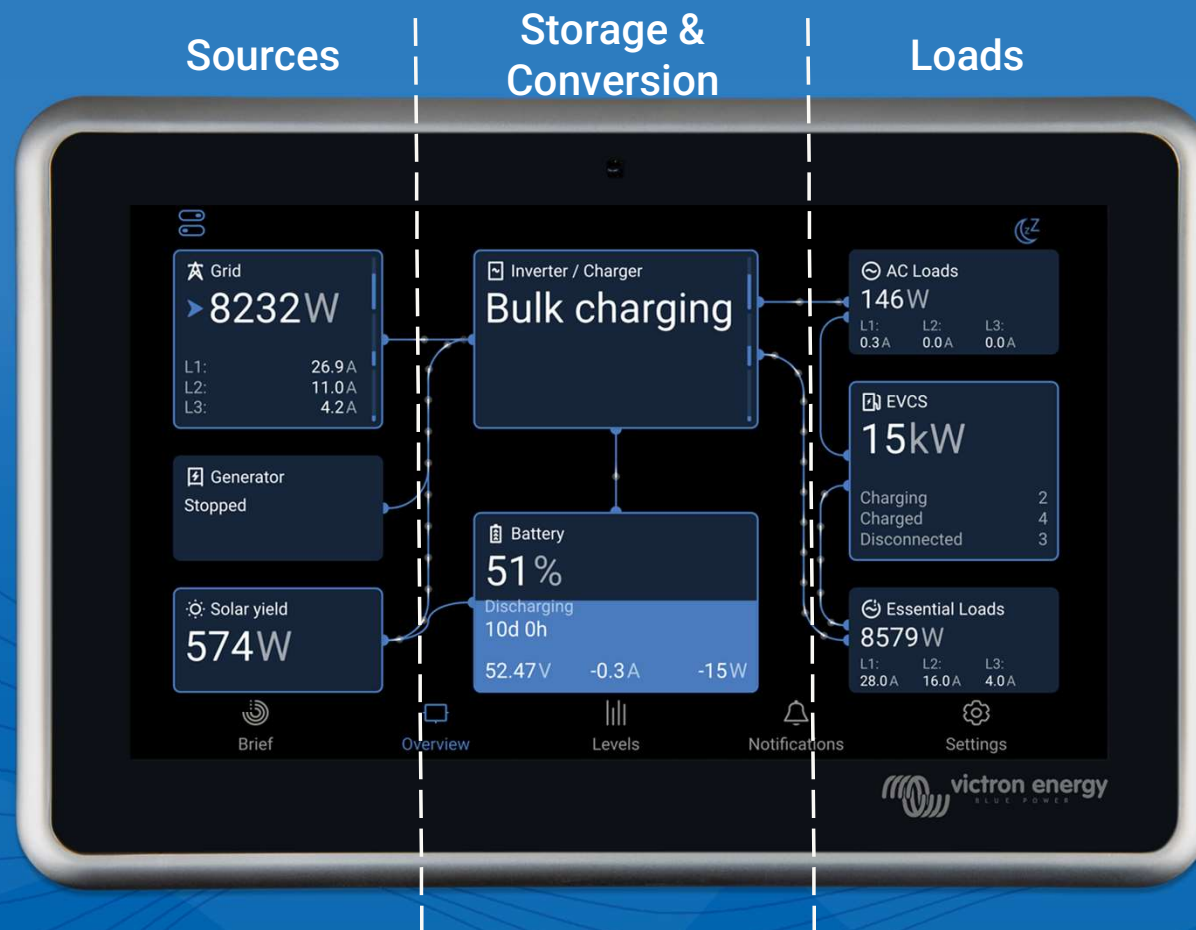


Overview Page

Updated overview page layout for a more comprehensive view of your system in one location for easy monitoring and management.



New Overview Page Layout



Good news!

The new GX user interface is available. Enhance your experience by activating it.

Click "Next" to make a choice.

Next



esc



What's New

Skip



Welcome!

We're excited to introduce a completely redesigned interface that enhances both the usability and aesthetics of your GX.

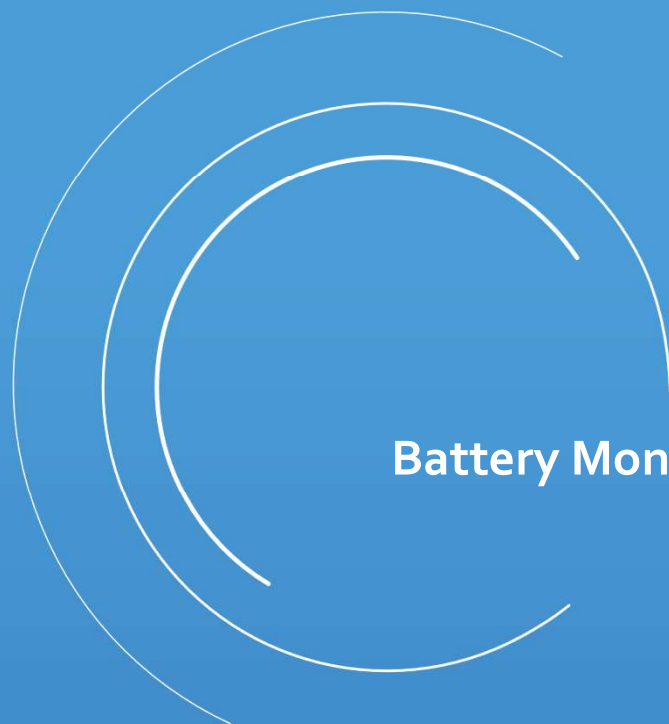
With streamlined navigation and a fresh look, everything you love is now even easier to access and more visually appealing.

Back

Next

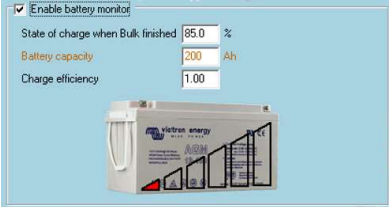


 **victron energy**
BLUE POWER





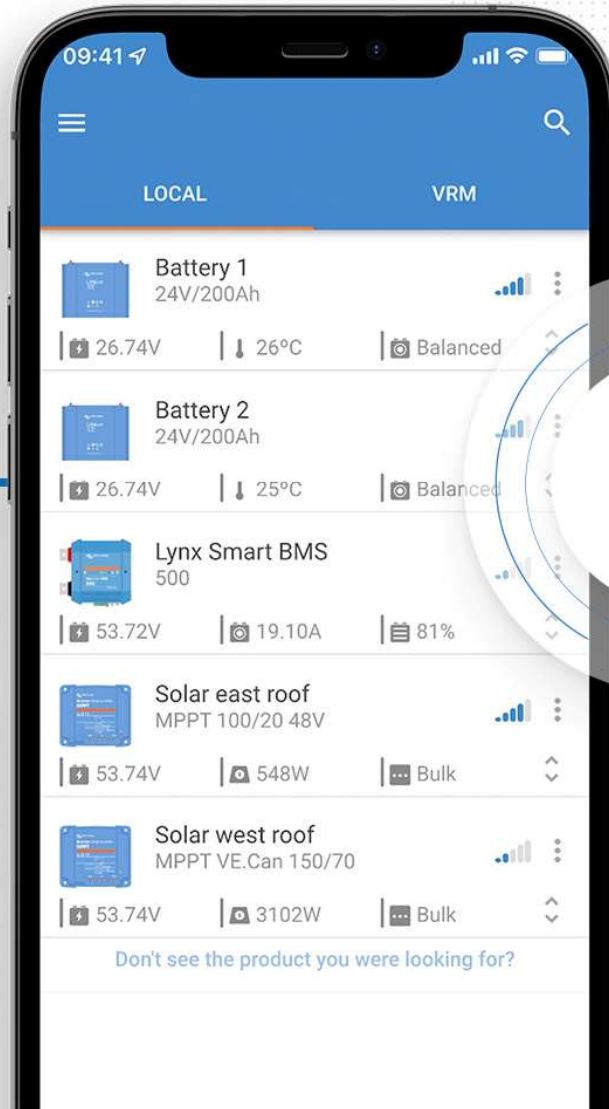
Battery Monitoring

Battery Monitor options

Smart battery	VE.Bus SOC	BMV & SmartShunt	Lynx shunt
<ul style="list-style-type: none"> If the battery can generate SOC then use it. Connects with CAN-bus to a GX Device Integrated Batteries listed on our website are ideal 	<ul style="list-style-type: none"> Use in case of no smart battery or DC loads. Uses MPPT current in SOC calculation Must have a GX device 	<ul style="list-style-type: none"> Use if no smart battery is used <u>and</u> there are DC loads or non-Victron DC sources, like wind power or DC generators 	<ul style="list-style-type: none"> Only use if no smart battery is used <u>and</u> there are DC loads or non-Victron DC sources, like wind power or DC generators 

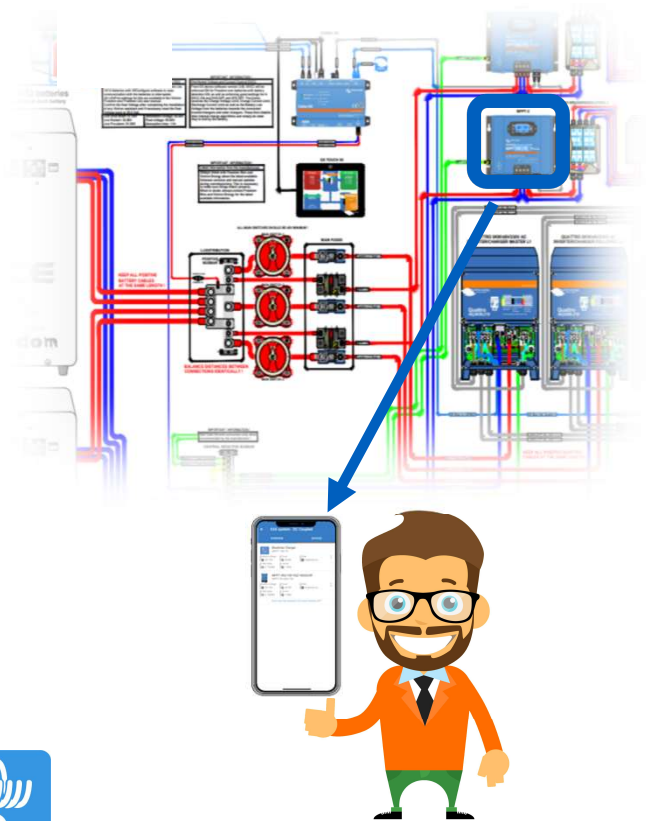


VictronConnect



Monitor Smart products
in a glance

VictronConnect



VictronConnect - On-site monitoring

- Connect to individual products with Bluetooth
- Configure settings for the product
- Monitor each products operation
- View error codes and see History
- Download settings for use later when fault finding

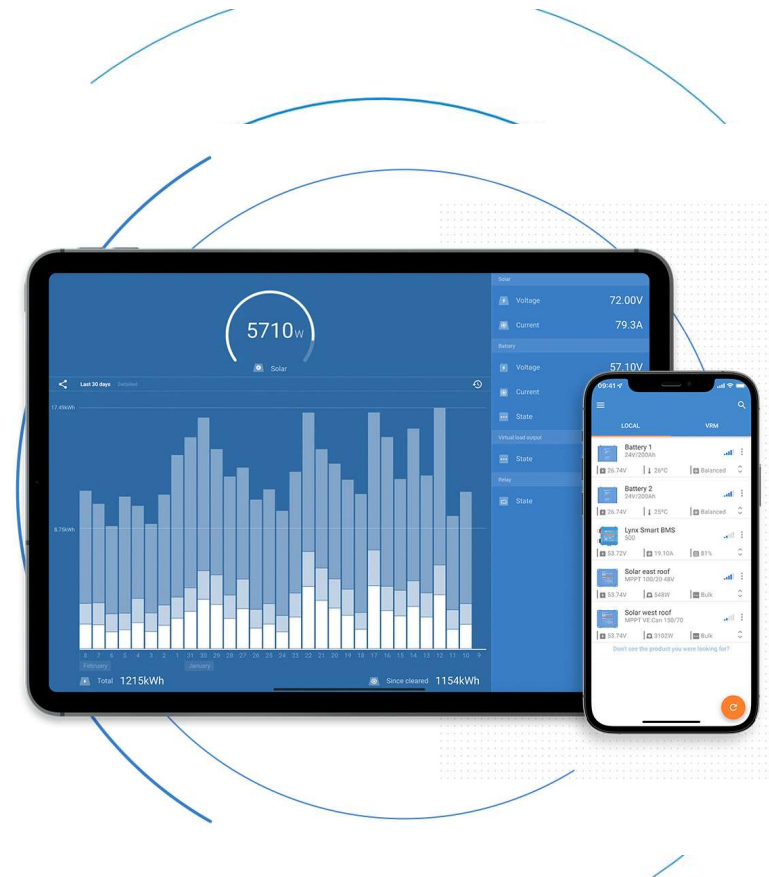


VictronConnect

Versatile application to Monitor, configure, update and diagnose **Smart** Victron products.

Connectivity:

- Bluetooth user to product
- WIFI/LAN network connect to GX Device
- Connect with an interface cable
- Victron Remote Management integration



VictronConnect

- Configuration software to program all Victron Products
- Inverter/charger programming is still limited, no assistants
- Multiple Unit systems, up to 3 units can be configured
- ✓ * **Firmware update** – VictronConnect is the best option – VE-Flash is used on older system only





VictronConnect

Monitoring of Systems and its Components

1. On-site monitoring

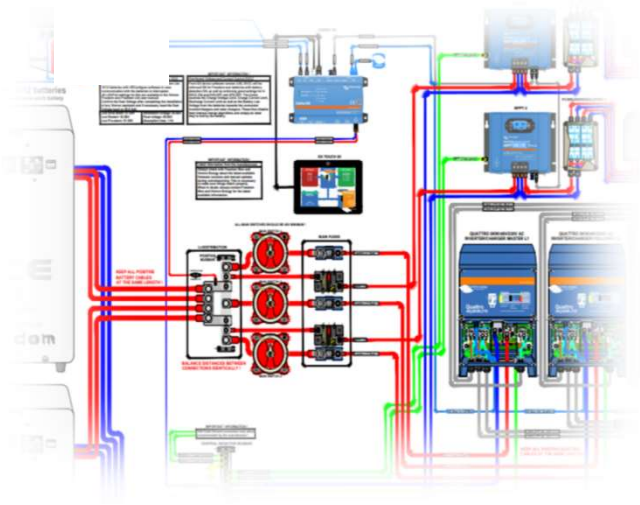
- Provides information about the system components operation and performance
- Real time feedback during commissioning for analysis and improvements
- Provides notifications to the user for the component's status and performance

2. Remote monitoring (through integrated VRM)

- Provides component and system information overview and control
- Detailed analysis of trends, performance, warnings and alarms
- Remote interrogation of system to improve performance
- Quick support with limited site visits



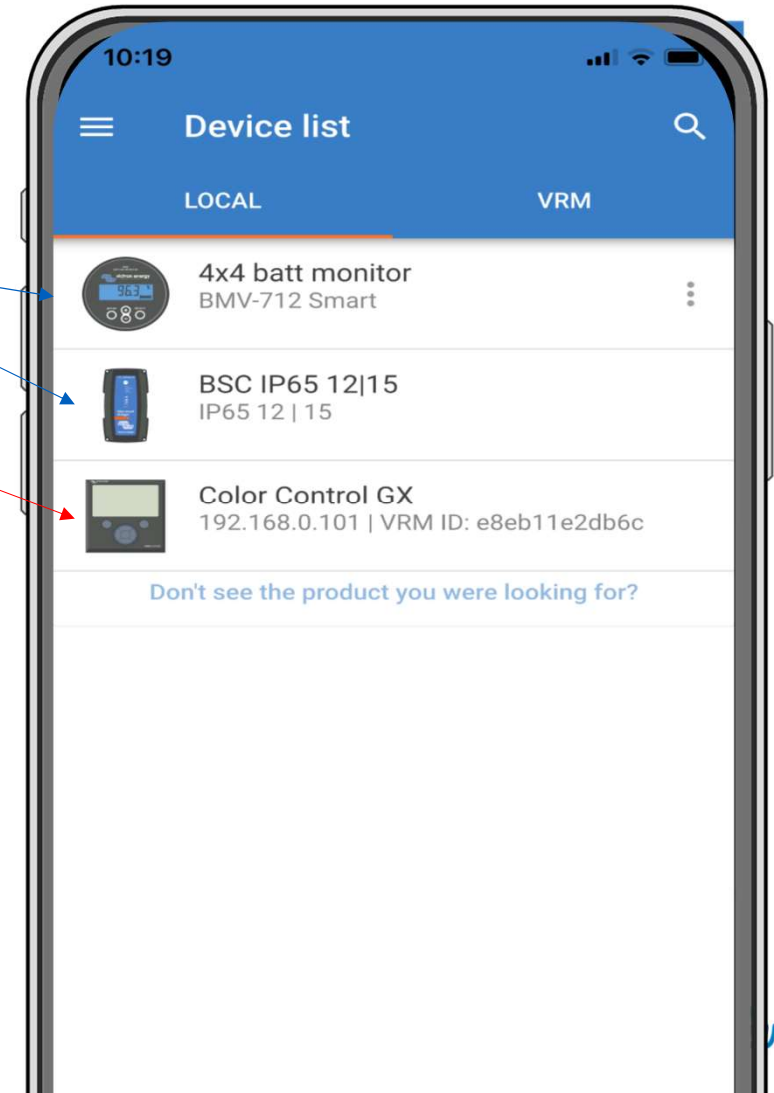
VictronConnect



Bluetooth connected

Shared Wifi connected

Shared Wifi, not needed
to be connected to the internet



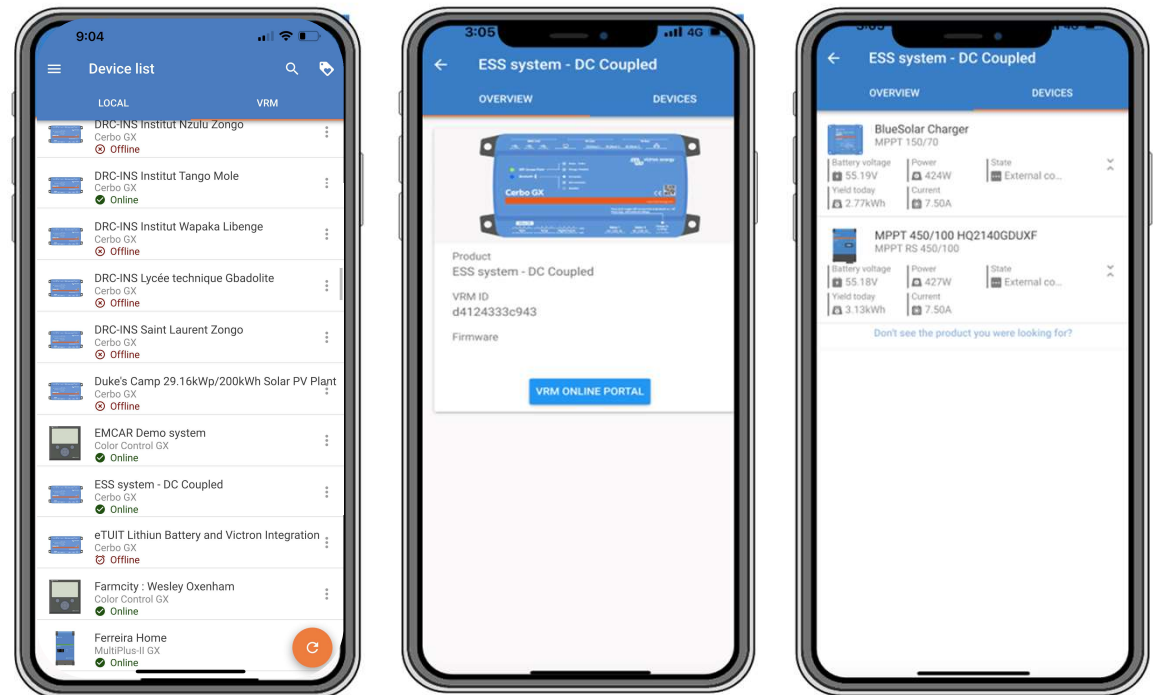
Remote Monitoring – Mobile Device

Remote access to products installed on site

Monitor live operation

View history and error codes

Change settings as required





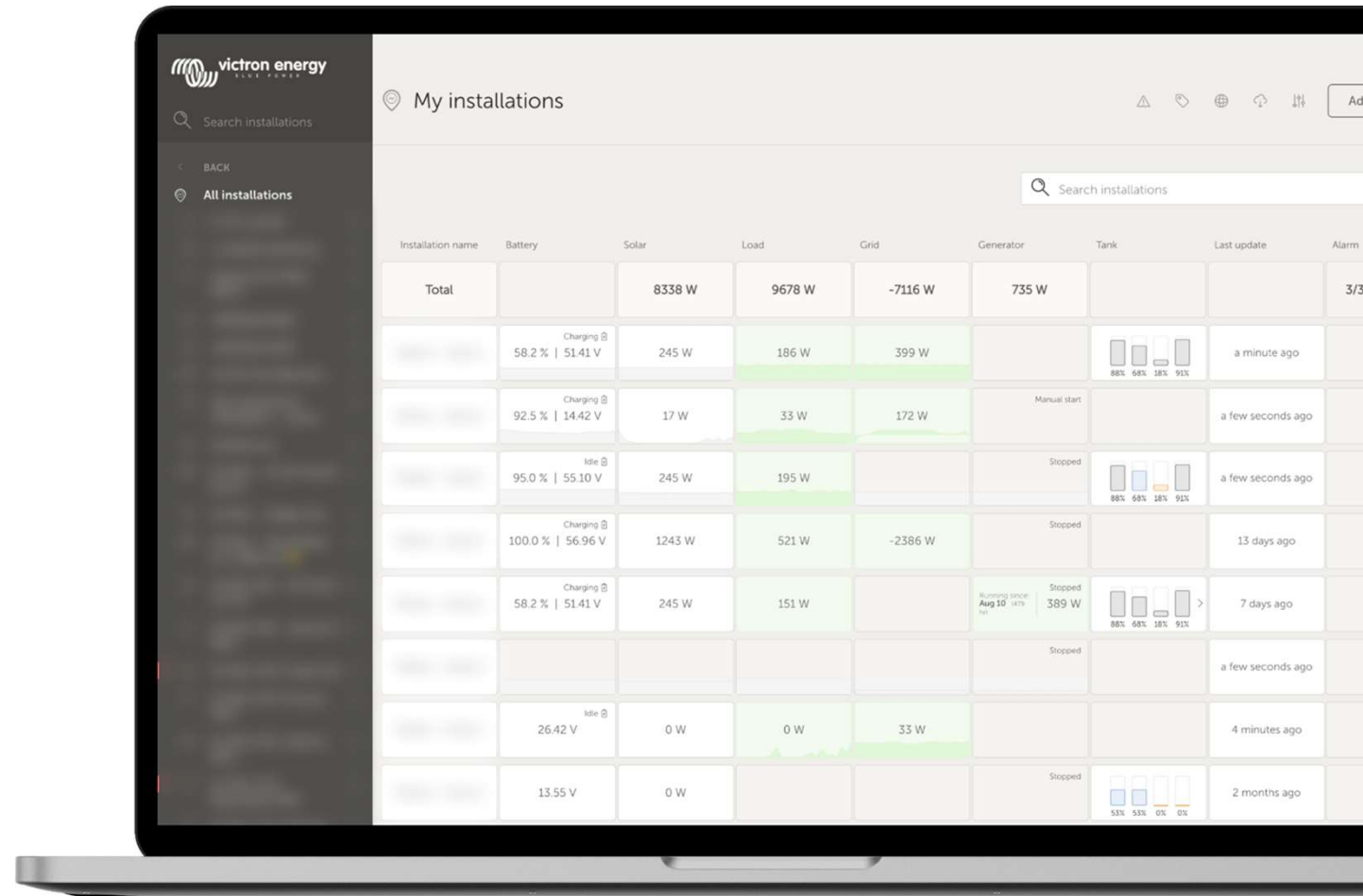
VRM Victron Remote Management



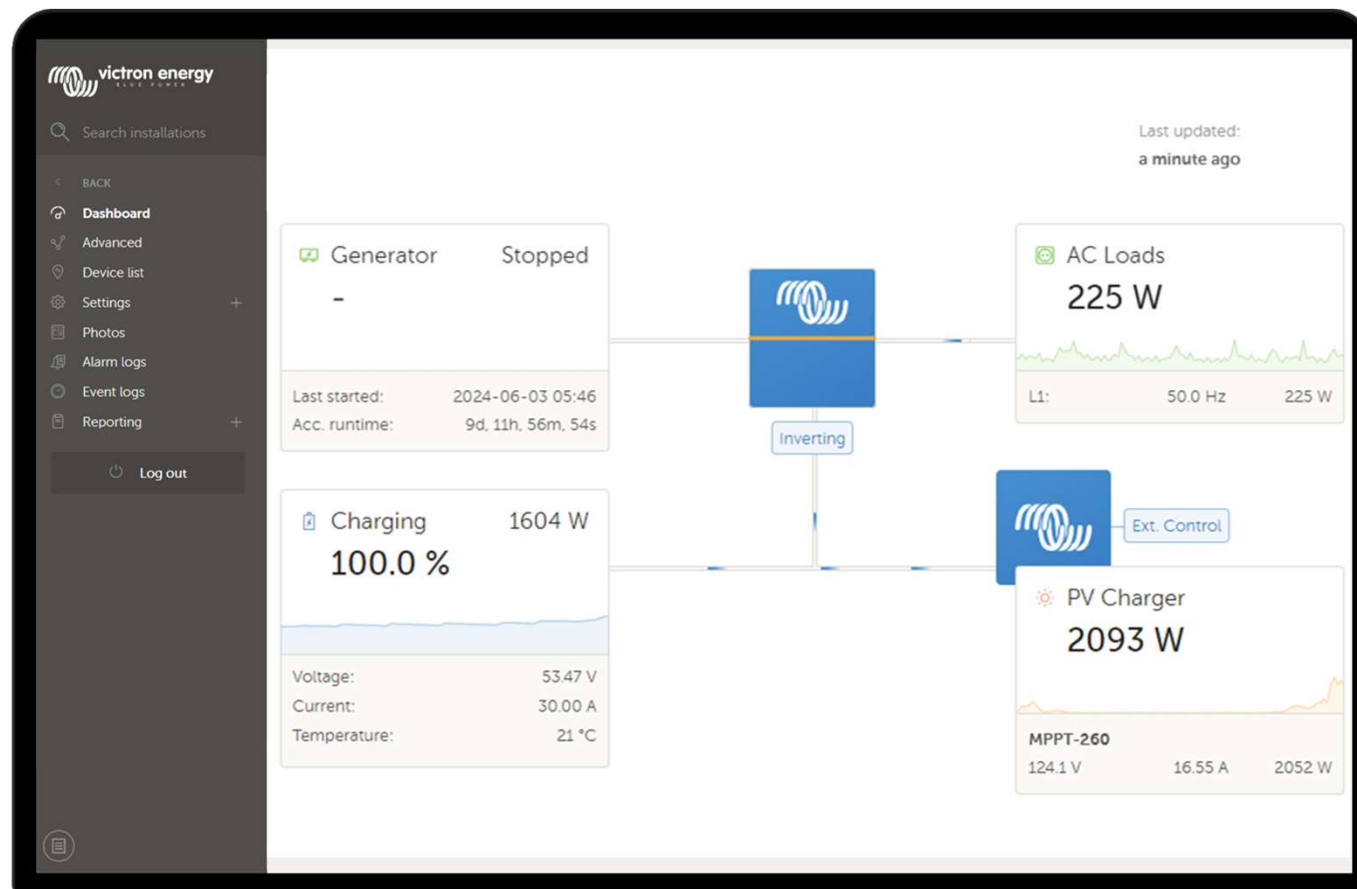
All your systems at a glance

Built for managing:

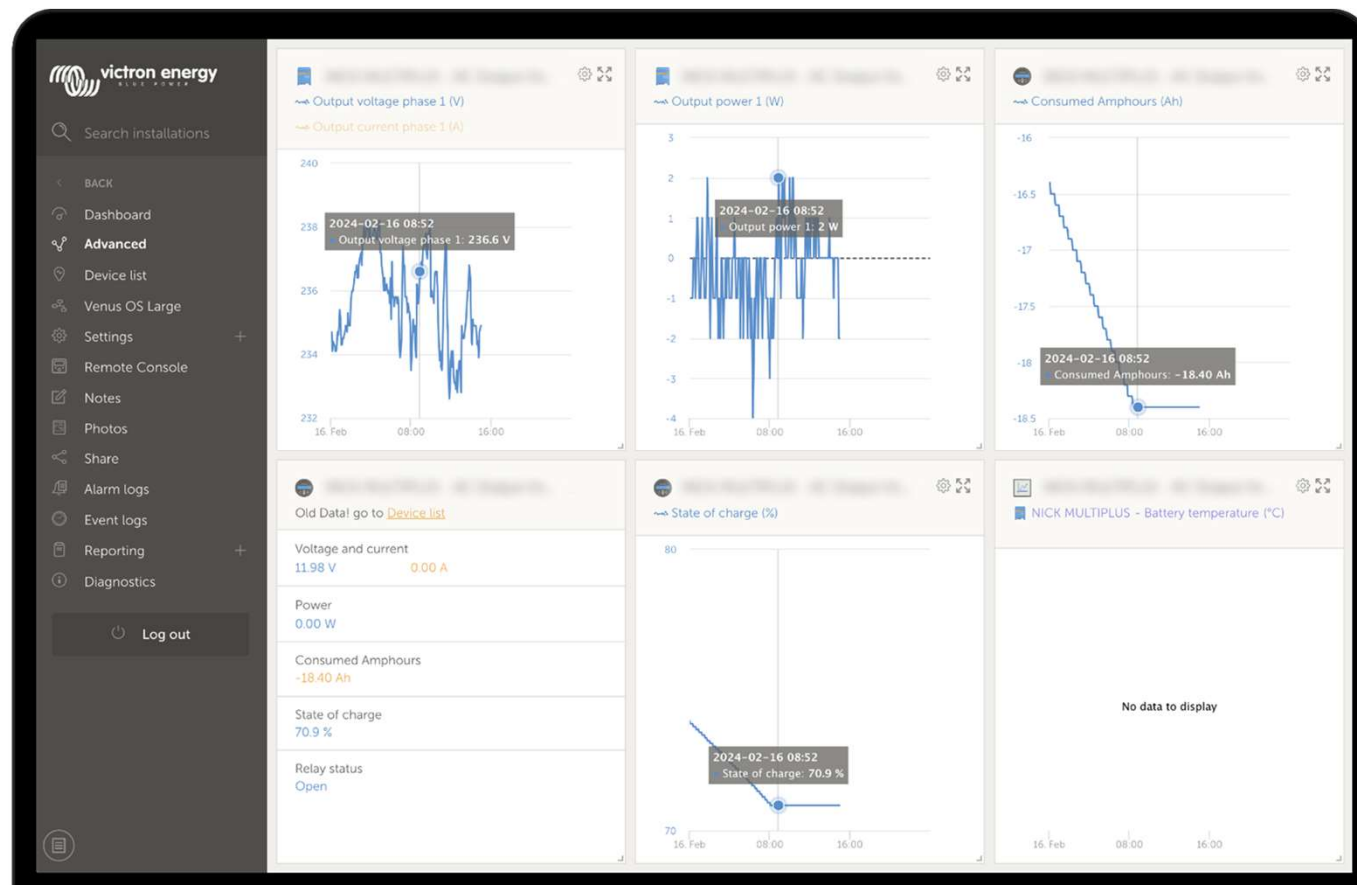
- Large number of ESS systems
- Hybrid generator rental fleets
- Off-grid systems



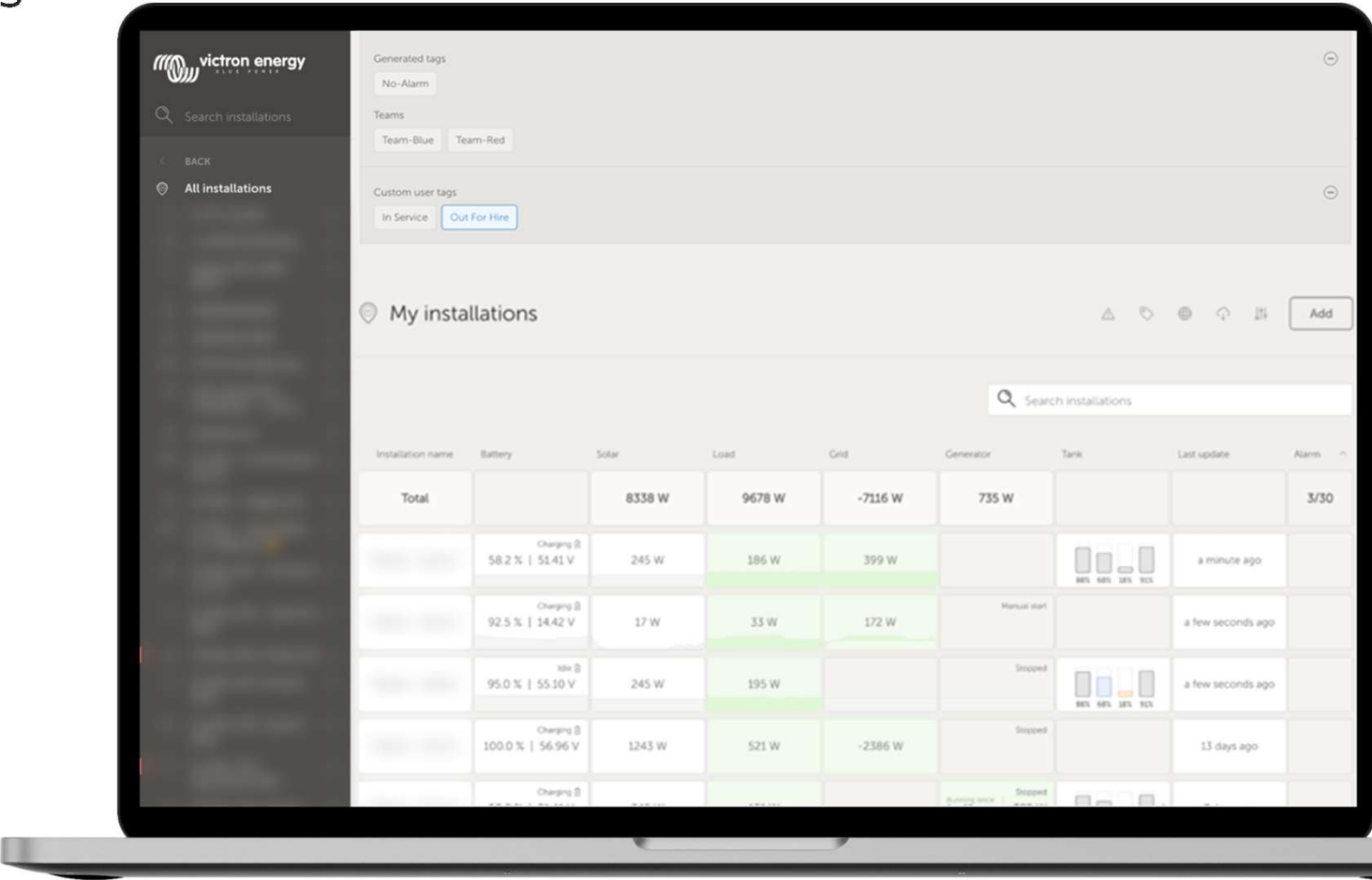
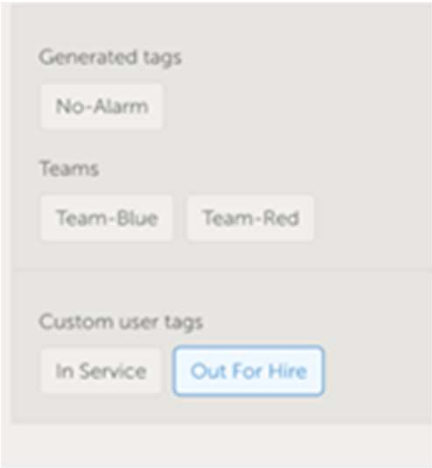
Single system overview



Advanced page – for detailed diagnosis



Custom filters with tags



Map overview



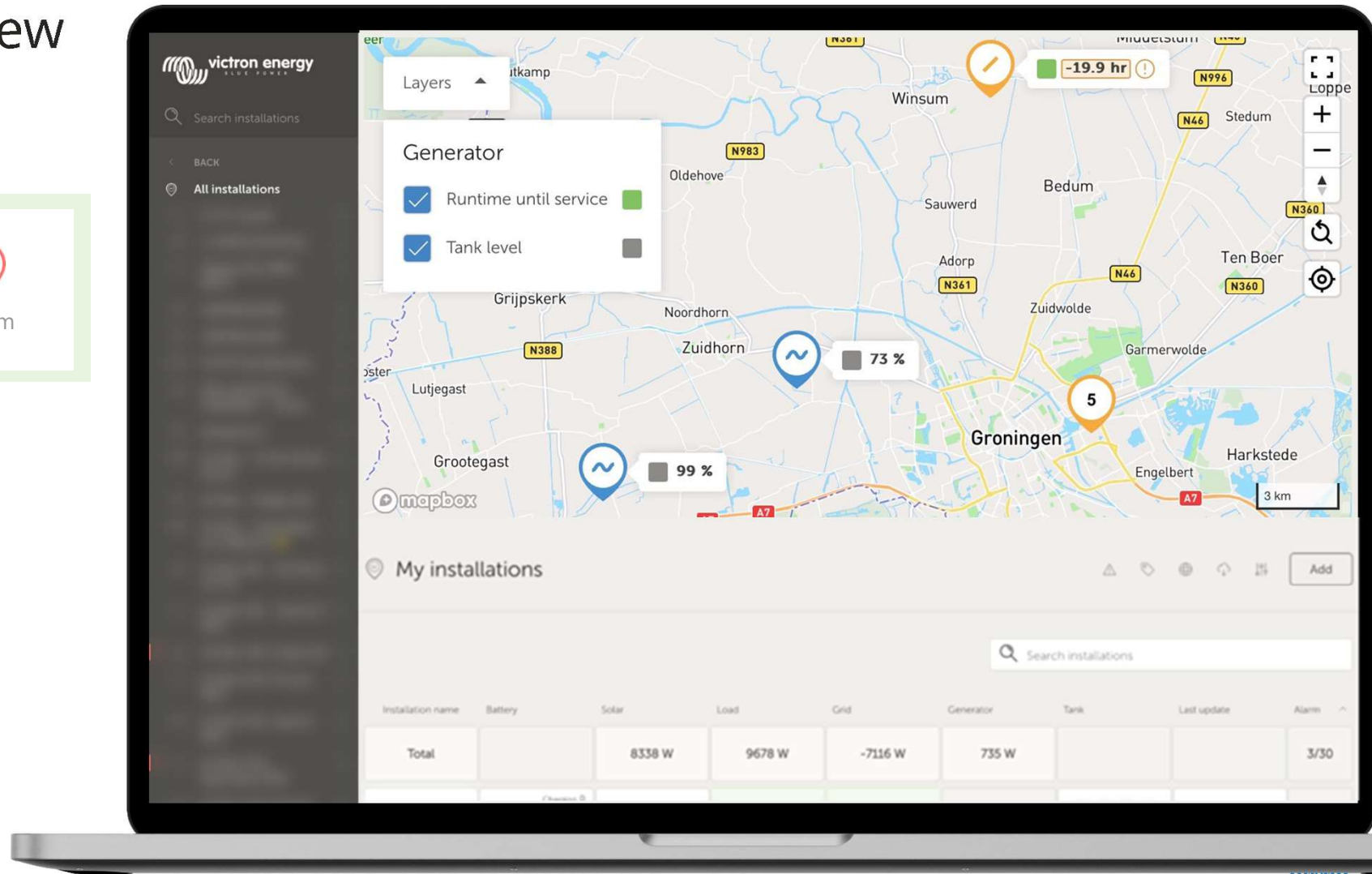
OK



Warning

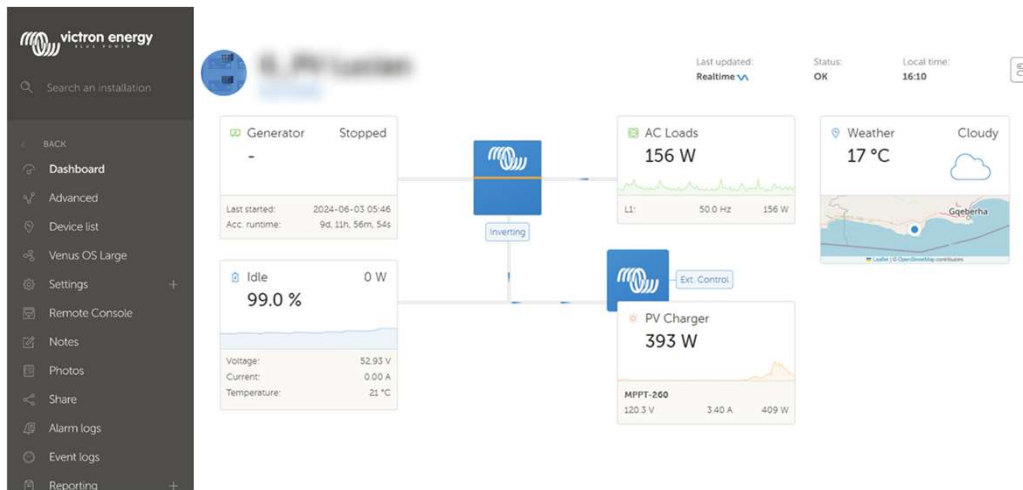


Alarm



Remote Control

- Access system controls through VRM



Controls:

Generator

Stopped

Stopped

Autostart

Service

Service interval ⓘ

Runtime until service

Manual control

Timed run

Duration

Start generator

Stopped

--:--

Reset

200 hr

41 hr

00 : 00

Learn more by clicking this [Link](#)

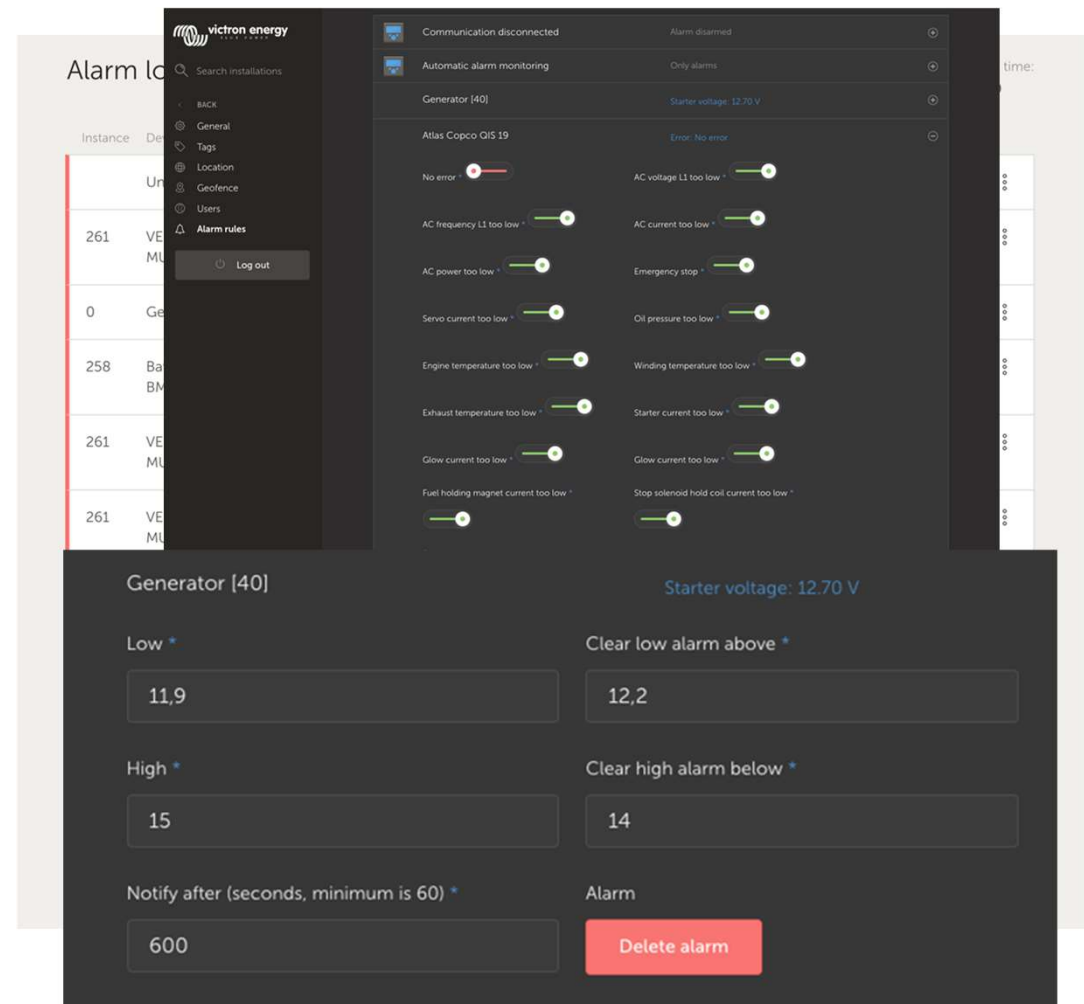
VRM – Alarms and monitoring

VRM Portal constantly monitors your fleet and can notify you of any alarms.

There are four categories of monitoring:

- Internet connection between portal and sites
- Automatic alarm monitoring: a default set on all connected products
- User configurable alarms.

The detailed alarm log provides a full system record for monitoring and compliance



Learn more by clicking this [Link](#)



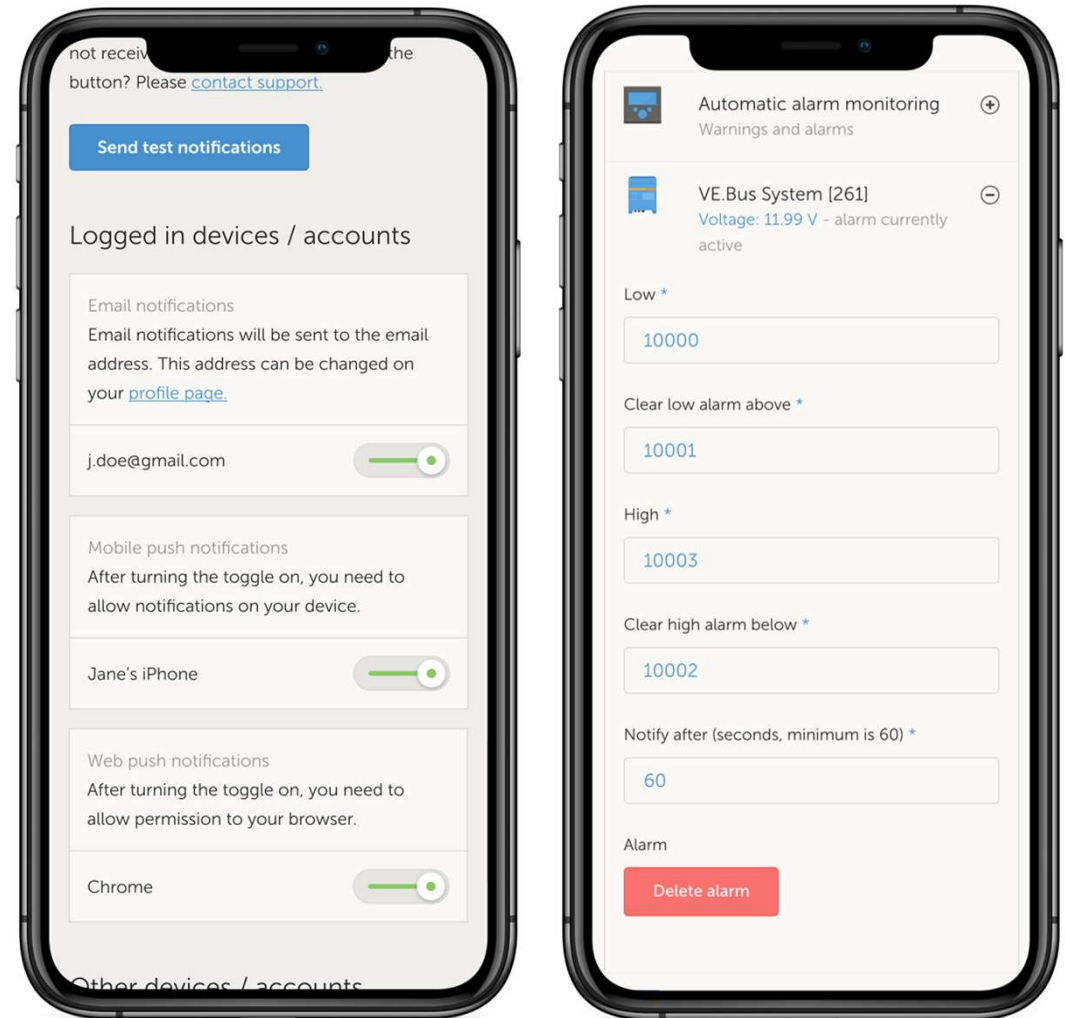
VRM – Notifications

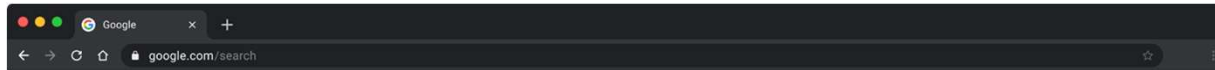
If one of the alarm and monitoring conditions is met, you can be notified in various ways:

- By email
- By push notification on your browser, smartphone, or tablet

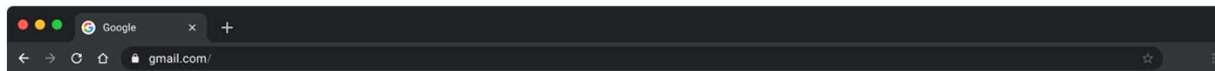
Notifications can be tailored to your requirements:

- Choose which users and devices receive alarms from which systems
- Customise alarm parameters from the app or browser





Problem – Victron VRM
Site: Victron ESS Test Installation
Device: VE.Bus System - Multiplus [261]
Alarm: Temperature



Compose		Search mail		1-50 of 2,619	
Inbox		Primary	Social	Promotions	Updates
★ Starred		<input type="checkbox"/> ★ Victron VRM	Nextdoor, Message fro...	Low's Home Improvement	
🕒 Snoozed		<input type="checkbox"/> ☆ Jacob Jones			
➤ Sent		<input type="checkbox"/> ☆ Guy Hawkins			
✉ Drafts		<input type="checkbox"/> ☆ Ralph Edwards			
🚫 Spam		<input type="checkbox"/> ☆ Darrell Steward			
🗑️ Trash		<input type="checkbox"/> ☆ Theresa Webb			
📁 Categories					



Problem – Victron VRM
Site: Victron ESS Test Installation
Device: VE.Bus System - Multiplus [261]
Alarm: Temperature



Production report in Excel

Battery %	Battery Voltage	Battery Mode	Load	Solar Yield	Tanks	Temperature
28.84 V	100.0 %	Charging	14 W	46 W	Tank-Fresh Water-89 % Tank-Waste Water-2 % Tank-Fuel-30 %	Temp-Battery-21.0 °C Battery 2-13.0 °C Te
28.40 V	100.0 %	Idle	17 W	20 W	Tank-Fresh Water-17 % Tank-Waste Water-50 % Tank-Fuel-64 %	Temp-Battery-17.0 °C Te
28.39 V	100.0 %	Idle	11 W	26 W	Tank-Fresh Water-97 % Tank-Waste Water-2 % Tank-Fuel-89 %	Temp-Battery-17.0 °C Temp-Cabin-13.0 °
28.42 V	100.0 %	Idle	20 W	26 W	Tank-Fresh Water-80 % Tank-Waste Water-19 % Tank-Fuel-50 %	Fridge-12.1 °C Temp-Battery-11.0 °C Te
28.41 V	100.0 %	Idle	9 W	14 W	Fresh water-37 % Waste water-0 % Fuel-76 %	
28.39 V	100.0 %	Idle	14 W	14 W	Rain-71 % Waste-51 % Fuel-83 %	Battery 1-14.0 °C Battery 2-14.0
26.77 V	89.4 %	Charging	28 W	233 W	Tank-Fresh Water-10 % Tank-Waste Water-63 % Tank-Fuel-75 %	Temp-Battery-20.0 °C Temp-Cabin-20.0
27.10 V	98.6 %	Charging	1 W	260 W	Fresh water-93 % Waste water-14 % Fuel-56 %	
26.97 V	88.9 %	Charging	41 W	273 W	Fresh water-0 % Waste water-0 % Fuel-17 %	
26.79 V	93.9 %	Charging	51 W	137 W	Fresh water-65 % Waste water-0 % Fuel-80 %	
28.42 V	100.0 %	Charging	-1 W	105 W	Fresh water-62 % Waste water-90 % Fuel-6 %	
27.11 V	99.8 %	Charging	24 W	127 W	Fresh water-99 % Waste water-0 % Fuel-51 %	
26.38 V	56.7 %	Idle	67 W	87 W	Fresh water-8 % Waste water-0 % Fuel-45 %	
26.87 V	87.5 %	Charging	46 W	202 W	Fresh water-99 % Waste water-0 % Fuel-75 %	
26.69 V	78.1 %	Charging	18 W	93 W	Fresh water-71 % Waste water-0 % Fuel-99 %	
26.77 V	97.2 %	Idle	6 W	59 W	Fresh water-100 % Waste water-31 % Fuel-33 %	
27.00 V	95.3 %	Charging	7 W	216 W	Fresh water-44 % Waste water-0 % Fuel-70 %	
27.03 V	94.4 %	Charging	21 W	509 W	Fresh water-99 % Waste water-0 % Fuel-56 %	
28.39 V	100.0 %	Idle	9 W	14 W	Fresh water-99 % Waste water-0 % Fuel-0 %	





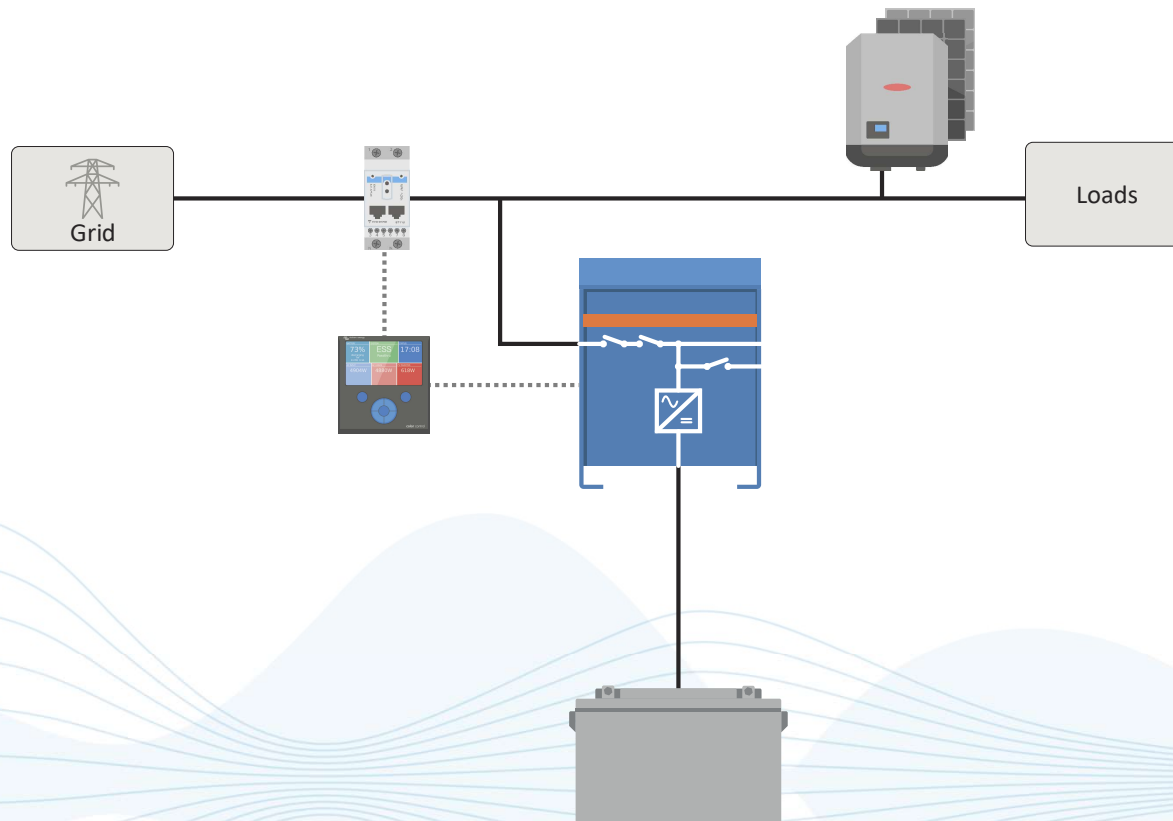
Base



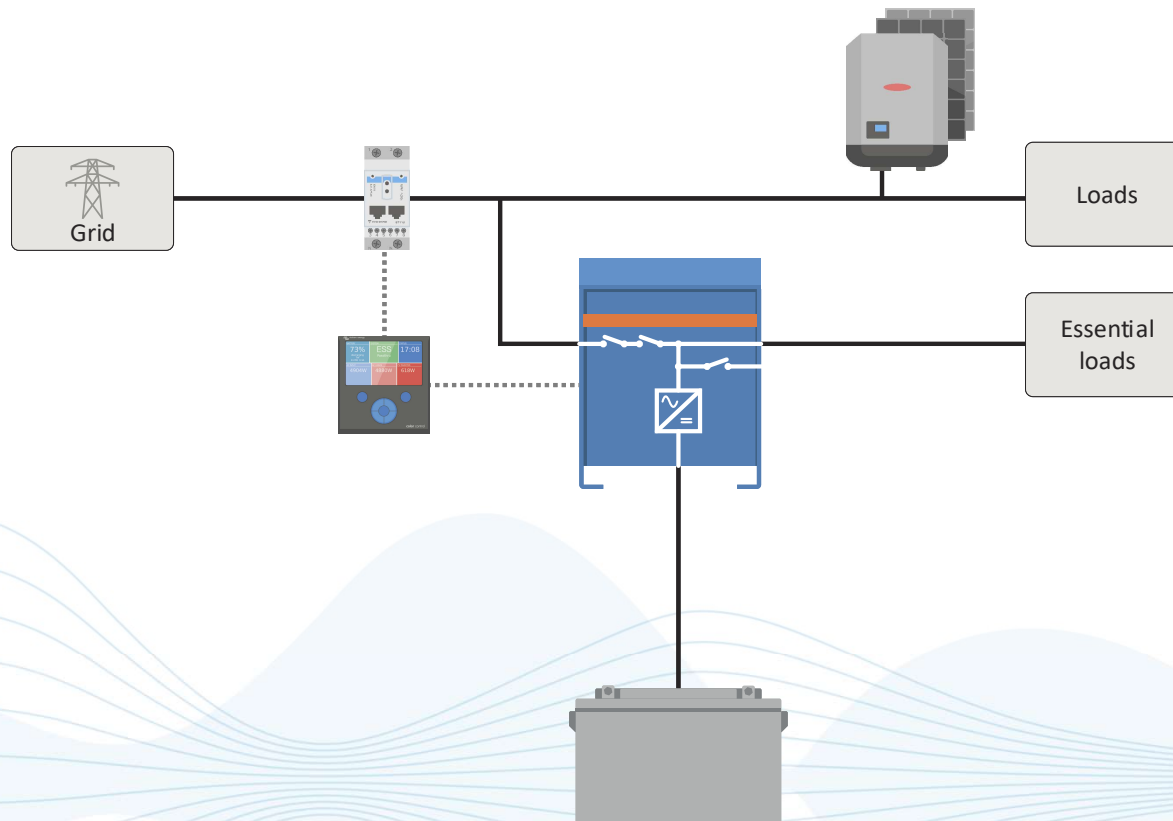
Standard AC-coupled PV



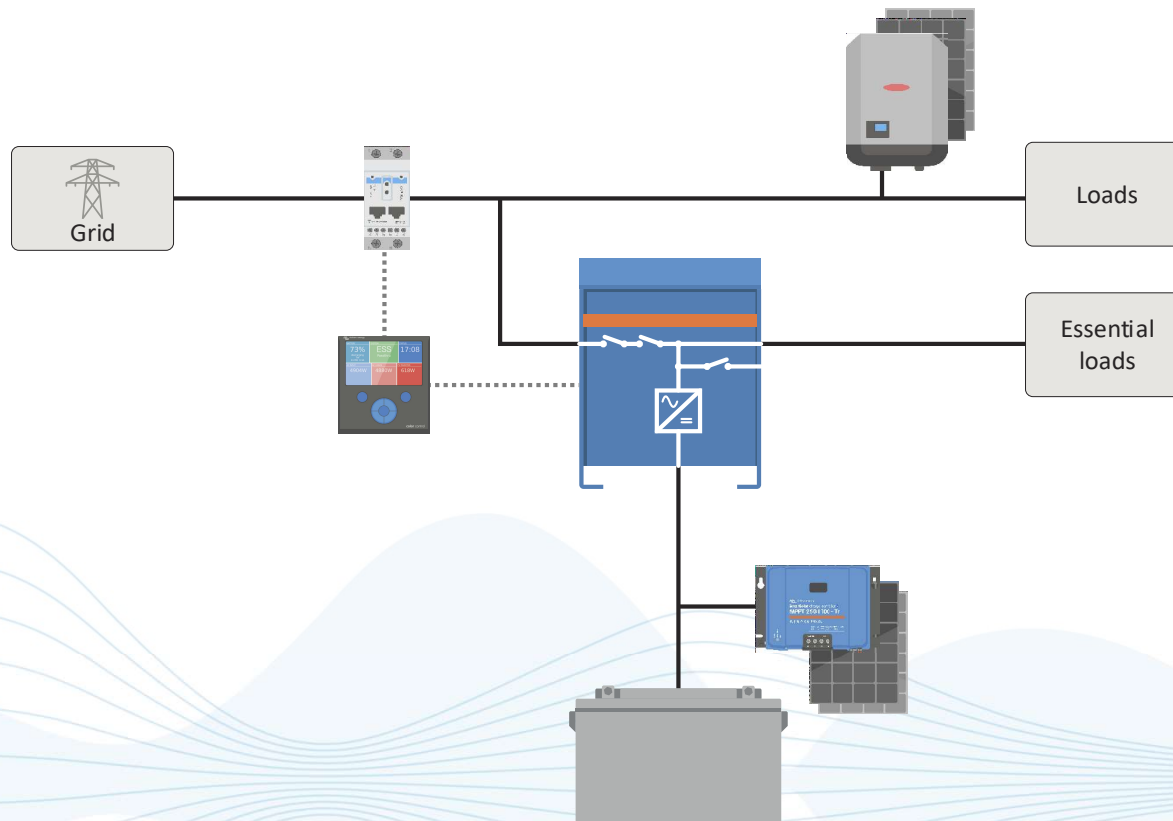
Add energy storage and a meter



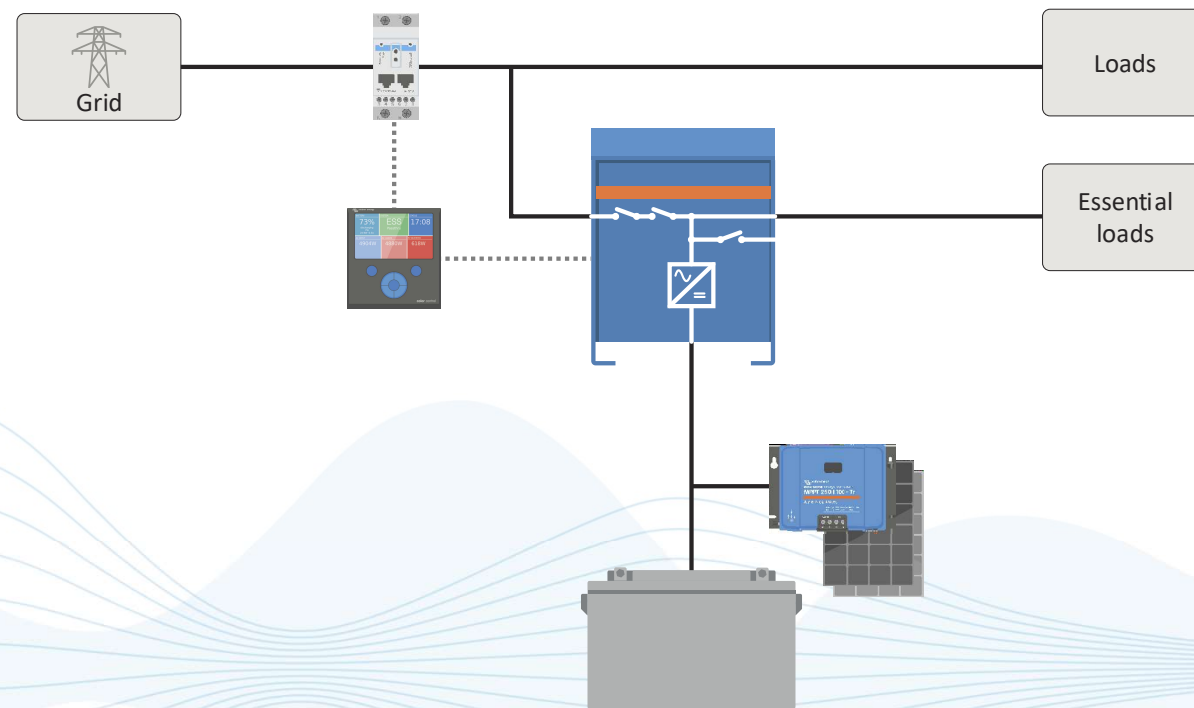
Add essential loads



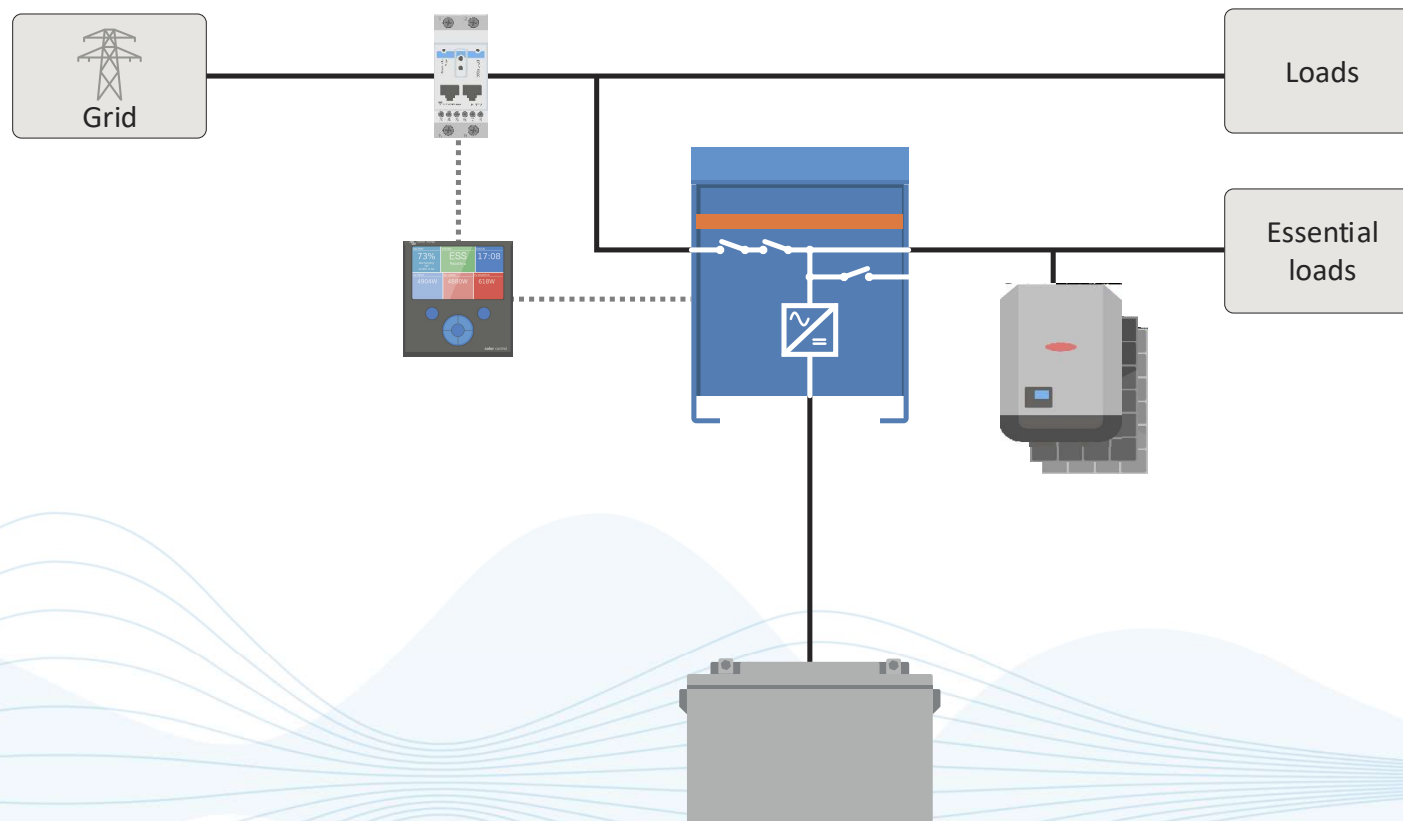
Add DC-coupled PV



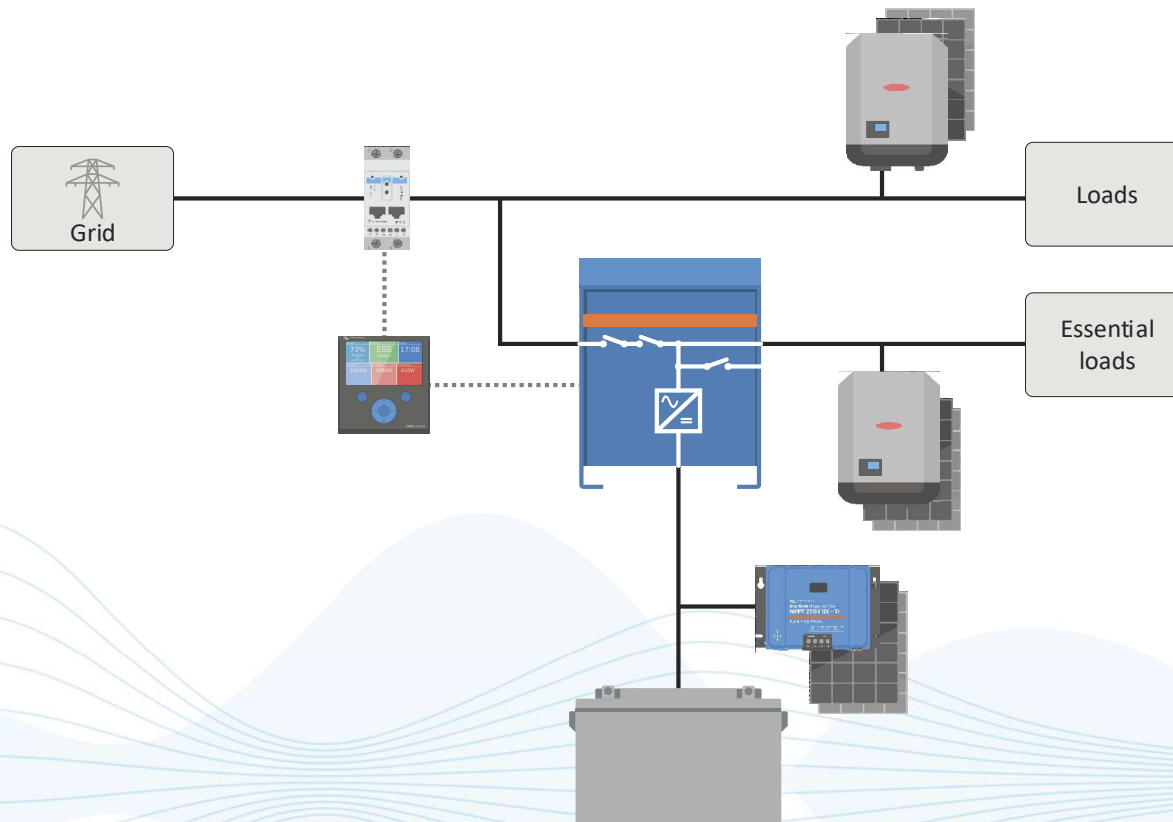
Or use only DC-coupled PV



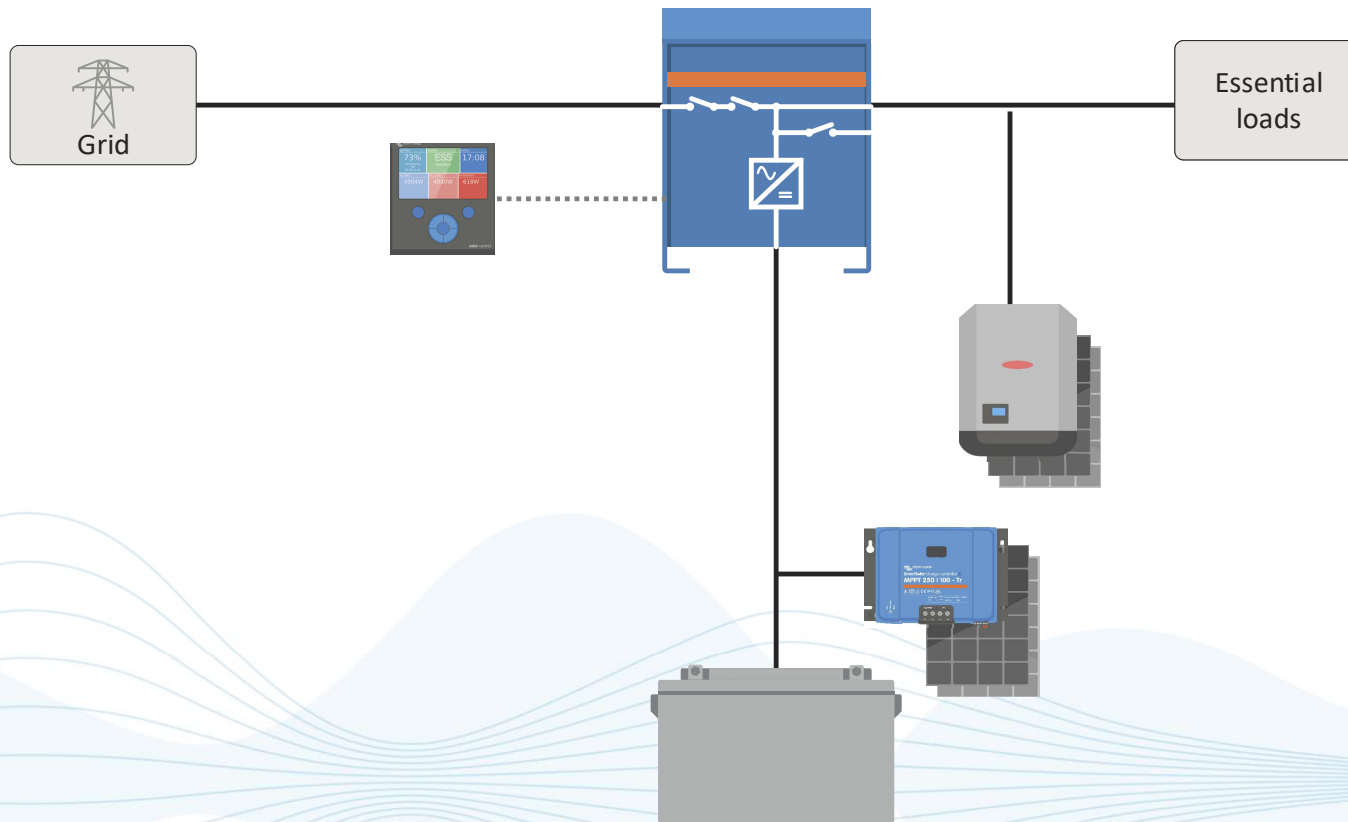
Or AC-coupled PV on output



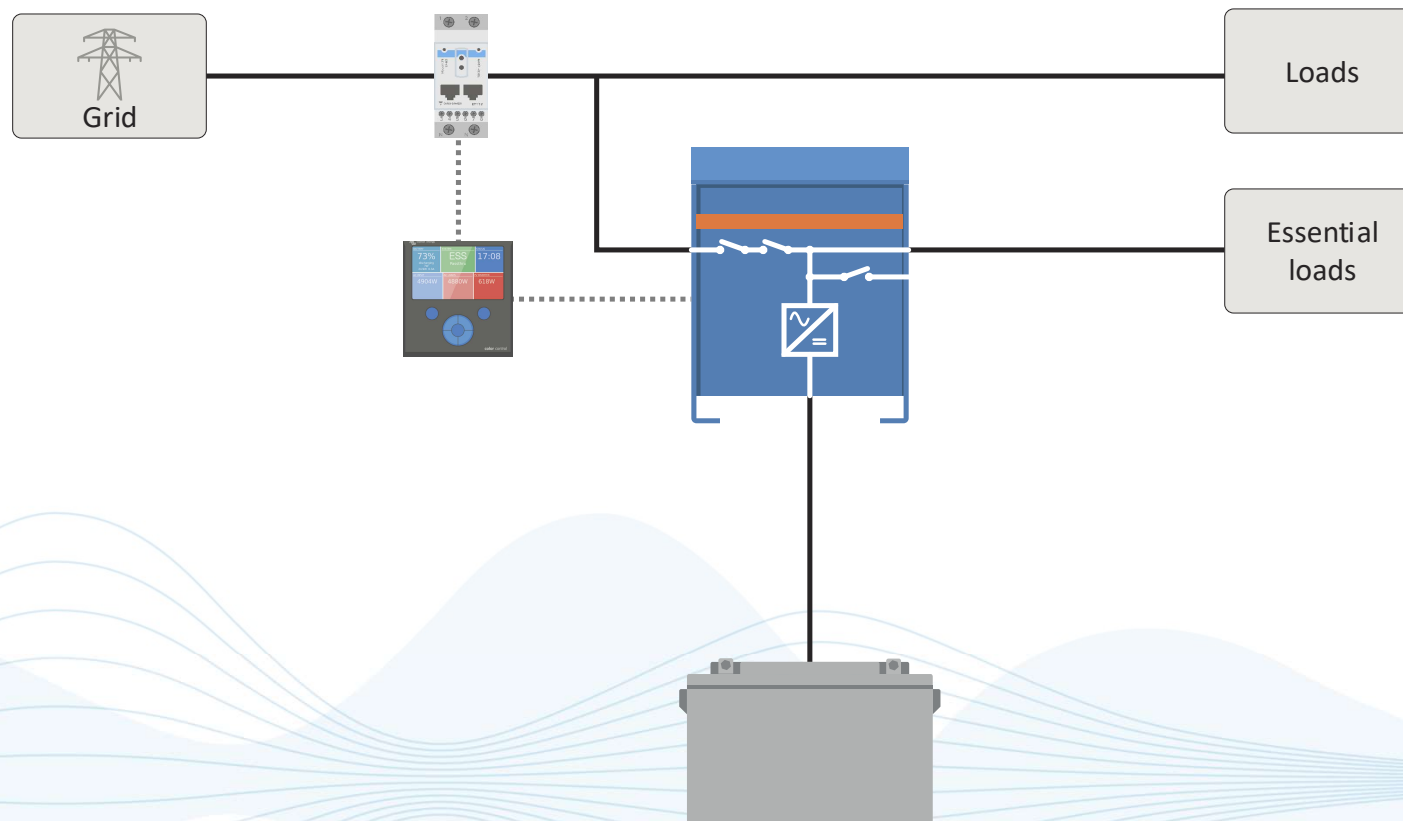
All, or any combination is possible



No meter - all loads are essential loads



Pure energy storage, no PV



Pure energy storage with external control

