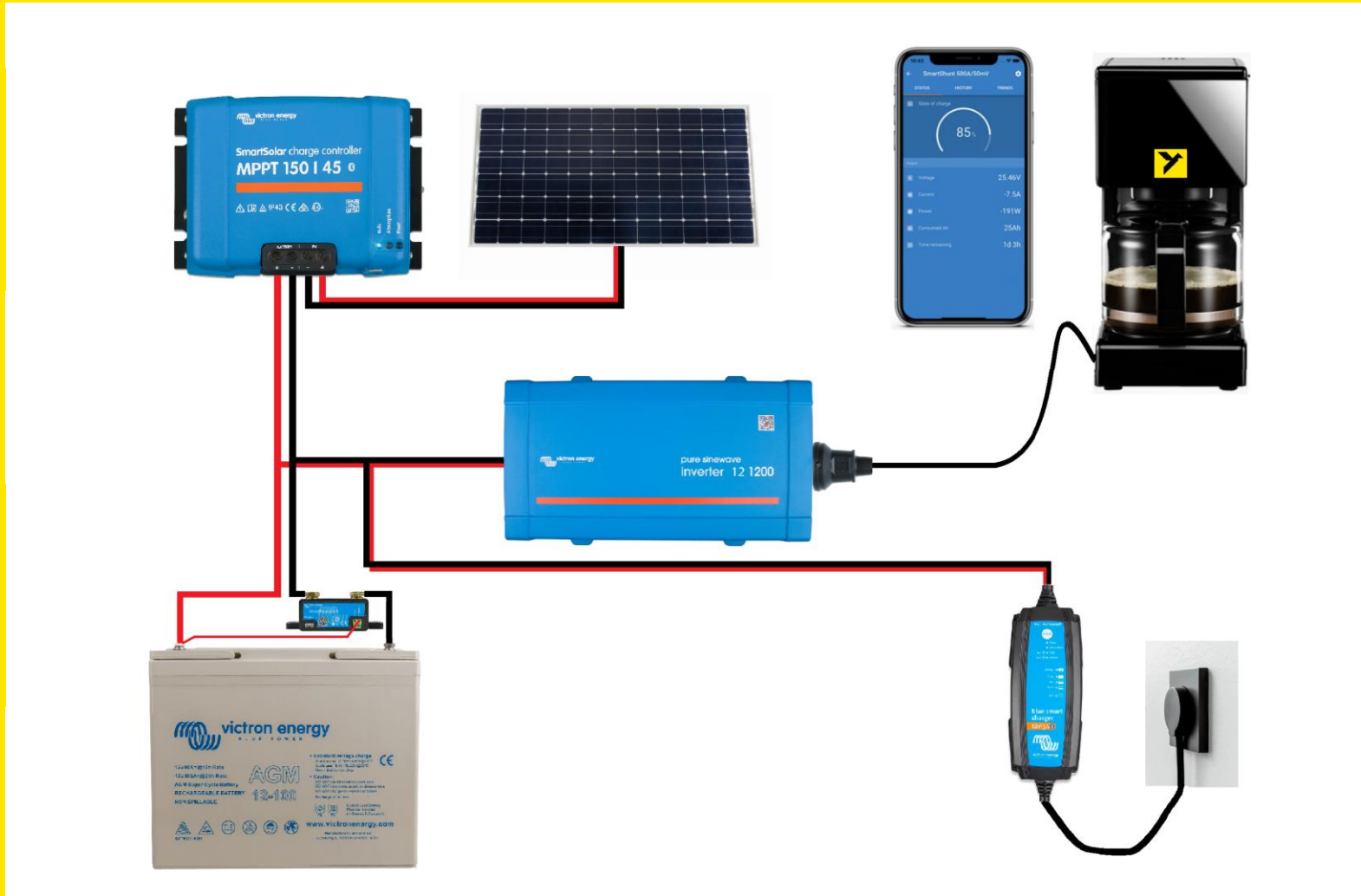


Victron Inverter

Enkel UPS/Avbruddsfri strømforsyning



Inverter med SCHUKO



- 12, 24, 48V
 - 250 ..(4).. 1600VA
- Eks. 1600VA:
 - 1450W kont.
 - 1600W / 1t, kaldstart
 - 2100W / 15s, maks
- VE.Direct
- Liten (mm)
 - 117 x 231 x 395

Små ladere

Blue Smart IP67

Blue Smart IP22

Blue Smart IP65

Smart IP43

- 6V: 1,1A
- 12V: 1,1 / 4 / 5 ... 25 / 30 A
- 24V: 5 ...16 A
- Adaptiv lade algoritme
- Beskyttelse (elektronisk) mot:
 - Reversert polaritet
 - Kortslettning
 - Overopphetning
- Kan brukes som strømforsyning



Solcelle ladekontroller

- MPPT (Maximum Power Point Tracking)
- Batteri: 12, 24, og 48V
- Ladestrøm: 10A og opp til 100A.
- Ladekontroller og antall/type solcellepaneler må tilpasses hverandre.



Stor lader og inverter

- Lader
 - 12 / 24 / 48 V
 - 20 ... 100 A
- Inverter
 - 12 / 24 / 48 V
 - 1,6k / 2k / 3k 5k VA



Kombinert inverter/ladere

Kombinert inverter/ladere

- Effekt: 500 til 20000 VA
- Egnet for marine-, kjøretøy-, off-grid- og ESS-systemer
- **PowerControl** forhindrer overbelastning av landstrøm / generator
- **PowerAssist** kompensere ved å hente ekstra fra batteri
- Egnet som UPS -
Avbruddsfri strømforsyning
 - Omkobling < 20 ms etter strømbrudd
 - Bilde, ca. 5 ms (uoffisiell test)



Multiplus



Multiplus



Multiplus-II



Multiplus-II GX



Quattro



Quattro-II



EasySolar-II GX



Forskjeller:

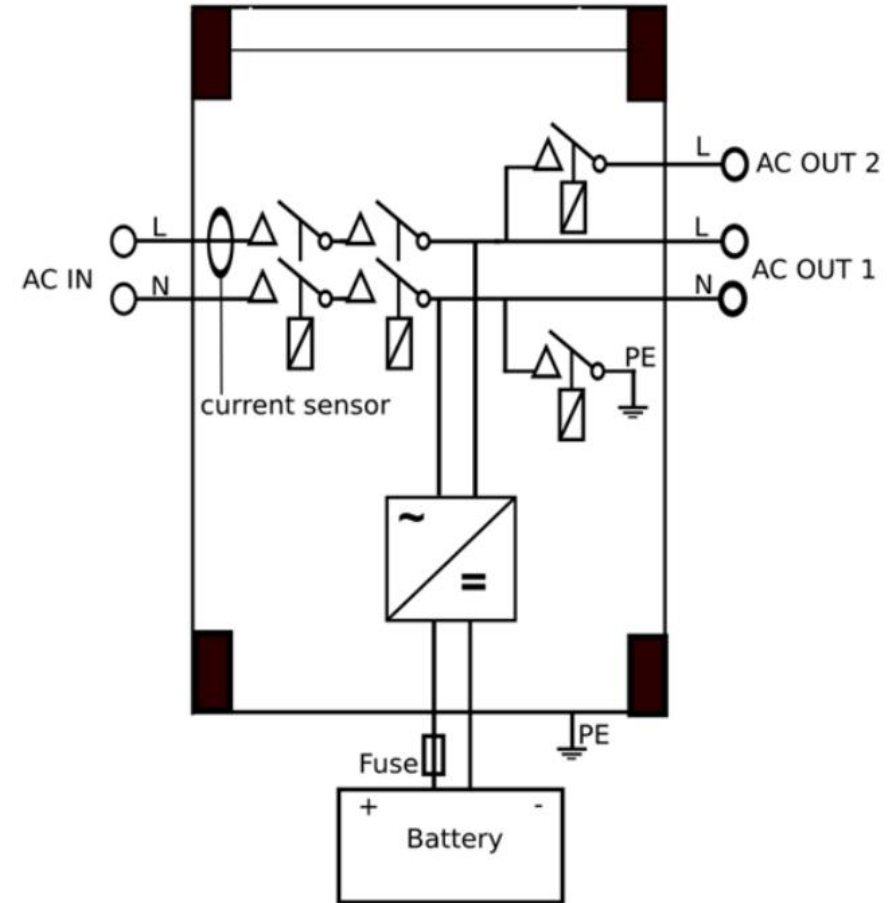
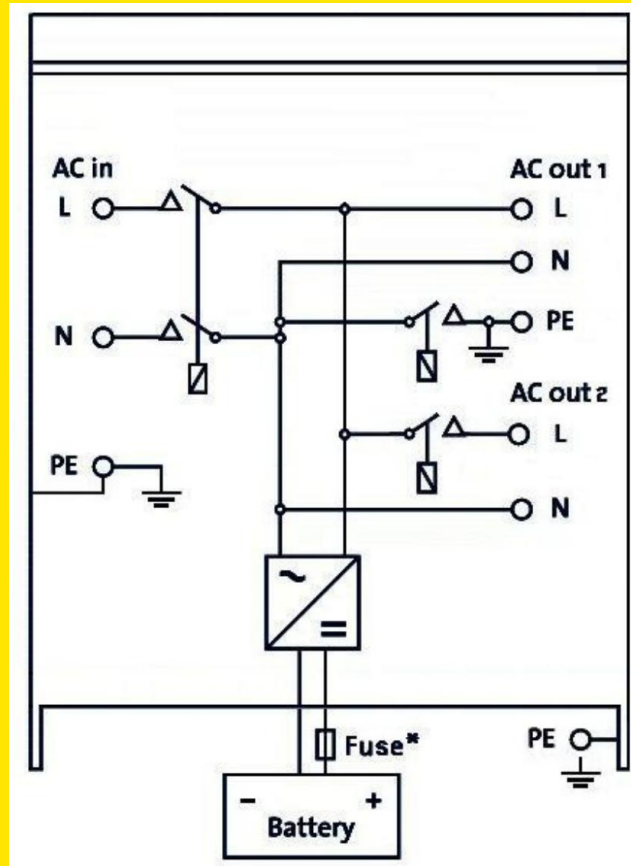
- Antall AC inn-/utganger
- Spenning og effekt
- Antall rele på nett-tilkobling

- Innebygd Cerbo GX
- Også MPPT innebygd i EasySolar

MultiPlus

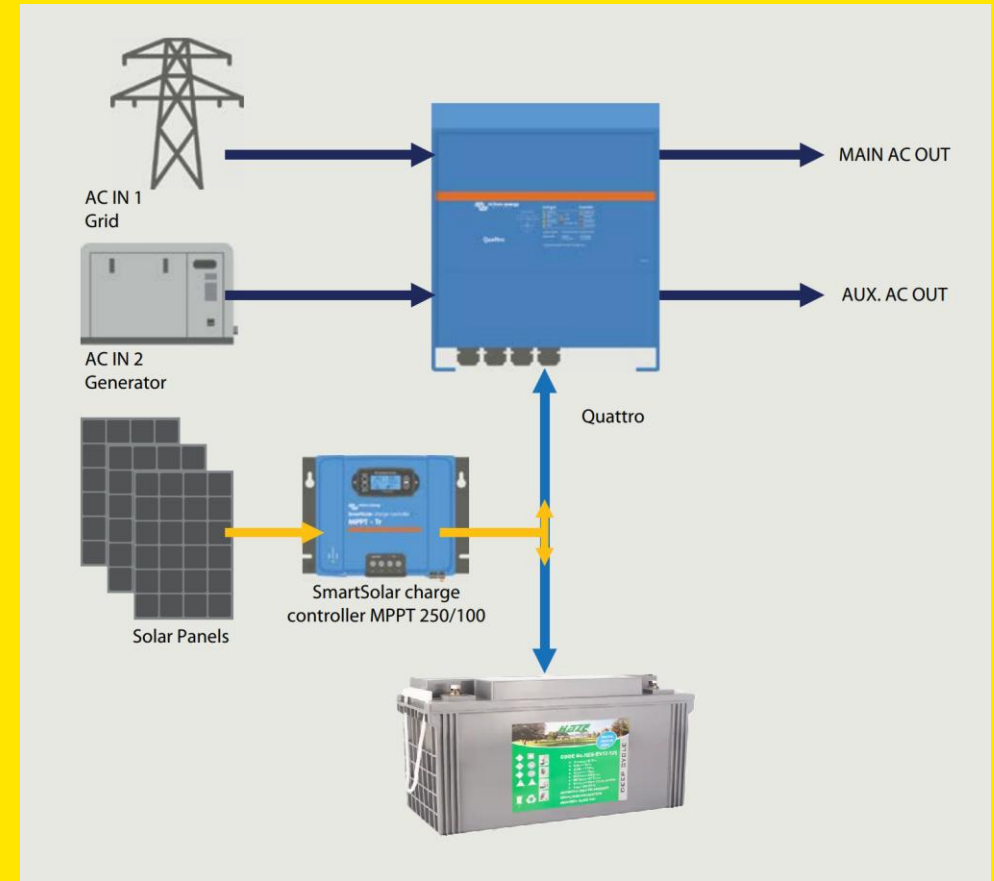
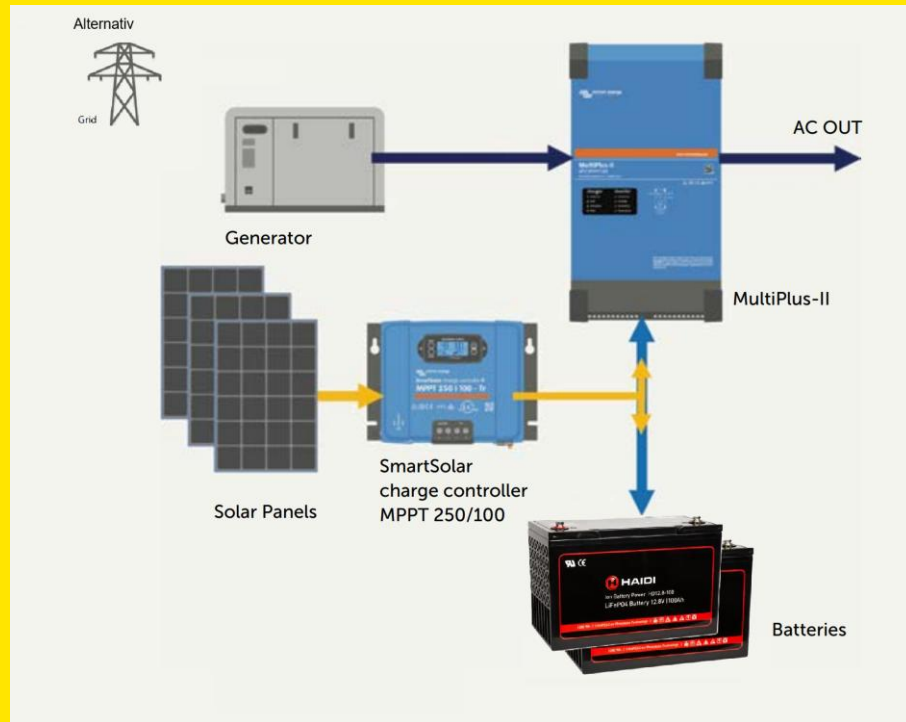
vs

MultiPlus-II

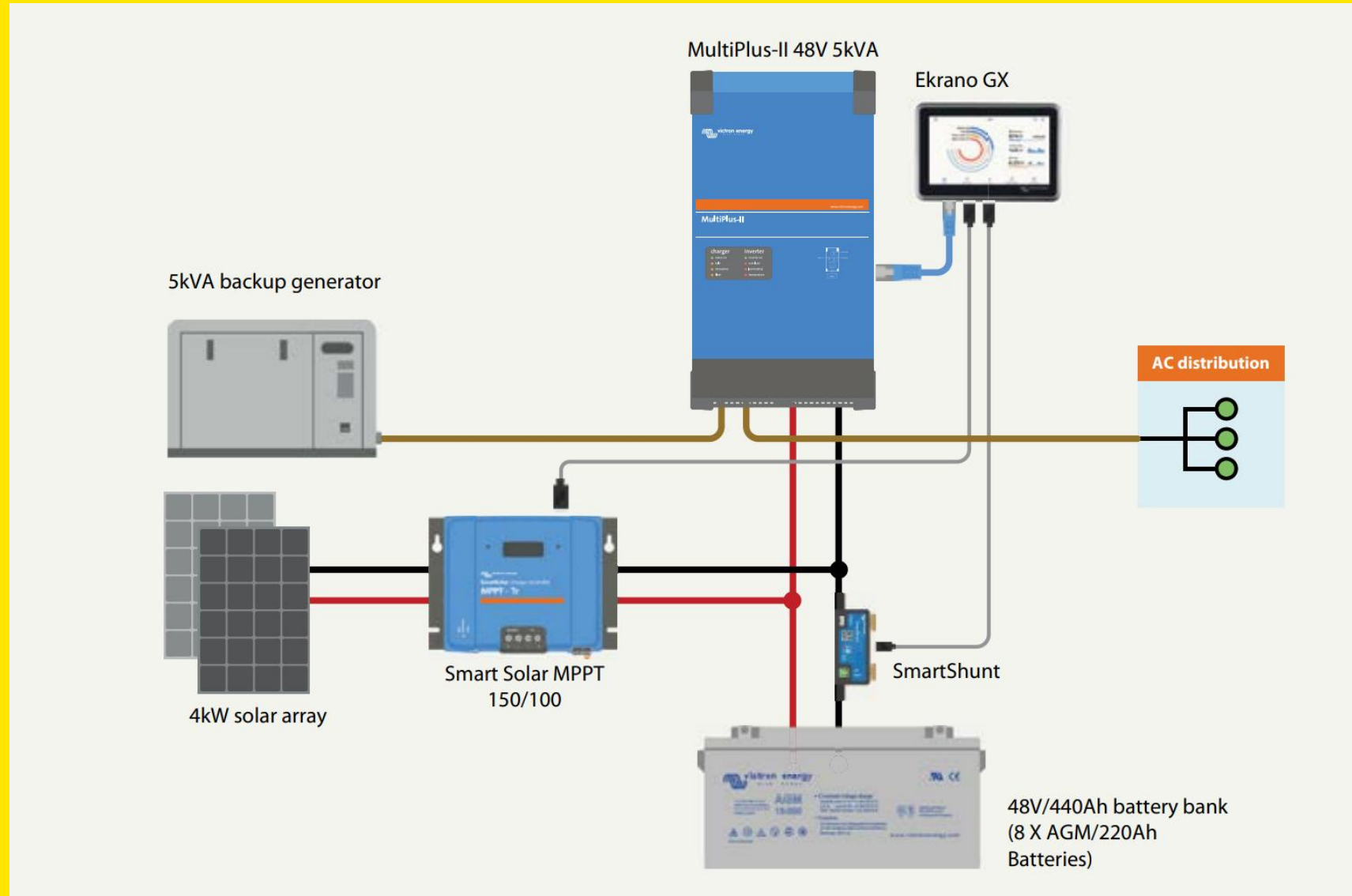


Gjelder: Quattro-II, MultiPlus-II,
MultiPlus-II GX og EasySolar-II GX

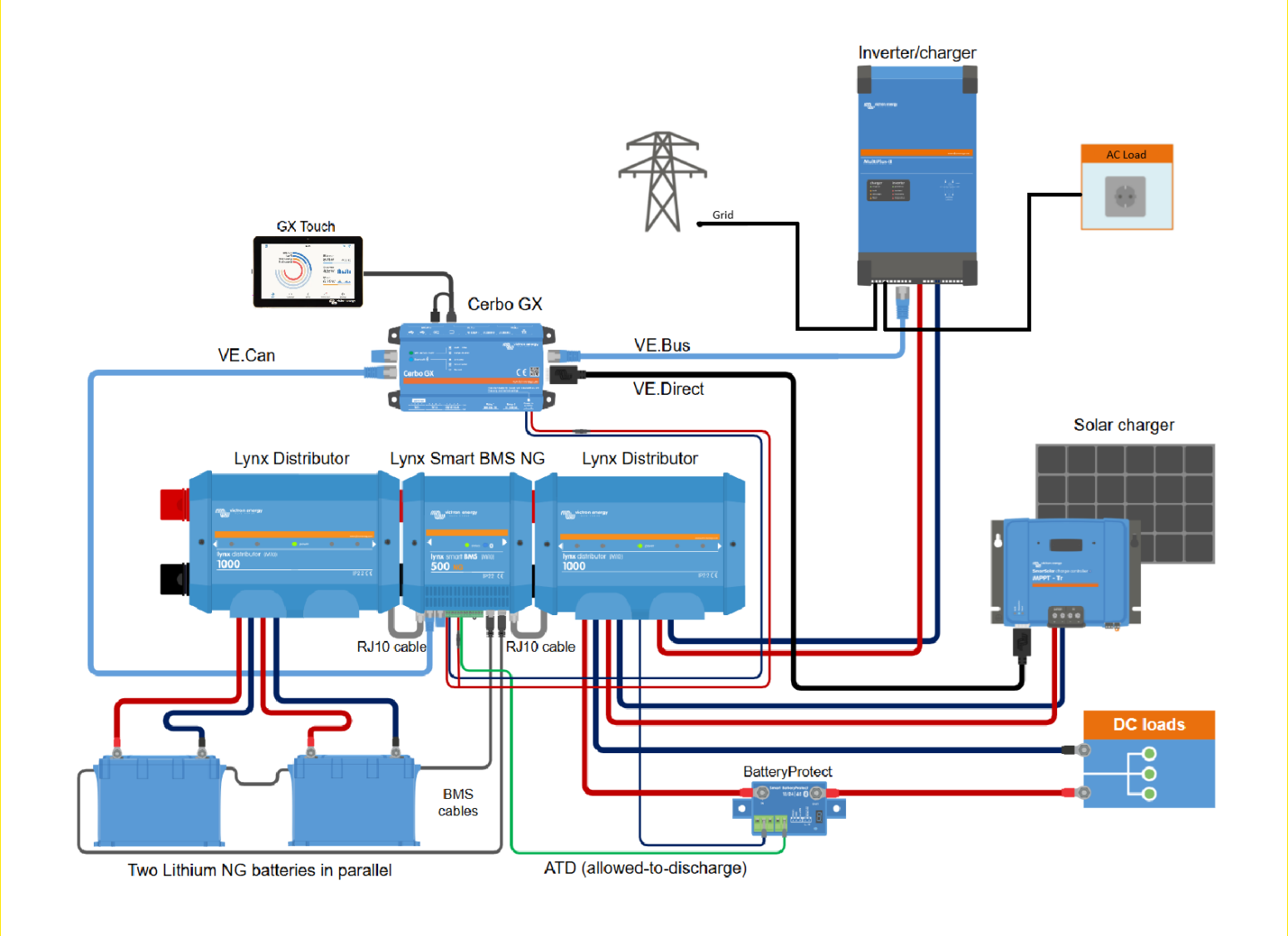
DC koblet PV system og aggregat for AC last



Off-grid AC last

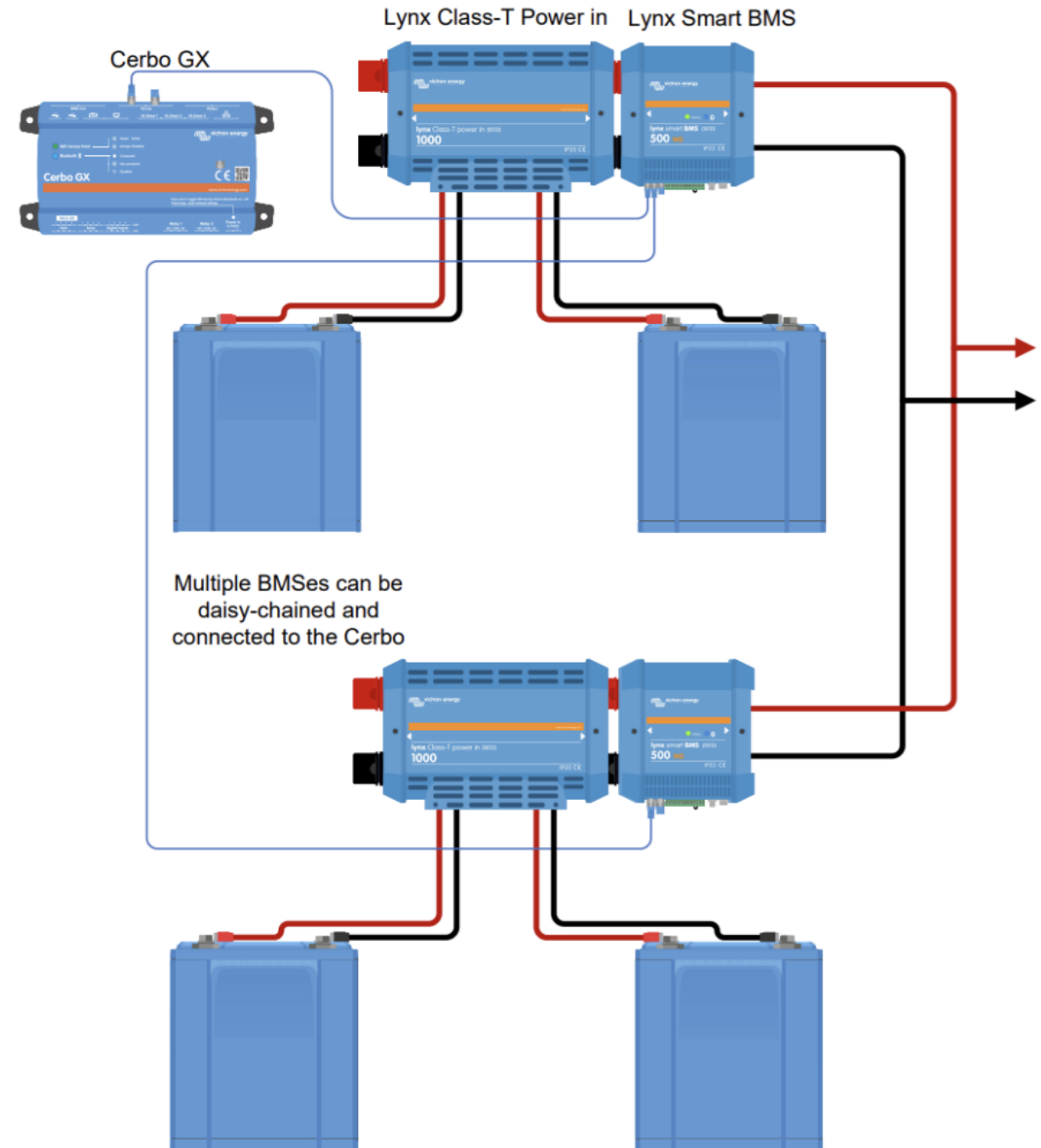


Victron NG system

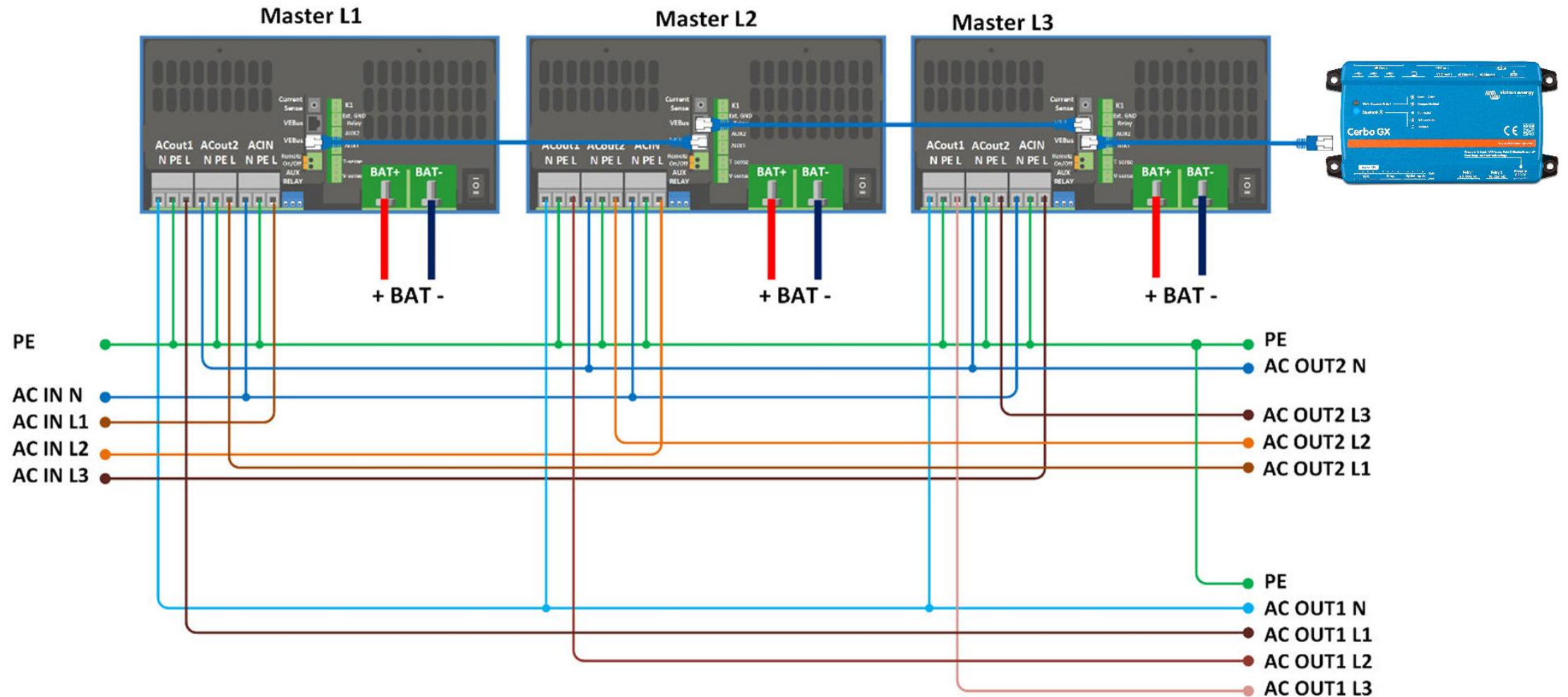


Redundans

- Eneste som trengs er en GX enhet
- Får full oversikt over totalen
- 2-5 batteribanker
- Opptil 1,9MWh

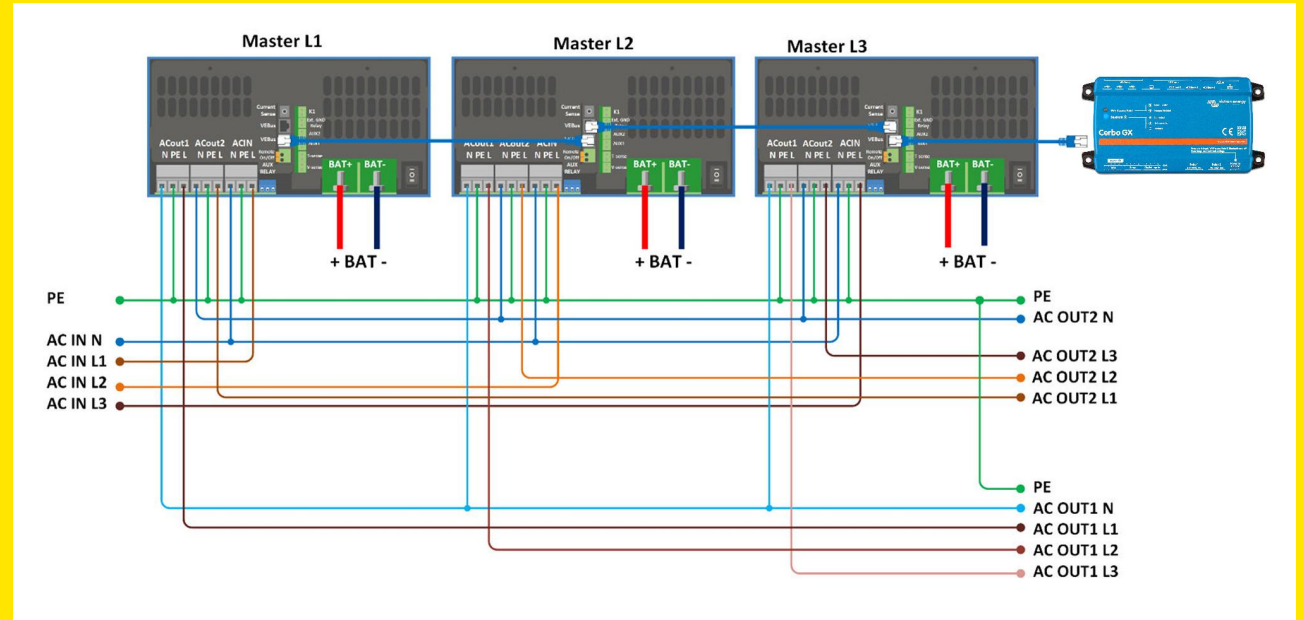


Parallellkobling



TN 3-fase

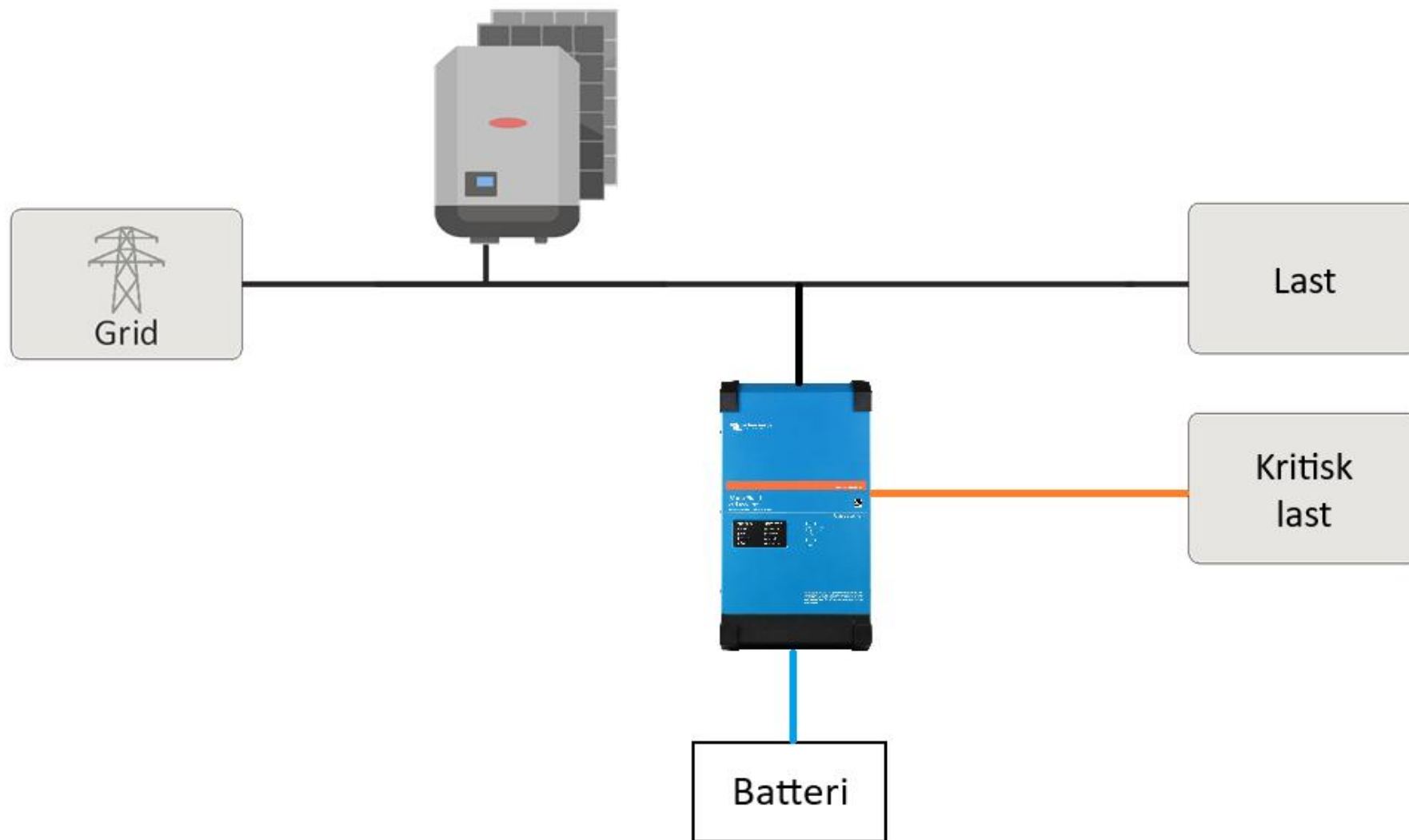
- Må settes opp i en stjernekonfigurasjon. Delta er ikke tillatt!
- Må ha en felles nøytralleder!
- 3-fase inverter/ladere kan drive en delta last
 - Ujevn belastning kan være et problem i gjennomgangsmodus (ON), men er ikke et problem når inverter/lader opererer i inverteringsmodus (Inverter Only)



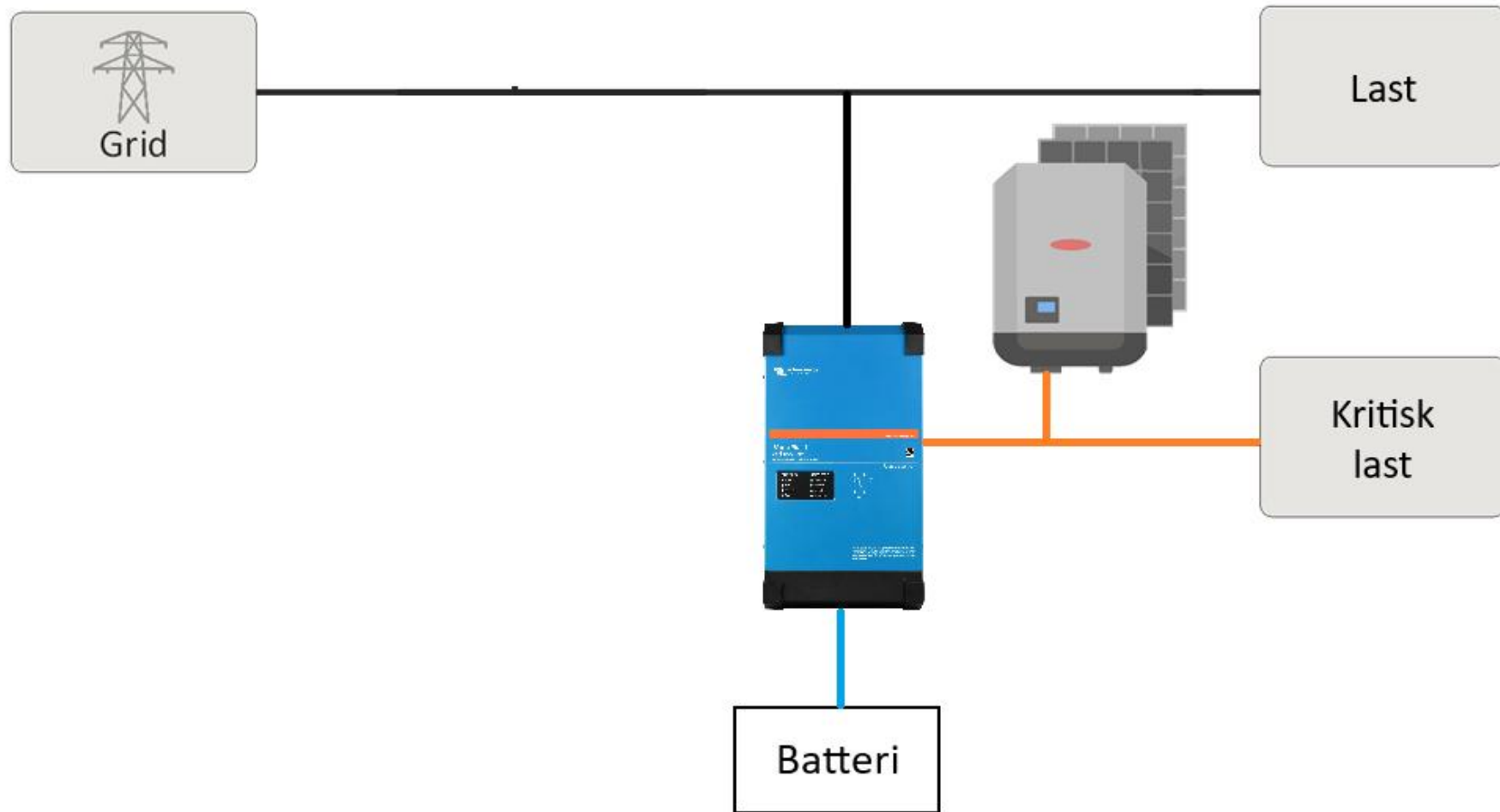
Typisk anlegg med PV inverter



Anbefalt løsning - 1



Anbefalt løsning - 2



System konfigurasjon og overvåkning

VictronConnect app

- På Windows PC, macOS X, Linux, iOS og Android
- Via Blåtann, USB, WiFi, LAN og Internett
- Grensesnitt:
 - MK3-USB (VE.Bus to USB)
 - VE.Direct Bluetooth Smart dongle
 - VE.Bus Smart dongle



VictronConnect app

VictronConnect

IP43 12 | 30 (1+1) 230V

Status Graph History

Bulk charge

Battery is charging with maximum current until absorption voltage is reached. At the end of bulk charge battery is 80% charged and ready for use.

Output

Voltage 13.80V

Current 30.0A

Relay

State Open

DEMO PRODUCT

VictronConnect

IP43 12 | 30 (1+1) 230V

Status Graph History

Bulk Abs Rec Float Storage R.Abs

Bulk charge

Battery is charging with maximum current until absorption voltage is reached. At the end of bulk charge battery is 80% charged and ready for use.

DEMO PRODUCT

VictronConnect

IP43 12 | 30 (1+1) 230V

Status Graph History

	Active cycle	Cycle 1	Cycle 2
97.4Ah			
48.7Ah			
Status	Completed	Completed	AC discon.
Elapsed	6h 33m	6h 4m	5h 38m
Charge	84.3Ah	78.1 Ah	72.5Ah
Maintain	13.1Ah	12.2Ah	0.0Ah
Type	high+recon	high+recon	li-ion
Vstart	12.03V	12.11V	12.11V
Vend	14.70V	14.70V	-
Error	-	-	-


Totals

Operation time	Charged Ah
13d 8h	3486.45Ah
Cycles started	Cycles completed
40	38

DEMO PRODUCT

VictronConnect

Product info



Product
Smart Charger IP43 12 | 30 (1+1) 230V
A344

Serial number
HQ204241796

Bluetooth
Bluetooth enabled

DEMO PRODUCT

VictronConnect app eksempel

The screenshot shows the main dashboard of the VictronConnect app. At the top, the device ID '48/5000/70-50' is displayed. The central part of the screen features a schematic diagram of the power system with a battery icon at the bottom. Below the diagram, the text 'Absorption charge' is shown, followed by a description: 'Battery is charging at constant voltage and with decreasing current until it is fully charged.' To the right, a 'Status' section indicates the system is in 'Absorption' state. Below this, 'AC INPUT L1' and 'AC OUTPUT L1' sections provide real-time data for voltage, current, power, and frequency. A 'Battery' section at the bottom right shows voltage (57.76V), SOC (85%), and temperature (25°C).

AC INPUT L1	AC OUTPUT L1	Battery
Voltage: 230V	Voltage: 230V	Voltage: 57.76V
Current: 0.14A	Current: 0.01A	SOC: 85%
Power: 3W	Power: 0W	Temperature: 25°C
Frequency: 50.0Hz	Frequency: 50.0Hz	

This screenshot shows the 'Settings' menu of the VictronConnect app. The main dashboard is visible in the background. The 'Settings' menu is open, displaying a notification: 'MK3-USB required. These settings are available only when connected via an MK3-USB (wired) connection. Note: MK3-USB interface isn't supported on iOS.' Below the notification is a list of settings categories: General, Grid, Inverter, Charger, AC input control, Advanced, and Help & Manuals.

This screenshot shows the 'General' settings page in the VictronConnect app. The main dashboard is visible in the background. The 'General' settings are listed on the right side of the screen, including: System frequency (50Hz), AC1 input current limit (50.0A), Current limit overruled by remote (toggle on), Dynamic current limit (toggle off), External current sensor connected (toggle off), Enable battery monitor (toggle off), Battery capacity (—), State of charge when bulk finished (85.0%), and Charge efficiency (1.00).

VEConfigure

- For spesielt oppsett:
 - Quattro
 - MultiPlus
- Eks.:
 - 3 fase
 - Leverer strøm til grid

VE Configure 3 (Quattro 12/3000/120-50/30)

File Port selection Target Defaults Options Special Help

Quattro

UMains --- V
IMains --- A

UOut --- V
IOut --- A

Udc --- V
Udc ripple --- V
Idc --- A

Freq. Out --- Hz
Freq. In --- Hz

Ignore AC aux. relay ---

Get settings

Send settings

General Grid Inverter **Charger** Virtual switch Assistants

System frequency
 50Hz 60Hz

Shore limit

AC1 input current limit 50.0 A Overruled by remote (priority)

AC2 input current limit 30.0 A Overruled by remote

Dynamic current limiter

External current sensor connected (see manual)

Enable battery monitor

State of charge when Bulk finished 85.0 %

Battery capacity 0 Ah

Charge efficiency 1.00

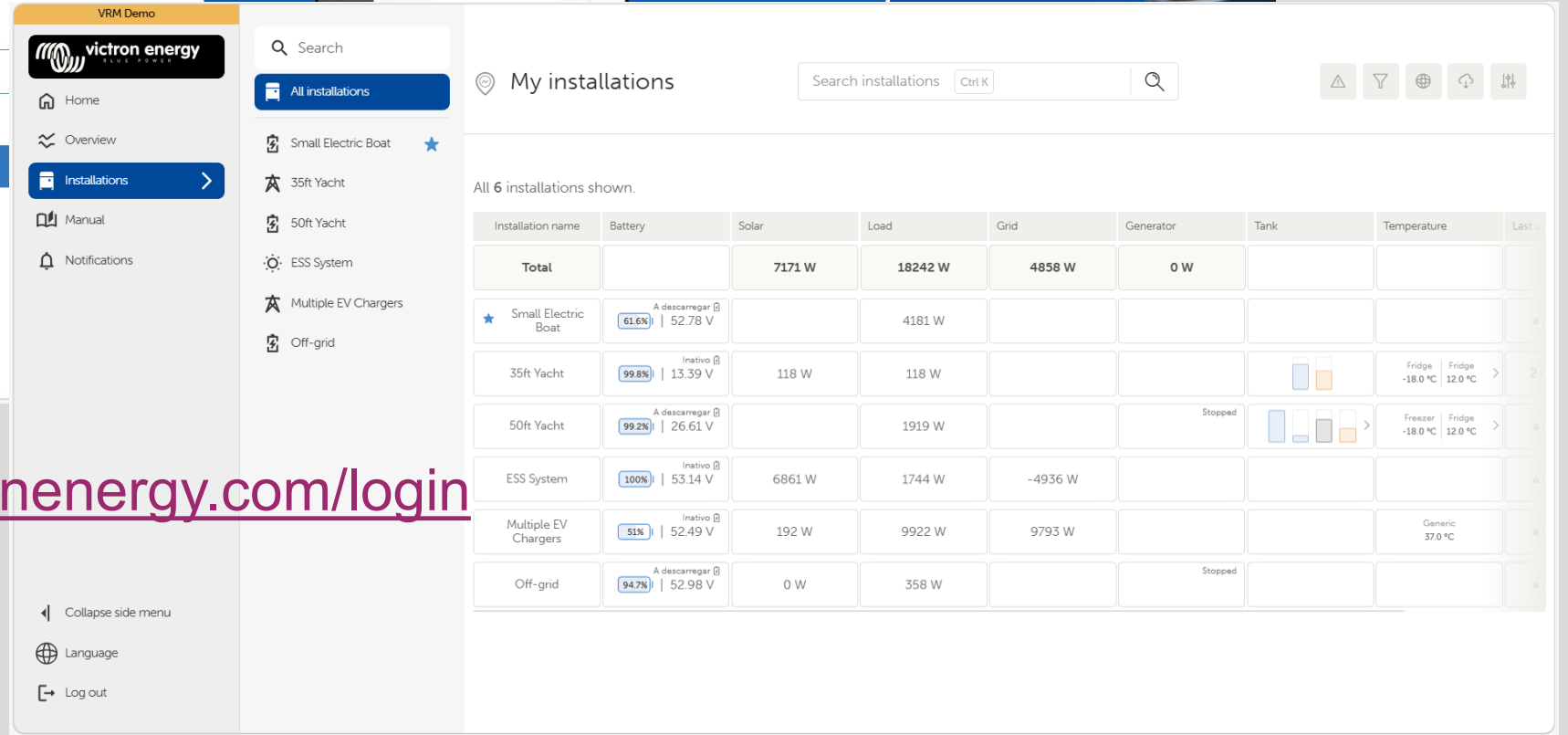
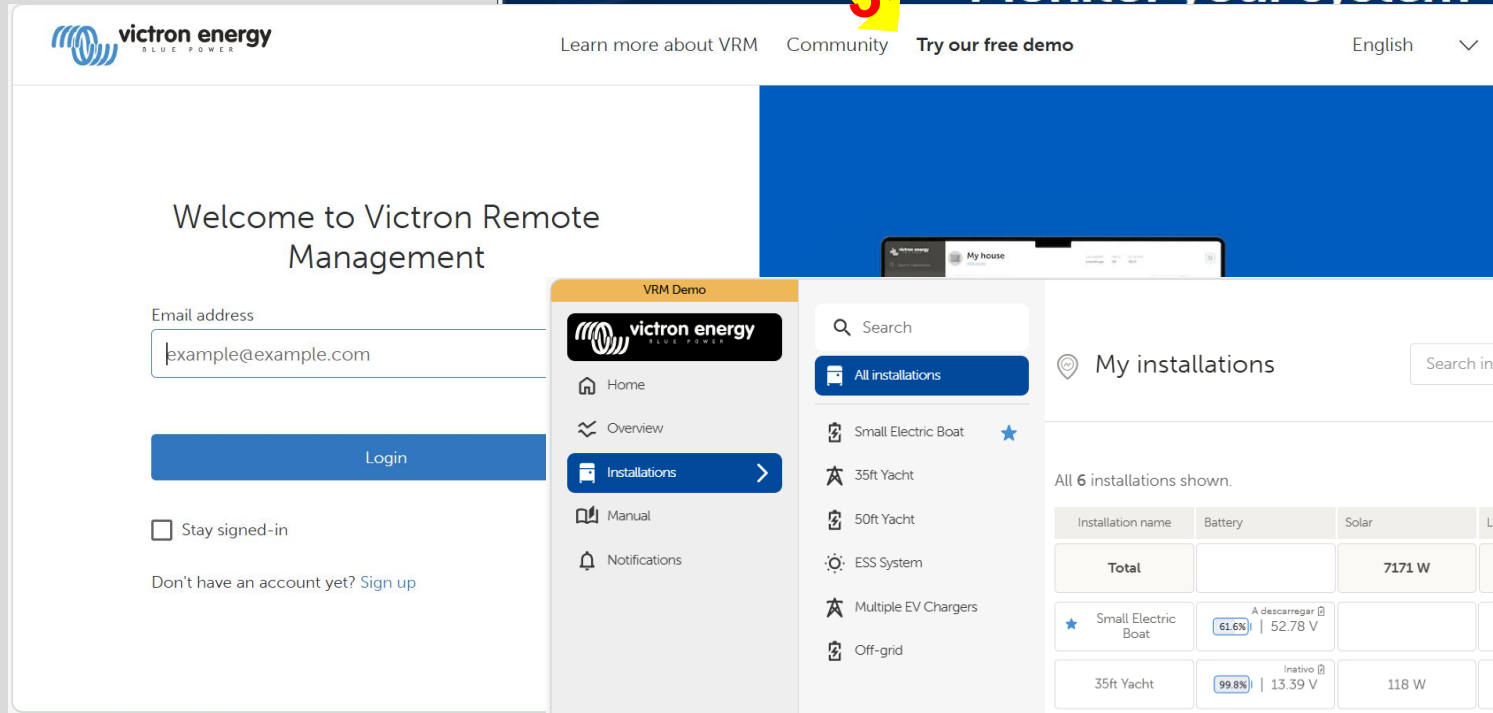
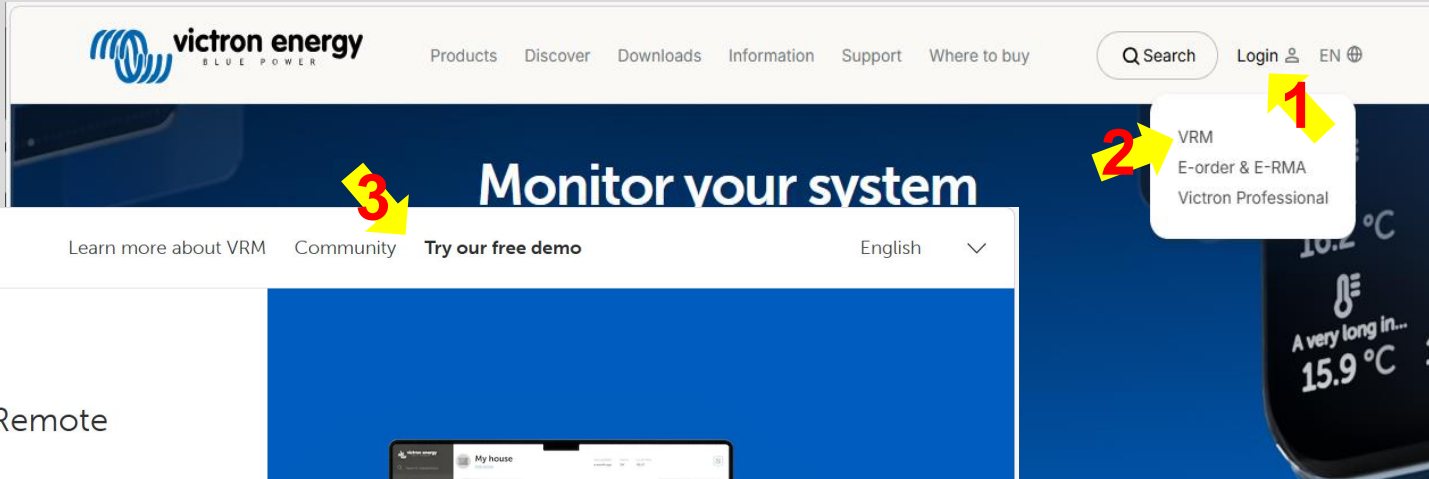
victron energy
AGM
12-180

Kommunikasjon, overvåkning og konfigurering

- GlobalLink 520/530
 - kommunikasjonscenter - «Lite»
 - Innebygd LTE 4G modem. 5 års bruk inkludert.
- Cerbo GX og Ekran GX
 - kommunikasjonscenter (Large)
 - LAN, WiFi, GX LTE 4G (krever SIM)
 - Lokal tilgang til system - Touch skjerm
- Tilgang til VRM portal
 - **Victron Remote Management**
 - Fjerntilgang over Internett:
Bla. System konfigurering, sanntids overvåking, fjernbetjening, alarmer og historikk



DEMO



- <https://vrm.victronenergy.com/login>



Tlf: 67 15 14 00
post@gylling.no
gylling.no