MultiPlus Inverter/Chargers 2 kVA and 3 kVA
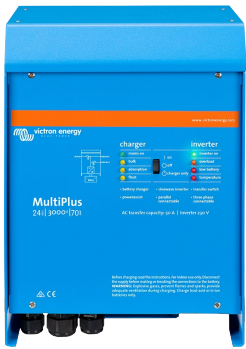
(120 V/60 Hz)   Lithium-Ion battery compatible

MultiPlus
24/3000/70

MultiPlus Compact
12/2000/80

Ekrano GX or Cerbo GX
Provides intuitive system control and monitoring and enables access to our free remote monitoring website: the VRM Online Portal.

VRM Portal and app
Our free remote monitoring website (VRM) will display all your system data in a comprehensive graphical format. System settings can be changed remotely via the portal. Alarms can be received by e-mail or push notification.

Multifunctional, with intelligent power management
The MultiPlus is a powerful true sine wave inverter, a sophisticated battery charger that features adaptive charge technology, and a high-speed AC transfer switch in a single compact enclosure. Next to these primary functions, the MultiPlus has several advanced features, as outlined below.

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 six Multis can operate in parallel to achieve higher power output. Six 24/3000/70 units, for example, provide 15 kW / 18 kVA output power with 420 Amps of charging capacity.

Three phase capability
In addition to parallel connection, three units can be configured for three-phase output. But that's not all: with three strings of six parallel units a 45 kW / 54 kVA three phase inverter and 1260 A charger can be built.

Split phase options
Two units can be stacked to provide 120-0-120 V, and additional units can be paralleled up to a total of 6 units per phase, to supply up to 30 kW / 36 kVA of split phase power.
Alternatively, a split phase AC source can be obtained by connecting our autotransformer (see data sheet on www.victronenergy.com) to a 'European' inverter programmed to supply 240 V / 60 Hz.

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 (nearly 20 A per 3 kVA MultiPlus at 120 VAC). With the Multi Control 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, thus preventing the 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 supplement the capacity of the alternative source. Where peak power is so often required only for a limited period, the MultiPlus will make sure that insufficient shore or generator power is immediately compensated for by power from the battery. When the load reduces, the spare power is used to recharge the battery.

Four stage adaptive charger and dual bank battery charging
The main output provides a powerful charge to the battery system by means of advanced 'adaptive charge' software. The software fine-tunes the three-stage automatic process to suit the condition of the battery, and adds a fourth stage for long periods of float charging. The adaptive charge process is described in more detail on the Charger datasheet and on our website, under Technical Information. In addition to this, the MultiPlus will charge a second battery using an independent trickle charge output intended for a main engine or generator starter battery.

System configuring has never been easier
After installation, the MultiPlus is ready to go.
If settings have to be changed, this can be done in a matter of minutes with a DIP switch setting procedure. Even parallel and 3-phase operation can be programmed with DIP switches: no computer needed!
Alternatively, VE.Net can be used instead of the DIP switches.
And sophisticated software (VE.Bus Quick Configure and VE.Bus System Configurator) is available to configure several new, advanced, features.
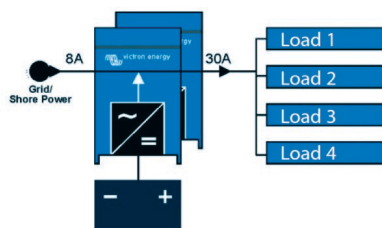
PowerAssist with 2x MultiPlus in parallel
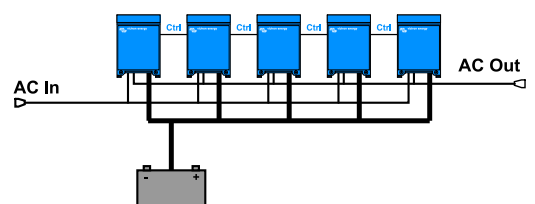
Five parallel units: output power 12,5 kW

MultiPlus	12 Volt	12/2000/80	12/3000/120
	24 Volt	24/2000/50	24/3000/70
PowerControl		Yes	
PowerAssist		Yes	
Transfer switch (A)		50	
Parallel and 3-phase operation		Yes	

<table>
<tr><td colspan="4" align="center">INVERTER</td></tr>
</table>

Input voltage range (VDC)		9,5 – 17 V 19 – 33 V	
Output		Output voltage: 120 VAC ± 2 % Frequency: 60 Hz ± 0,1 % [1]	
Cont. output power at 25 ºC / 77 °F (VA) [3]		2000	3000
Cont. output power at 25 ºC / 77 °F (W)		1600	2400
Cont. output power at 40 ºC / 104 °F (W)		1450	2200
Cont. output power at 65 ºC / 150 °F (W)		1100	1700
Peak power (W)		4000	6000
Maximum efficiency (%)		92 / 94	93 / 94
Zero load power (W)		9 / 11	20 / 20
Zero load power in AES mode (W)		7 / 8	15 / 15
Zero load power in Search mode (W)		3 / 4	8 / 10

<table>
<tr><td colspan="4" align="center">CHARGER</td></tr>
</table>

AC Input		Input voltage range: 95-140 VAC Input frequency: 45 – 65 Hz Power factor: 1	
Charge voltage 'absorption' (VDC)		14,4 / 28,8	
Charge voltage 'float' (VDC)		13,8 / 27,6	
Storage mode (VDC)		13,2 / 26,4	
Charge current house battery (A) [4]		80 / 50	120 / 70
Charge current starter battery (A)		4	
Battery temperature sensor		yes	

<table>
<tr><td colspan="4" align="center">GENERAL</td></tr>
</table>

Auxiliary output [5]		n. a.	Yes (32 A)
Programmable relay [6]		Yes (1x)	Yes (3x)
Protection [2]		a - g	
VE.Bus communication port		For parallel and three phase operation, remote monitoring and system integration	
General purpose com. port [7]		n. a.	Yes (2x)
Remote on-off		Yes	
Common Characteristics		Operating temp. range: -40 - +65 °C / -40 to 150 °F (fan assisted cooling) Humidity (non-condensing): max 95%	

<table>
<tr><td colspan="4" align="center">ENCLOSURE</td></tr>
</table>

Common Characteristics		Material & Colour: aluminium (blue RAL 5012) Protection category: IP 21	
Battery-connection		M8 bolts	M8 bolts (2 plus and 2 minus connections)
120 V AC-connection		Screw-terminal 6 AWG (13 mm²)	Screw-terminal 6 AWG (13mm²)
Weight		13 kg 25 lbs.	19kg 40 lbs.
Dimensions (hxwxd in mm and inches)		520x255x125 mm 20.5x10.0x5.0 inch	362x258x218 mm 14.3x10.2x8.6 inch

<table>
<tr><td colspan="4" align="center">STANDARDS</td></tr>
</table>

Safety		UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29	UL 1741, UL 458, EN-IEC 60335-1, EN-IEC 60335-2-29
Emission and Immunity		EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3	EN-IEC 61000-3-2/3-3/, EN-IEC 61000-6-1/6-2/6-3

1) Can be adjusted to 50 HZ;
2) Protection key:
  a) output short circuit
  b) overload
  c) battery voltage too high
  d) battery voltage too low
  e) temperature too high
  f) 120 VAC on inverter output
  g) input voltage ripple too high

3) Non-linear load, crest factor 3:1
4) Up to 75 ˚F ambient
5) Switches off when no external AC source available
6) Programmable relay that can a.o. be set for general alarm,
  DC under voltage or genset start/stop function
  AC rating: 120 V/4 A
  DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC
7) A.o. to communicate with a Lithium Ion battery BMS

Digital Multi Control Panel
A convenient and low-cost solution for monitoring and control. With an on/off charger-only switch, full LED readout and a rotary knob to set PowerControl and PowerAssist levels.

VE.Bus Smart Dongle
For monitoring and control via Bluetooth together with the VictronConnect app. It also measures battery voltage and temperature.

Interface MK3-USB
Needed to configure the MultiPlus, Can be used with the VictronConnect app or VE.Configure software. The interface connects to the MultiPlus via an RJ45 UTP cable and plugs into a USB port.

VictronConnect app
Use to monitor or configure the MultiPlus using your phone tablet or PC.

Battery Monitor
To monitor battery state of charge via Bluetooth or the VRM portal.
The BMV 712 Smart has display, while the SmartShunt does not have a display. Both communicate via Bluetooth and have a VE.Direct communication port.

victron energy
BLUE POWER