MultiPlus-II Inverter/Charger

MultiPlus-II 24/3000/70-32, 48/3000/35-32 & 48/5000/70-50

► Victron online product page

https://ve3.nl/6H



A MultiPlus, plus ESS (Energy Storage System) functionality

The MultiPlus-II is a multifunctional inverter/charger with all the features of the MultiPlus, plus an external current sensor option which extends the PowerControl and PowerAssist function to 50A resp. 100A.
The MultiPlus-II is ideally suited for professional marine, yachting, vehicle and land based off-grid applications.
It also has built-in anti-islanding functionality, and an increasingly long list of country approvals for ESS application.
Several system configurations are possible. For more detailed information see the ESS Design and configuration manual.

PowerControl and PowerAssist - Boosting the capacity of the grid or a generator

A maximum grid or generator current can be set. The MultiPlus-II will then take account of other AC loads and use whatever is extra for battery charging, thus preventing the generator or grid from being overloaded (PowerControl function).
PowerAssist takes the principle of PowerControl to a further dimension. Where peak power is so often required only for a limited period, the MultiPlus-II will compensate insufficient generator, shore or grid power with power from the battery. When the load reduces, the spare power is used to recharge the battery.

Solar energy: AC power available even during a grid failure

The MultiPlus-II can be used in off grid as well as grid connected PV and other alternative energy systems. It is compatible with both solar charger controllers and grid-tie inverters.

Two AC Outputs

The main output has no break functionality. The MultiPlus-II 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-II. Loads that should not discharge the battery, like a water heater for example, can be connected to this output.

Virtually unlimited power thanks to parallel and three phase operation

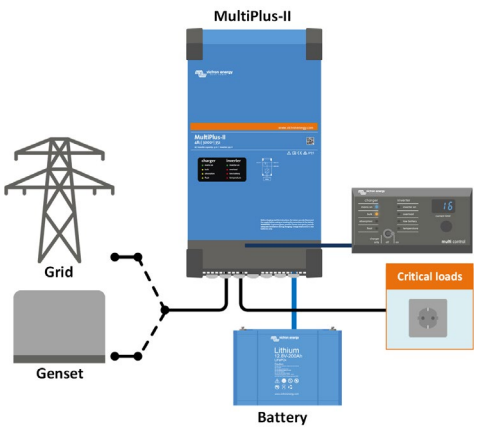
Up to 6 Multis can operate in parallel to achieve higher power output. Six 48/5000/70 units, for example, will provide 25 kW / 30 kVA output power with 420 Amps charging capacity.
In addition to parallel connection, three units of the same model can be configured for three phase output. But that's not all: up to 6 sets of three units can be parallel connected for a 75 kW / 90 kVA inverter and more than 1200 Amps charging capacity.

On-site system configuring, monitoring and control

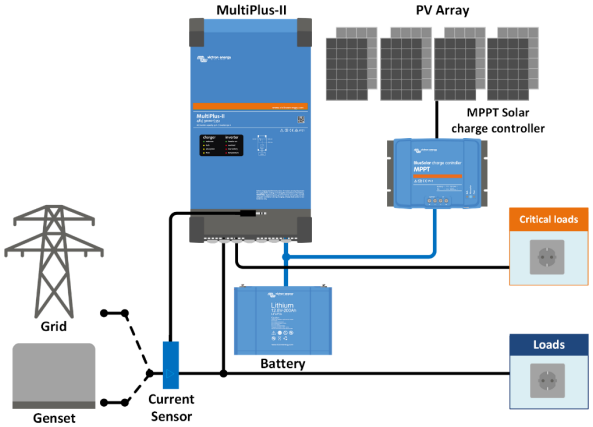
Settings can be changed in a matter of minutes with VEConfigure software (computer or laptop and MK3-USB interface needed).
Several monitoring and control options are available: Color Control GX, Venus GX, Octo GX, CANvu GX, laptop, computer, Bluetooth (with the optional VE.Bus Smart dongle), Battery Monitor, Digital Multi Control Panel.

Remote configuring and monitoring

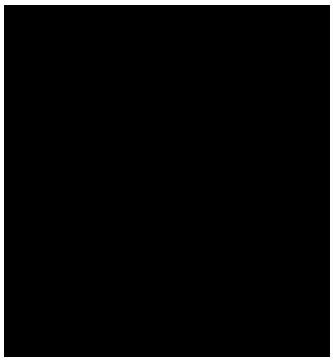
Install a Color Control GX or other GX product to connect to the internet.
Operational data can be stored and displayed on our VRM (Victron Remote Management) website, free of charge.
When connected to the internet, systems can be accessed remotely, and settings can be changed.



Standard marine, mobile or off-grid application
Loads that should shut down when AC input power is not available can be connected to a second output (not shown). These loads will be taken into account by the PowerControl and PowerAssist function in order to limit AC input current to a safe value when AC power is available.



Grid parallel topology with MPPT solar charge controller
The MultiPlus-II will use data from the external AC current sensor (must be ordered separately) or power meter to optimise self-consumption and, if required, to prevent grid feed. In case of a power outage, the MultiPlus-II will continue to supply the critical loads



Color Control Panel (CCGX)
Provides intuitive system control and monitoring
Besides system monitoring and control the CCGX enables access to our free remote monitoring website: the VRM Online Portal



VRM Portal
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.



VRM app
Monitor and manage your Victron Energy system from your smart phone and tablet. Available for both iOS and Android.

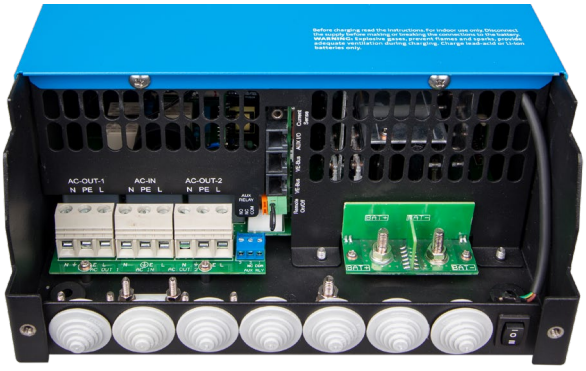


VE.Bus Smart Dongle
Measures battery voltage and temperature and allows monitoring and control with a smart phone or other Bluetooth enabled device.

MultiPlus-II	24/3000/70-32	48/3000/35-32	48/5000/70-50
PowerControl & PowerAssist	Yes		
Transfer switch	32A		50A
Maximum AC input current	32A		50A
INVERTER			
DC Input voltage range	19 – 33V	38 – 66V	
Output	Output voltage: 230 VAC ± 2% Frequency: 50 Hz ± 0,1% (1)		
Cont. output power at 25°C (3)	3000VA		5000VA
Cont. output power at 25°C	2400W		4000W
Cont. output power at 40°C	2200W		3700W
Cont. output power at 65°C	1700W		3000W
Maximum apparent feed-in power	2500VA		4000VA
Peak power	5500W		9000W
Maximum efficiency	94%	95%	96%
Zero load power	13W	11W	18W
Zero load power in AES mode	9W	7W	12W
Zero load power in Search mode	3W	2W	2W
CHARGER			
AC Input	Input voltage range: 187-265 VAC Input frequency: 45 – 65 Hz		
Charge voltage 'absorption'	28,8V	57,6V	
Charge voltage 'float'	27,6V	55,2V	
Storage mode	26,4V	52,8V	
Maximum battery charge current (4)	70A	35A	70A
Battery temperature sensor	Yes		
GENERAL			
Auxiliary output	Yes (32A)		
External AC current sensor (optional)	50A		100A
Programmable relay (5)	Yes		
Protection (2)	a – g		
VE.Bus communication port	For parallel and three phase operation, remote monitoring and system integration		
General purpose com. port	Yes, 2x		
Remote on-off	Yes		
Operating temperature range	-40 to +65°C (fan assisted cooling)		
Humidity (non-condensing)	max 95%		
ENCLOSURE			
Material & Colour	Steel, blue RAL 5012		
Protection category	IP22		
Battery-connection	M8 bolts		
230 V AC-connection	Screw terminals 13 mm² (6 AWG)		
Weight	18 kg		29 kg
Dimensions (hxwxd) mm	506 x 275 x 147		565 x 323 x 148
STANDARDS			
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1, EN-IEC 62109-2		
Emission, Immunity	EN 55014-1, EN 55014-2 EN-IEC 61000-3-2, EN-IEC 61000-3-3 IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3		
Uninterruptible power supply	Please consult the certificates on our website.		
Anti-islanding	Please consult the certificates on our website.		

1) Can be adjusted to 60 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) 230 VAC on inverter output
g) input voltage ripple too high

3) Non-linear load, crest factor 3:1
4) At 25°C ambient
5) Programmable relay which can be set for general alarm, DC under voltage or genset start/stop function. AC rating: 230V / 4A, DC rating: 4A up to 35VDC and 1A up to 60VDC



Connection Area



Current sensor 100A:50mA
To implement PowerControl and PowerAssist and to optimize self-consumption with external current sensing.
Maximum current: 50A resp. 100A.
Length of connection cable: 1 m.



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

Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
General phone: +31 (0)36 535 97 00 | E-mail: sales@victronenergy.com
www.victronenergy.com