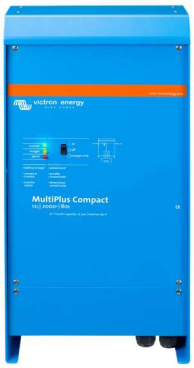
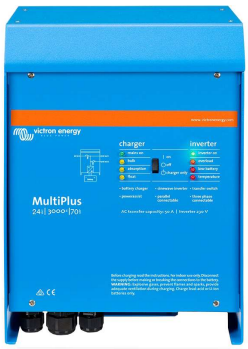
MultiPlus Inverter/Charger

800 VA – 5 kVA Lithium Ion battery compatible

www.victronenergy.com



MultiPlus Compact 12/2000/80



MultiPlus 24/3000/70

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
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.

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

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 Multis 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 (nearly 10 A per 5 kVA Multi at 230 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.

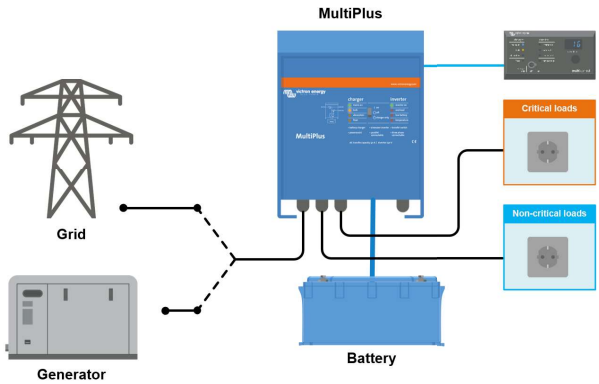
Solar energy: AC power available even during a grid failure
The MultiPlus can be used in off grid as well as grid connected PV and other alternative energy systems.
Loss of mains detection software is available.

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

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

Remote Monitoring and control
Color Control GX or other GX devices.
Data can be stored and displayed on our VRM (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 and settings can be changed remotely.



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 considered by the PowerControl and PowerAssist function in order to limit AC input current to a safe value when AC power is available.

MultiPlus 12 Volt 24 Volt 48 Volt	C 12/800/35 C 24/ 800/16	C 12/1200/50 C 24/1200/25	C 12/1600/70 C 24/1600/40	C 12/2000/80 C 24/2000/50	12/3000/120 24/3000/70 48/3000/35	24/5000/120 48/5000/70
Nominal Battery voltage	12 V battery 24 V battery	12 V battery 24 V battery	12 V battery 24 V battery	12 V battery 24 V battery	12 V battery 24 V battery 48 V battery	24 V battery 48 V battery
PowerControl	Yes	Yes	Yes	Yes	Yes	Yes
PowerAssist	Yes	Yes	Yes	Yes	Yes	Yes
AC input	Input voltage range: 187-250 V Input frequency: 50/60 Hz Cos Φ >0.8					
Transfer switch (A)	16	16	16	30	16 or 50	100
INVERTER						
Input voltage range (VDC)	9,5 – 17 V 19 – 33 V 38 – 66 V					
Input current (A DC)	n. a.	n. a.	n. a.	n. a.	250 / 125 / 65	238 / 118
Output	Output voltage: 230 VAC ± 2 % Frequency: 50 Hz ± 0,1 % [1]					
Cont. output power at 25 °C (VA) [3]	800	1200	1600	2000	3000	5000
Cont. output power at 25 °C (W)	700	1000	1300	1600	2400	4000
Cont. output power at 40 °C (W)	650	900	1200	1400	2200	3700
Cont. output power at 65 °C (W)	400	600	800	1000	1700	3000
Peak power (W)	1600	2400	3000	4000	6000	10.000
Maximum continuous Output current (A~)	n. a.	n. a.	n. a.	n. a.	11	19
Power factor range	n. a.	n. a.	n. a.	n. a.	±0.8	±0.8
Maximum output fault current	n. a.	n. a.	n. a.	n. a.	32A peak 1 sec.	53A peak 1sec
Maximum efficiency (%)	92 / 94	93 / 94	93 / 94	93 / 94	93 / 94 / 95	94 / 95
Zero load power (W)	8 / 10	8 / 10	8 / 10	9 / 11	20 / 20 / 25	30 / 35
Zero load power in AES mode (W)	5 / 8	5 / 8	5 / 8	7 / 9	15 / 15 / 20	25 / 30
Zero load power in Search mode (W)	2 / 3	2 / 3	2 / 3	3 / 4	8 / 10 / 12	10 / 15
CHARGER						
AC Input	Input voltage range: 187-265 VAC Input frequency: 45 – 65 Hz Power factor: 1					
Charge voltage 'absorption' (VDC)	14,4 / 28,8 / 57,6					
Charge voltage 'float' (VDC)	13,8 / 27,6 / 55,2					
Storage mode (VDC)	13,2 / 26,4 / 52,8					
Charge current house battery (A) [4]	35 / 16	50 / 25	70 / 40	80 / 50	120 / 70 / 35	120 / 70
Charge current starter battery (A)	4 (12 V and 24 V models only)					
Battery temperature sensor	yes					
GENERAL						
Auxiliary output [5]	n. a.	n. a.	n. a.	n. a.	Yes (16A)	Yes (50A)
Programmable relay [6]	Yes					
Protection [2]	a - g					
VE.Bus communication port	For parallel and three phase operation, remote monitoring and system integration					
General purpose com. port	n. a.	n. a.	n. a.	n. a.	Yes	Yes
Remote on-off	Yes					
Common Characteristics	Operating temp. range: -40 to +65 °C (fan assisted cooling) Humidity (non-condensing): max 95 %					
Maximum altitude	2000 m.					
ENCLOSURE						
Common Characteristics	Material & Colour: aluminium (blue RAL 5012), Protection category: IP20, pollution degree 2, OVCIII Icw: 6kA 30mS					
Battery-connection	battery cables of 1.5 meter			M8 bolts	Four M8 bolts (2 plus and 2 minus connections)	
230 VAC-connection	G-ST18i connector			Spring-clamp	Screw terminals 13 mm² (6 AWG)	M6 bolts
Weight (kg)	10	10	10	12	18	30
Dimensions (hxwxd in mm)	375 x 214 x 110			520 x 255 x 125	362 x 258 x 218	444 x 328 x 240
STANDARDS						
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, IEC 62109-1					
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					
Road vehicles	12 V and 24 V models: ECE R10-4					
Anti-islanding	See our website					

1) Can be adjusted to 60 HZ. 120 V models available on request
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) Up to 25 °C 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: 230 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 B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
E-mail: sales@victronenergy.com | **www.victronenergy.com**

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