# MultiPlus 120V Inverter/Charger 500VA - 1200VA

12/500/20, 12/800/35 and 12/1200/50

www.victronenergy.com



MultiPlus 1200VA

### Multifunctional, with intelligent power management

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

### Parallel operation and three-phase capability

Up to six MultiPlus units can operate in parallel to achieve higher power output.
In addition to parallel connection, three units can be configured for three-phase output.

### PowerControl - Dealing with limited generator, shore side or grid power

A maximum generator or shore current can be set with the Multi Control Panel. 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 often required only for a limited period, the MultiPlus will ensure 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 through advanced 'adaptive charge' software. The software fine-tunes the three-stage automatic process to suit the battery's condition 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.

### High start-up power

Essential to start high inrush loads such as power converters for LED lamps, halogen lamps or electric tools.

### Search Mode

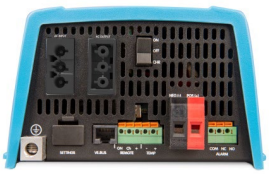
When Search Mode is 'on', the power consumption of the inverter in no-load operation is decreased by approx. 70%. In this mode, the MultiPlus, when operating in inverter mode, is switched off in case of no load or very low load and switches on every two seconds for a short period. If the output current exceeds a set level, the inverter will continue to operate. If not, the inverter will shut down again.

### Programmable relay

By default, the programmable relay is set as an alarm relay, i.e. the relay will de-energise in the event of an alarm or a pre-alarm (inverter almost too hot, ripple on the input almost too high, battery voltage almost too low).

### Remote on / off / charger on

Three pole terminal.



Connection area
MultiPlus 500VA

### On-site system configuring, monitoring and control

After installation, the MultiPlus is ready to go.
Some basic settings can be changed via DIP switches: remote switch, battery charge voltage and search mode.
Use the VictronConnect app or VE-Configure together with the Interface MK3-USB for in-depth configuration.

### Remote configuring and monitoring

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






**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.

| MultiPlus | 12/500/20 - 120 VAC | 12/800/35 - 120 VAC | 12/1200/50 - 120 VAC |
|---|---|---|---|
| PowerControl and PowerAssist | Yes | | |
| Three Phase and parallel operation | Yes | | |
| Transfer switch | 16 A | | |
| **INVERTER** | | | |
| DC Input voltage range | 9.5 - 17 V | | |
| AC output voltage | 120 V ±2 % | | |
| AC output Frequency | 60 Hz ±0.1 % | | |
| Continuous output power at 25 °C [2] | 500 VA | 800 VA | 1200 VA |
| Continuous output power at 25 °C | 430 W | 700 W | 1000 W |
| Continuous output power at 40 °C | 400 W | 650 W | 900 W |
| Continuous output power at 65 °C | 300 W | 400 W | 600 W |
| Peak power | 900 W | 1600 W | 2400 W |
| Maximum efficiency | 90 % | 92 % | 93 % |
| Zero-load power | 6 W | 7 W | 13 W |
| Zero-load power in search mode | 2 W | 2 W | 4 W |
| **CHARGER** | | | |
| AC Input voltage range | 95 - 140 V | | |
| AC input frequency range | 55 - 65 Hz | | |
| Charge voltage 'absorption' | 14.4 V | | |
| Charge voltage 'float' | 13.8 V | | |
| Storage mode | 13.2 V | | |
| Charge current house battery [3] | 20 A | 35 A | 50 A |
| Charge current starter battery | 1 A | | |
| Battery temperature sensor | Yes | | |
| **GENERAL** | | | |
| Programmable relay [4] | Yes | | |
| Protection [1] | a - g | | |
| VE.Bus communication port | 1x RJ45 port, used for remote monitoring and system integration [5] | | |
| Remote on-off | On/off/charger-only | | |
| DIP switches | Yes [6] | | |
| Internal DC fuse | 125 A | 150 A | 200 A |
| Operating temperature range | -40 to +65 °C (-40 to +149 °F), fan assisted cooling | | |
| Maximum humidity (non-condensing) | 95 % | | |
| **ENCLOSURE** | | | |
| Material | Steel/ABS | | |
| Colour | Blue RAL 5012 | | |
| Protection category | IP 21 | | |
| Battery connection | 16mm² | 25mm² | 35mm² |
| AC connection | G-ST18i connector | | |
| Weight | 4.4 kg (9.7 lb) | 6.4 kg (14.1) | 8.2 kg (18.1 lb) |
| Dimensions (h x w x d) | 311 x 182 x 100 mm (12.24 x 7.17 x 3.94 in) | 360 x 240 x 100 mm (14.17 x 9.45 x 3.94 in) | 406 x 250 x 100 mm (15.98 x 9.84 x 3.94 in) |
| **STANDARDS** | | | |
| Safety | EN-IEC 60335-1, EN-IEC 60335-2-29, EN 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 | ECE R10-4 | | |

1) Protection:
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

2) Non-linear load, crest factor 3:1
3) Up to 25 °C (77 °F) ambient
4) Programmable relay which can be set for:
general alarm, DC under voltage or generator start/stop signal function.
AC rating: 4 A at 120 V
DC rating: 4 A up to 35 V, 1 A up to 60 V
5) For parallel and three-phase operation an RJ45-splitter ASS030065510 is needed.
6) Select remote behaviour, battery charge voltages and/or search mode.



**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.

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