

# MultiPlus Inverter/Charger 500VA - 1600VA

12 / 24 / 48V

www.victronenergy.com

## Proven reliability

The full bridge plus toroidal transformer topology has proven its reliability over many years.

The inverter is short circuit proof and protected against overheating, whether due to overload or high ambient temperature.

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

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

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.

## High start-up power

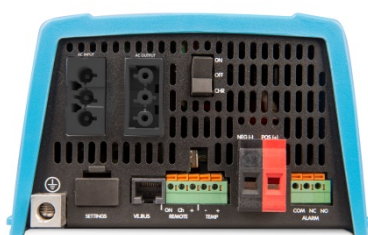
Needed to start high inrush loads such as power converters for LED lamps, halogen lamps or electric tools.

## 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 Multi, 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).



| 12 Volt                                | 12/500/20  | 12/800/35   | 12/1200/50                   | 12/1600/70                   |
|--|--|---|------------------------------|------------------------------|
| 24 Volt                                | 24/500/10  | 24/800/16   | 24/1200/25                   | 24/1600/40                   |
| 48 Volt                                | 48/500/6   | 48/800/9  | 48/1200/13                   | 48/1600/20                   |
| PowerControl / PowerAssist             | Yes  |   |                              |                              |
| Three Phase and parallel operation     | Yes  |   |                              |                              |
| Transfer switch                        | 16A  |   |                              |                              |
| <b>INVERTER</b>                        |  |   |                              |                              |
| Input voltage range                    | 9,5 – 17V  |   | 19 – 33V                     | 38 – 66V                     |
| Output                                 | Output voltage: 230VAC ± 2%      Frequency: 50Hz ± 0,1% (1)  |   |                              |                              |
| Cont. output power at 25°C (3)         | 500VA  | 800VA   | 1200VA                       | 1600VA                       |
| Cont. output power at 25°C             | 430W   | 700W  | 1000W                        | 1300W                        |
| Cont. output power at 40°C             | 400W   | 650W  | 900W                         | 1100W                        |
| Cont. output power at 65°C             | 300W   | 400W  | 600W                         | 800W                         |
| Peak power                             | 900W   | 1600W   | 2400W                        | 2800W                        |
| Maximum efficiency                     | 90 / 91 / 92%  | 92 / 93 / 94%   | 93 / 94 / 95%                | 93 / 94 / 95%                |
| Zero-load power                        | 6 / 6 / 7W   | 7 / 7 / 8W  | 10 / 9 / 10W                 | 10 / 9 / 10W                 |
| Zero-load power in search mode         | 2 / 2 / 3W   | 2 / 2 / 3W  | 3 / 3 / 3W                   | 3 / 3 / 3W                   |
| <b>CHARGER</b>                         |  |   |                              |                              |
| AC Input                               | Input voltage range: 187-265 VAC   |   | Input frequency: 45 – 65 Hz  |                              |
| Charge voltage 'absorption'            | 14,4 / 28,8 / 57,6V  |   |                              |                              |
| Charge voltage 'float'                 | 13,8 / 27,6 / 55,2V  |   |                              |                              |
| Storage mode                           | 13,2 / 26,4 / 52,8V  |   |                              |                              |
| Charge current house battery (4)       | 20 / 10 / 6A   | 35 / 16 / 9A  | 50 / 25 / 13A                | 70 / 40 / 20A                |
| Charge current starter battery         | 1A (12V and 24V models only)   |   |                              |                              |
| Battery temperature sensor             | Yes  |   |                              |                              |
| <b>GENERAL</b>                         |  |   |                              |                              |
| Programmable relay (5)                 | Yes  |   |                              |                              |
| Protection (2)                         | a – g  |   |                              |                              |
| VE.Bus communication port              | For parallel and three phase operation, remote monitoring and system integration (RJ45-splitter ASS030065510 needed for 500/800/1200VA models) |   |                              |                              |
| Remote on-off                          | On/off/charger only  |   |                              | On/off                       |
| DIP switches                           | Yes (6)  |   |                              | Yes (7)                      |
| Internal DC fuse                       | 125/60/30A   | 150/80/40A  | 200/100/50A                  | 200/125/60A                  |
| Common Characteristics                 | Operating temp. range: -40 to +65°C (fan assisted cooling)<br>Humidity (non-condensing): max 95%   |   |                              |                              |
| <b>ENCLOSURE</b>                       |  |   |                              |                              |
| Common Characteristics                 | Material & Colour: Steel/ABS (blue RAL 5012)   |   | Protection category: IP 21   |                              |
| Battery-connection                     | 16 / 10 / 10 mm <sup>2</sup>   | 25 / 16 / 10 mm <sup>2</sup>  | 35 / 25 / 10 mm <sup>2</sup> | 50 / 35 / 16 mm <sup>2</sup> |
| 230V AC-connection                     | G-ST18i connector  |   |                              |                              |
| Weight                                 | 4,4 kg   | 6,4 kg  | 8,2 kg                       | 10,2 kg                      |
| Dimensions (h x w x d)                 | 311 x 182 x 100 mm   | 360 x 240 x 100 mm  | 406 x 250 x 100 mm           | 470 x 265 x 120 mm           |
| <b>STANDARDS</b>                       |  |   |                              |                              |
| 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<br>IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3                                      |   |                              |                              |
| Road vehicles                          | ECE R10-5  |   |                              |                              |
| 1) Can be adjusted to 60Hz and to 240V |  | 3) Non-linear load, crest factor 3:1                                    |                              |                              |
| 2) Protection                          |  | 4) At 25°C ambient  |                              |                              |
| a. Output short circuit                |  | 5) Programmable relay which can be set for:                             |                              |                              |
| b. Overload                            |  | general alarm, DC under voltage or generator start/stop signal function |                              |                              |
| c. Battery voltage too high            |  | AC rating: 230V/4A  |                              |                              |
| d. Battery voltage too low             |  | DC rating: 4A up to 35VDC, 1A up to 60VDC                               |                              |                              |
| e. Temperature too high                |  | 6) Remote / Battery charge voltage / Inverter frequency / search mode   |                              |                              |
| f. 230VAC on inverter output           |  | 7) Battery charge voltage / search mode                                 |                              |                              |
| g. Input voltage ripple too high       |  |   |                              |                              |