

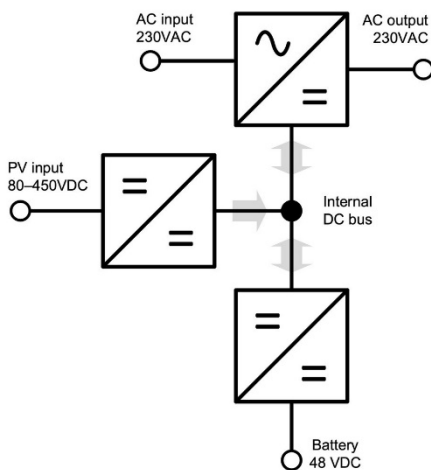
# Multi RS Solar 48/6000

With 450 V / 4 kW PV input

www.victronenergy.com



**Multi RS Solar 48/6000/100-450/80  
1 tracker**



**Inside the Multi RS 48 V 6000 VA**

## Hybrid Inverter/Charger

The Multi RS Solar 48/6000 is a 48 V 6 kVA Inverter/Charger with 450 VDC 4 kWp PV input.

## Combination of an inverter, AC charger, and Solar MPPT

The inverter produces a perfect sine wave, and able to supply high powered appliances.

It is also bi-directional, charging the battery when excess solar power or AC supply is available, or converting from the battery when it is needed.

## Wide MPPT voltage range

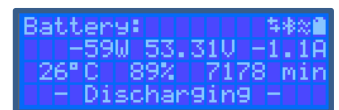
80 – 450 VDC, with a 120 VDC PV startup voltage.

## Light weight, efficient and quiet

Thanks to high frequency technology and a new design this powerful inverter weighs only 11 kg. In addition to this it has an excellent efficiency, low standby power, and a very quiet operation.

## Display, Bluetooth and VictronConnect app

The display reads battery, inverter and solar parameters. The same parameters can be accessed with a smartphone or other Bluetooth enabled device, using the VictronConnect app.



## Extendable PV capacity, both AC-coupled and DC-coupled

The integrated 4 kWp PV capacity can be extended by adding Solar Chargers to the system, for example our Smart Solar Charger range, including the Smart Solar RS models. When connected in a VE.Can network, all battery charging will operate synchronously and be coordinated.

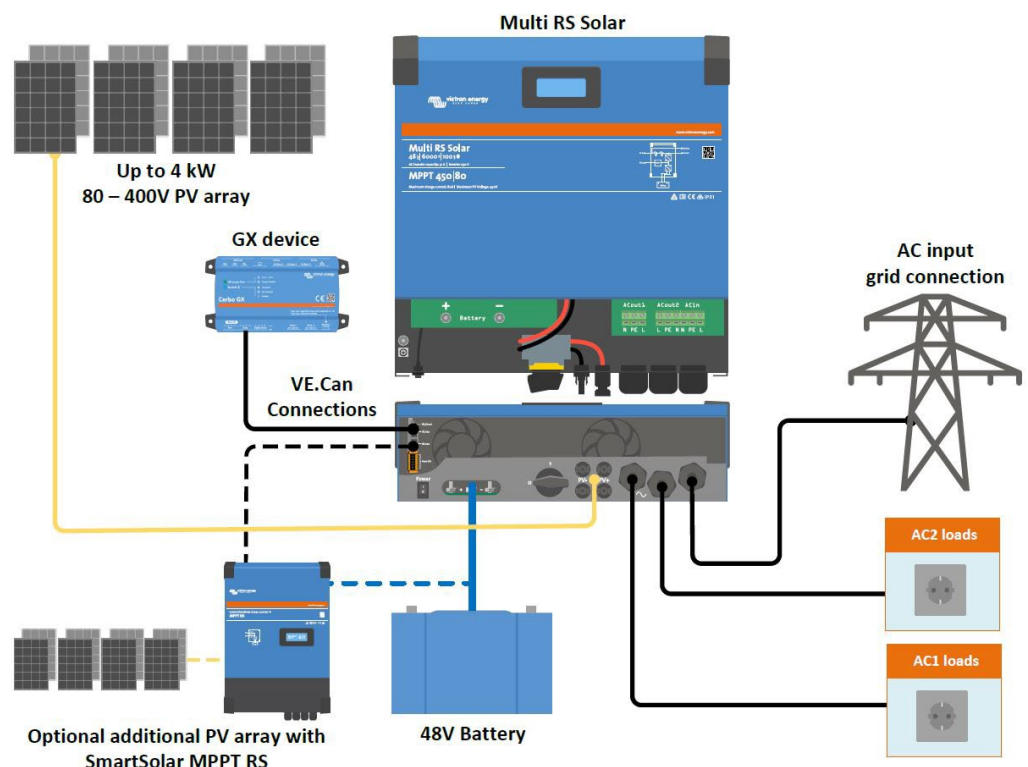
Alternatively, the PV capacity can be extended by installing AC PV Inverters, of which the output power will be automatically controlled by the integrated Frequency Shift Power Control.

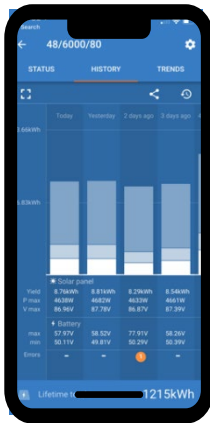
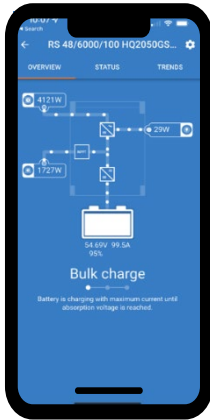
## Communication ports

VE.Can connection to a GX device for system monitoring, data logging, and remote firmware updates. VE.Direct connection to a GlobalLink 520 for remote data monitoring.

## I/O Connections

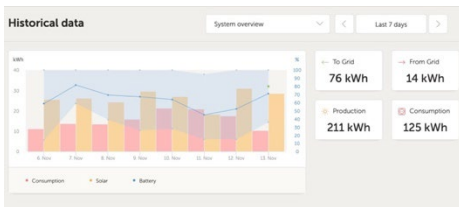
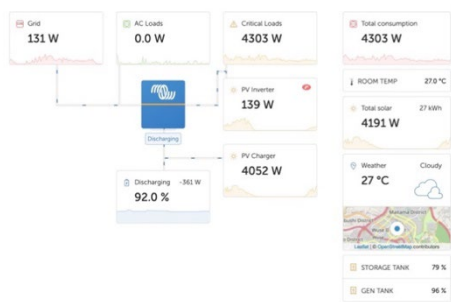
Programmable Relay, temperature sensor and voltage sensor connections. The remote input can also be configured to accept the Victron smallBMS.





### Configure and monitor with VictronConnect

A built in Bluetooth Smart connection allows for quick monitoring or settings adjustment of the Multi RS.



### VRM Portal

When the Multi RS is connected to a GX device with internet connection, you can access our free remote monitoring website (VRM). This 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.

| Multi RS Solar   | 48/6000   |
|--|---|
| <b>INVERTER</b>  |   |
| DC Input voltage range                                   | 38 – 62 V (1)   |
| Output   | Output voltage: 230 VAC ± 2 %<br>Frequency: 50 Hz ± 0,1 % (2)   |
| Continuous output power at 25 °C                         | Increases linearly from 4800 W at 46 VDC to 5300 W at 52 VDC  |
| Continuous output power at 40 °C                         | 4500 W  |
| Continuous output power at 65 °C                         | 3000 W  |
| Peak power   | 9 kW for 3 seconds  |
| Short-circuit output current                             | 50 A  |
| Maximum continuous current                               | 25 A  |
| Max. inverter output AC overcurrent protection           | 30 A  |
| Maximum efficiency                                       | 96,5 % at 1 kW load<br>94 % at 5 kW load  |
| Zero load power  | 20 W  |
| Inrush current   | NA  |
| Low Battery shutdown                                     | 37.2 V (adjustable)   |
| Low battery restart                                      | 43.6 V (adjustable)   |
| <b>SOLAR</b>   |   |
| Maximum DC voltage                                       | 450 V   |
| Start-up voltage   | 120 V   |
| MPPT operating voltage range                             | 80 – 450 V (3)  |
| Max operational PV input current                         | 18 A  |
| Max PV Short circuit current reverse polarity protection | 20 A  |
| Maximum DC solar charging power                          | 4000 W  |
| Max PV short circuit current (Isc PV)                    | 30 A  |
| Earth leakage trip level                                 | 30 mA   |
| Isolation fail level (detection before start-up)         | 100 kΩ  |
| <b>CHARGER</b>   |   |
| Programmable Charger voltage range (VDC)                 | 36 – 60 V (7)   |
| Charge voltage 'absorption' (V DC)                       | Default setting: 57,6 V (adjustable)  |
| Charge voltage 'float' (VDC)                             | Default setting: 55,2 V (adjustable)  |
| Maximum AC charging power at 230 VAC                     | 5000 W  |
| Maximum combined charger current                         | 100 A (8)   |
| AC input current limit                                   | 31 A  |
| Battery temperature sensor                               | Yes   |
| Battery voltage sense                                    | Yes   |
| <b>GENERAL</b>   |   |
| Parallel and 3-phase operation                           | no  |
| Programmable relay (4)                                   | Yes   |
| Protection (5)   | a - g   |
| Data Communications Ports                                | VE.Direct port and VE.Can port (6)  |
| Bluetooth frequency                                      | 2402 – 2480 MHz   |
| Bluetooth power  | 4 dBm   |
| General purpose analogue/digital in port                 | Yes, 2x   |
| Remote on-off  | Yes   |
| Operating temperature range                              | -40 to +65 °C (fan assisted cooling)  |
| Maximum altitude   | 2000 m  |
| Humidity (non-condensing)                                | max 95 %  |
| <b>ENCLOSURE</b>   |   |
| Material & Colour  | steel, blue RAL 5012  |
| Protection category                                      | IP21 Protective Class: I  |
| Battery-connection                                       | M8 bolts  |
| 230 VAC-connection                                       | Screw terminals 13 mm <sup>2</sup> (6 AWG)  |
| Weight   | 11 kg   |
| Dimensions (hwxwd)                                       | 425 x 440 x 125 mm  |
| <b>STANDARDS</b>   |   |
| 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<br>EN-IEC 61000-3-2, EN-IEC 61000-3-3<br>IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3, Pollution degree 2 |

1) Minimum start-up voltage is 41 V. Inverter shutdown can be set as low as 32 VDC, but may shut down on low AC output voltage (due to load). Over-voltage disconnect is 65.5 V.  
 2) Can be adjusted to 60 Hz  
 3) MPPT operating range is also constrained by battery voltage - PV VOC should not exceed 8x battery float voltage, e.g. a 50 V battery voltage maximum should have 400 V maximum PV array. - see product manual for further information.  
 4) Programmable relay which can be set for general alarm, DC under voltage or genset start/stop function. DC rating: 4 A up to 35 VDC and 1 A up to 70 VDC  
 5) 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) Solar earth leakage  
 6) Connection to a GX device (i.e. Cerbo GX) must be made via the VE.Can interface. The VE.Direct interface is for connection to the GlobalLink 520, and to a computer, using a VE.Direct to USB to cable.  
 7) The Charger set-point (float and absorption) can be set to max 60 V. The output voltage at the charger terminals can be higher, due to temperature compensation as well as compensation for voltage drop over the battery cables. The maximum output current is reduced on a linear basis from full current at 60 V to 5A at 62 V. The equalization voltage can be set to max 62V, the equalization current percentage can be set to max 6%.  
 8) Maximum charging current from AC and DC sources varies with AC and DC voltages. See product manual for more detailed limitation specifications due to these variables.