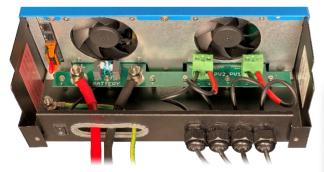
SmartSolar MPPT RS 450|100 & 450|200 - Isolated

5.76kW & 11.52kW Solar Charge Controller with 450V PV input



SmartSolar MPPT RS 450|100



Inside the SmartSolar MPPT RS 450|100

Configure and monitor with VictronConnect

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

The built in 30 day history shows individual performance of the separate MPPT trackers.

Try the VictronConnect demo to see the full range of configuration and display options with sample data.

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

Ultra-fast Maximum Power Point Tracking (MPPT) Solar Charge Controller

The MPPT RS SmartSolar is a 48V Solar charge controller with up to 450VDC PV input and either 100A, or 200A output. It is used in on-grid and off-grid solar applications where maximum battery charging power is required.

Multiple independent MPPT tracking inputs

With multiple MPPT trackers, you can optimize your solar panel design for maximum performance for your specific location.

Isolated PV connections for additional safety

Full galvanic isolation between PV and battery connections provide additional overall system safety.

Wide MPPT voltage range

80 - 450 VDC PV operating range, with a 120VDC PV startup voltage.

Light weight, efficient and quiet

Thanks to high frequency technology and a new design this powerful charger weighs only 7.9 kg for the 100A model. In addition to this it has an excellent efficiency, low standby power, and a very quiet operation.

Display and Bluetooth

The display reads battery, and solar charge controller parameters. The parameters can be accessed with a smartphone or other Bluetooth enabled device. In addition,

change settings with VictronConnect.

Bluetooth can be used to set up the system and to

Solar 1: \$≉*# 2007W 178.4V 11.3A Today 0.00 kWh Total 27.9 kWh

PV Isolation resistance monitoring for peace of mind at higher voltages

The MPPT RS continuously monitors the PV array and can detect if there are faults that reduce the isolation of the panels to unsafe levels.

VE.Can and VE.Direct port

For connection to a GX device for system monitoring, data logging, and remote firmware updates. VE.Can allows for up to 25 units to be connected together in parallel and synchronize their charging.

I/O Connections

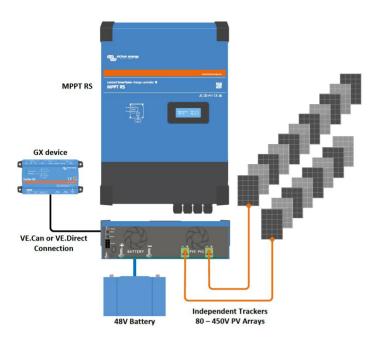
Programmable Relay, temperature sensor, auxiliary, digital input and voltage sensor connections. The remote input can accept the Victron smallBMS, and other BMS with allow-to-charge signal.







www.victronenergy.com



System example diagram

The 100A MPPT RS combined with a GX device, charging a 48V battery with 2 separate solar PV strings.

VRM Portal

When the MPPT RS is connected to a GX device with internet connection, or the GlobalLink 520 with built in 4G connectivity, you can access our free remote monitoring website (VRM). This will display all your system data in a comprehensive graphical format. Alarms can be received by e-mail.





Isolated SmartSolar MPPT RS450 100450 200CHARGERProgrammable charger voltage range (5)Minimum: 36 V Maximum 62 VCharge voltage 'absorption'default: 57,6 VCharge voltage 'absorption'default: 57,6 VCharge voltage 'absorption'default: 57,6 VCharge voltage 'absorption'default: 57,6 VMaximum charge current100 A200 ABattery temperature sensorIncludedSOLARMaximum DC PV voltage $50 - 45 \cup V$ (1)Number of trackers24Maximum operational PV input current200 A per trackerTackerMaximum DC output charging powerA0000 W per tracker100 A at 57.6 V / 200 A at 57.6 VMaximum PV array size per tracker (3)Yes, up to 25 units with VE.CanProtection (a) 100 kVE.Direct port, VE.Can port & Bluetooth (7)General purpose analogue/digital in port Remote on-offVE.LCOSUREMaterial & ColourSteel, blu< FAL 5012Protection categoryLENCLOSUREMaterial & ColourSteel, bluAdvo stats x 126 mmVE.LCOSUREMaterial & ColourStatch ColourStatch Colour				
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STANDARDS	•	-	-	
	Dimensions (hxwxd)		487 x 434 x 146 mm	
Safety EN-IEC 62109-1, EN-IEC 62109-2				
	Safety	EN-IEC 62109-1, EN-IEC 62109-2		

1) MPPT operating range is also constrained by battery voltage - PV VOC should not exceed 8x battery float voltage. For example, a 52,8V float voltage results in a maximum PV VOC of 422,4V. See product manual for further information.

2) A higher short circuit current may damage the controller if PV array is connected in reverse polarity.

3) Max. 450 Voc result in appr. 360 Vmpp, therefor the maximum PV array is appr. 360V x 20A = 7200Wp $\,$

4) The MPPT RS will test for sufficient resistive isolation between PV+ and GND, and PV- and GND. In the event of a resistance below the threshold, the unit will stop charging, display the error, and send the error signal to the GX device (if connected) for audible and email notification.

5) Programmable relay which can be set for general alarm, DC under voltage or genset start/stop function. DC rating: 4A up to 35VDC and 1A up to 70VDC

6) Protection key:a) battery voltage too highb) battery voltage too lowc) temperature too high

7) The MPPT RS is not currently compatible with VE.Smart Networks



