

SHS 200 MPPT

PAYGo enabled

www.victronenergy.com



SHS 200 – Front view
Keypad and LCD screen



SHS 200 – mounted on optional
battery box

Solar home system

The SHS 200 is a smart solar charge controller and power distribution system designed for off-grid electricity access. It is used with solar panels and a battery to power DC appliances (12V).

200W MPPT charge controller

Smart charge controller with four PV inputs of 50Wp. Maximum power point tracking (MPPT) will improve energy harvest by up to 30% compared to PWM charge controllers.

Smart battery management

Smart multi-stage charging and load disconnect to extend battery life. Internal temperature sensor (compensates charge voltage according to temperature). Optional battery enclosure to prevent user from tampering with battery terminals.

Fifteen DC load outputs

Compatible with a large range of accessories such as LED lighting, mobile phone charging, TVs, DC fridge, fans, or sound systems.

PAYGo enabled

Low-cost and reliable offline Pay-as-you-go (PAYG) operation through keypad activation. Compatible with most mobile money carriers and various PAYG software platforms.

LCD screen

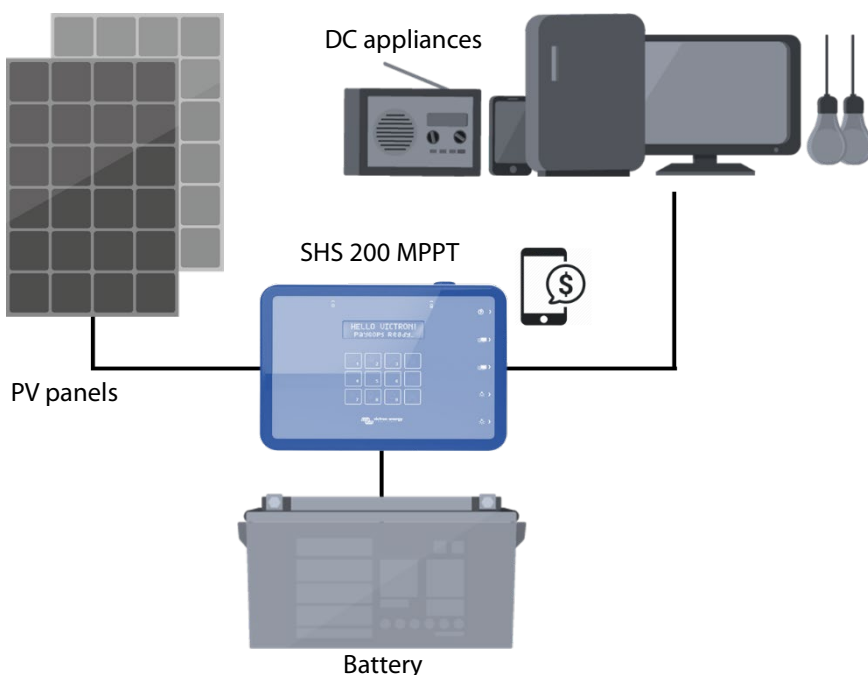
Display parameters such as usage statistics, battery state of charge and agent diagnostics. Easy navigation and adjustable languages (English, French, Swahili).

Customizable design

Different levels of personalization to distributor brands and last-mile operators.

Battery box

Optional anti-tampering box to prevent direct connection of loads on battery terminals.



Pay-as-you-go operations

- 1) The customer makes payment by mobile money or cash transfer to unlock his device for a definite period (e.g. one week).
- 2) The customer receives a recharge code on his cell phone by SMS.
- 3) The customer enters the code on the keypad of the device.
- 4) The product is unlocked and can be used until time credited is spent.

Example of daily usage

200Wp solar panel / 130Ah battery

- 1 x 50L fridge
- 1 x 24" TV with decoder for 8 hours
- 6 x 3W LED light bulbs for 6 hours
- 1 x radio for 6 hours
- 5 x phone charges per day

SHS 200 MPPT			
Battery voltage	12Vdc		
Nominal PV power	Up to 200Wp total (36 cells panels)		
Maximum charge / discharge currents	14A / 20A		
Peak efficiency	96%		
Suitable battery capacity	Up to 160Ah		
Compatible battery technologies	Sealed lead-acid, lithium.		
Absorption / float voltages	14.4V /13.75V (configurable)		
Temperature compensation	Yes (automatic)		
Automatic load disconnect	Yes (configurable low state of charge disconnect)		
Operating temperatures	0 to 40°C (derating from 35°C)		
Humidity	90%, non-condensing		
Protections	Battery reverse polarity, battery overvoltage, battery undervoltage, battery overcurrent, load outputs overcurrent.		
PAYGo			
Remote activation	Unlock tokens sent to end-user via SMS to activate the system		
Compatible PAYGo platforms	PaygOps, Angaza, Paygee		
Token technology	Free and secure open-source token system (OpenPAYGO)		
ENCLOSURE			
PV terminals	<table border="0"> <tr> <td><u>Barrel model</u> 4 x 5.5mmx2.1mm barrel connectors with an individual current limit of 5A</td> <td><u>MC4 model</u> A positive and a negative extension PV cable (1 meter - 14 AWG) terminated with MC4 connector.</td> </tr> </table>	<u>Barrel model</u> 4 x 5.5mmx2.1mm barrel connectors with an individual current limit of 5A	<u>MC4 model</u> A positive and a negative extension PV cable (1 meter - 14 AWG) terminated with MC4 connector.
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Battery cables	Included (14 AWG - 1m) / suitable for M6 battery terminals		
USB outputs	<p>10 USB ports (type A) Voltage: 4.75V-5.25V Overall maximum of 10A across all ports Individual maximum of 1.5A per port Compliant with the USB Battery Charging 1.2 standard</p>		
Standard 12V DC outputs	<p>Voltage: 10.5 to 15V (according to Lighting Global standard) Protection: software overcurrent protection and resettable fuse</p> <p>Port 1 (from top): - Current: Up to 9A - Connector: 5.08mm pin space pluggable screw terminal</p> <p>Port 2 and 3: - Current: Up to 4A - Connector: 5.5mm x 2.1mm barrel connector</p> <p>Port 4 and 5: - Current: Up to 2A - Connector: 5.5mm x 2.1mm barrel connector</p>		
Operating temperatures	0 to 40°C (derating from 35°C)		
Color	Standard: black enclosure and blue keypad Customizable co-branding (minimum order quantity: 1000 units)		
Dimensions (h x w x d)	148 x 204 x 67 mm		
Net weight	0.39kg		
Protection category	IP 41		