# SHS 200 MPPT v3.0
## PAYGo enabled

SHS 200 – Front view
Keypad and LCD screen



SHS 200 – side view
DC load outputs

### 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 cap to prevent user from tampering with battery terminals.

### Fifteen DC load outputs
Compatible with large range of accessories such as LED lighting, mobile phone charging, TVs, DC fridge, fans or sound systems.
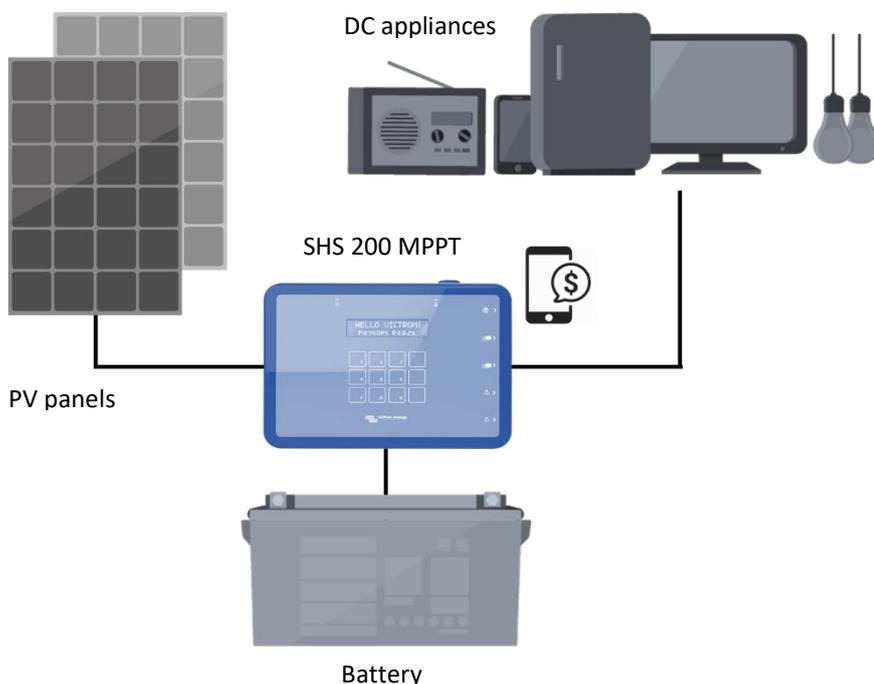
### PAYG enabled
Low-cost and reliable offline Pay-as-you-go (PAYG) operation through keypad activation. Compatible with most mobile money carriers and various PAYG software platforms.

### 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.



DC appliances

SHS 200 MPPT

PV panels

Battery

### 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 | 50 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, Victron SuperPack (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 | Reverse polarity protection on battery, overvoltage protection on battery, undervoltage protection on battery, overcurrent protection on battery, overcurrent protection on outputs. |
| PAYG | |
| Remote activation | Unlock codes 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 | 4 connectors with an individual current limit of 5A (50Wp) 5.5mmx2.1mm barrel connectors |
| Battery cables | Included (14 AWG - 1m) / suitable for M6 battery terminals |
| USB outputs | 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 |
| Standard 12V DC outputs | Voltage: 10.5 to 15V (according to Lighting Global standard) Protection: software overcurrent protection and resettable fuse Port 1 and 2 (from bottom): - Current: Up to 3A - Connector: 5.5mm x 2.1mm barrel connector Port 3 and 4: - Current: Up to 5A - Connector: 5.5mm x 2.1mm barrel connector Port 5: - Current: Up to 10A - Connector: 5.08mm pin space pluggable screw terminal |
| 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 |
| STANDARDS | |
| Lighting Global | Lighting Global verified |
| Other | CE |

victron energy
BLUE POWER