

BlueSolar charge controllers MPPT – Overview

www.victronenergy.com



Feature highlights

- Ultra-fast Maximum Power Point Tracking (MPPT)
- Advanced Maximum Power Point Detection in case of partial shading conditions
- Load output on the small models
- BatteryLife: intelligent battery management by load shedding
- Automatic battery voltage recognition
- Flexible charge algorithm
- Over-temperature protection and power de-rating when temperature is high.

Color Control GX

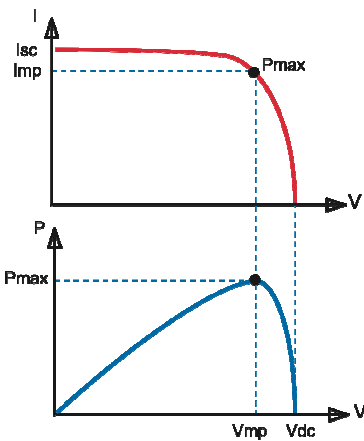
All Victron Energy MPPT Charge Controllers are compatible with the Color Control GX: The Color Control GX provides intuitive control and monitoring for all products connected to it. The list of Victron products that can be connected is endless: Inverters, Multi's, Quattro's, MPPT 150/70, BMV-600 series, BMV-700 series, Skylla-i, Lynx Ion and even more.

VRM Online Portal

Besides monitoring and controlling products on the Color Control GX, the information is also forwarded to our free remote monitoring website: the VRM Online Portal. To get an impression of the VRM Online Portal, visit <https://vrm.victronenergy.com>, and use the 'Take a look inside' button. The portal is free of charge.

Related product: EasySolar

Minimal wiring and an all-in-one solution: the EasySolar takes power solutions one stage further, by combining an Ultra-fast BlueSolar charge controller (MPPT), an inverter/charger and AC distribution in one enclosure.



Maximum Power Point Tracking

Upper curve:

Output current (I) of a solar panel as function of output voltage (V). The maximum power point (MPP) is the point Pmax along the curve where the product $I \times V$ reaches its peak.

Lower curve:

Output power $P = I \times V$ as function of output voltage.

When using a PWM (not MPPT) controller the output voltage of the solar panel will be nearly equal to the voltage of the battery, and will be lower than Vmp.

| Model | Load output | Fan | Battery voltage | Display | Color Control GX | Com. port |
|--------|-------------|-----|-----------------|---------|------------------|-----------|
| 75/15 | Yes | No | 12/24 | No | Compatible | VE.Direct |
| 100/15 | Yes | No | 12/24 | No | Compatible | VE.Direct |
| 100/30 | No | No | 12/24 | No | Compatible | VE.Direct |
| 75/50 | No | No | 12/24 | No | Compatible | VE.Direct |
| 100/50 | No | No | 12/24 | No | Compatible | VE.Direct |
| 150/35 | No | No | 12/24/36/48 | No | Compatible | VE.Direct |
| 150/70 | No | No | 12/24/36/48 | Yes | Compatible | VE.Can |
| 150/85 | No | Yes | 12/24/36/48 | Yes | Compatible | VE.Can |

