

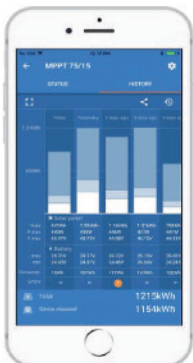
BlueSolar Charge Controllers

MPPT 75/10, 75/15, 100/15, 100/20-48V

www.victronenergy.co.nz



Solar Charge Controller
MPPT 75/15



VE.Direct Bluetooth Smart
dongle needed to enable
Bluetooth

Ultra-fast Maximum Power Point Tracking (MPPT)

Especially in case of a clouded sky, when light intensity is changing continuously, an ultra-fast MPPT controller will improve energy harvest by up to 30% compared to PWM charge controllers and by up to 10% compared to slower MPPT controllers.

Load output

Over-discharge of the battery can be prevented by connecting all loads to the load output. The load output will disconnect the load when the battery has been discharged to a pre-set voltage.

Alternatively, an intelligent battery management algorithm can be chosen: see Battery Life.

The load output is short circuit proof.

Some loads (especially inverters) can best be connected directly to the battery, and the inverter remote control connected to the load output. A special interface cable may be needed, please see the manual.

Battery Life: intelligent battery management

When a solar charge controller is not able to recharge the battery to its full capacity within one day, the result is often that the battery will continually be cycled between a 'partially charged' state and the 'end of discharge' state. This mode of operation (no regular full recharge) will destroy a lead-acid battery within weeks or months.

The Battery Life algorithm will monitor the state of charge of the battery and, if needed, day by day slightly increase the load disconnect level (i.e. disconnect the load earlier) until the harvested solar energy is sufficient to recharge the battery to nearly the full 100%. From that point onwards the load disconnect level will be modulated so that a nearly 100% recharge is achieved about once every week.

Programmable battery charge algorithm

See the software section on our website for details

Day/night timing and light dimming option

See the software section on our website for details

Programming, real-time data and history display options

- Color Control GX or other GX devices: see the **Venus** documents on our website.
- A smartphone or other Bluetooth-enabled device: VE.Direct Bluetooth Smart dongle needed.

| BlueSolar Charge Controller | MPPT 75/10 | MPPT 75/15 | MPPT 100/15 | MPPT100/20 |
|--|--|------------|-------------------|------------------------------|
| Battery voltage (auto select) | 12/24V | | | 12/24/48V |
| Rated charge current | 10A | 15A | 15A | 20A |
| Nominal PV power, 12V 1a,b) | 145W | 220W | 220W | 290W |
| Nominal PV power, 24V 1a,b) | 290W | 440W | 440W | 580W |
| Nominal PV power, 48V 1a,b) | n. a. | n. a. | n. a. | 1160W |
| Max. PV short circuit current 2) | 13A | 15A | 15A | 20A |
| Automatic load disconnect | Yes | | | |
| Max. PV open circuit voltage | 75V | | 100V | |
| Peak efficiency | 98% | | | |
| Self-consumption – load on | 12V: 25 mA 24V: 15 mA | | | 26 / 20 / 19 mA |
| Self-consumption – load off | | | | 10 / 8 / 7 mA |
| Charge voltage 'absorption' | 14,4V / 28,8V (adjustable) | | | 14,4V / 28,8V / 57,6V (adj.) |
| Charge voltage 'float' | 13,8V / 27,6V (adjustable) | | | 13,8V / 27,6V / 55,2V (adj.) |
| Charge algorithm | multi-stage adaptive | | | |
| Temperature compensation | -16 mV / °C resp. -32 mV / °C | | | |
| Max. continuous load current | 15A | | | 20A / 20A / 1A |
| Low voltage load disconnect | 11,1V / 22,2V / 44,4V or 11,8V / 23,6V / 47,2V or Battery Life algorithm | | | |
| Low voltage load reconnect | 13,1V / 26,2V / 52,4V or 14V / 28V / 56V or Battery Life algorithm | | | |
| Protection | Output short circuit / Over temperature | | | |
| Operating temperature | -30 to +60°C (full rated output up to 40°C) | | | |
| Humidity | 95%, non-condensing | | | |
| Data communication port | VE.Direct (see the data communication white paper on our website) | | | |
| ENCLOSURE | | | | |
| Colour | Blue (RAL 5012) | | | |
| Power terminals | 6 mm ² / AWG10 | | | |
| Protection category | IP43 (electronic components), IP22 (connection area) | | | |
| Weight | 0,5 kg | 0,6 kg | 0,6 kg | 0,65 kg |
| Dimensions (h x w x d) | 100 x 113 x 40 mm | | 100 x 113 x 50 mm | 100 x 113 x 60 mm |
| STANDARDS | | | | |
| Safety | EN/IEC 62109-1, UL 1741, CSA C22.2 | | | |
| 1a) If more PV power is connected, the controller will limit input power. 1b) The PV voltage must exceed Vbat + 5V for the controller to start. Thereafter the minimum PV voltage is Vbat + 1V 2) A PV array with a higher short circuit current may damage the controller. | | | | |