BlueSolar Charge Controllers
MPPT 75/10, 75/15, 100/15, 100/20-48V





Solar Charge Controller MPPT 75/15

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.





VE.Direct Bluetooth Smart dongle needed to enable Bluetooth

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 mm² / AWG10			
Protection category	IP43 (electronic components), IP22 (connection area)			
Weight	0,5 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 131 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.

Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
E-mail: sales@victronenergy.com
www.victronenergy.com