BlueSolar Charge Controller MPPT 75/10, 75/15 & MPPT 100/15

www.victronenergy.com

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

- Modern Apple and Android smartphones, tablets, macbooks and other devices: see the VE.Direct Bluetooth Smart dongle and the MPPT app discovery sheet for screenshots.
- ColorControl panel

BlueSolar Charge Controller	MPPT 75/10	MPPT 75/15	MPPT 100/15
Battery voltage	12/24V Auto Select		
Rated charge current	10A	15A	15A
Maximum PV power, 12V 1a,b)	135W	200W	200W
Maximum PV power, 24V 1a,b)	270W	400W	400W
Max. PV short circuit current 2)	10A	15A	15A
Automatic load disconnect	Yes, maximum load 15A		
Maximum PV open circuit voltage	75V		100V
Peak efficiency	98%		
Self-consumption	10 mA		
Charge voltage 'absorption'	14,4V / 28,8V (adjustable)		
Charge voltage 'float'	13,8V / 27,6V (adjustable)		
Charge algorithm	multi-stage adaptive		
Temperature compensation	-16 mV / °C resp. -32 mV / °C		
Continuous/peak load current	15A / 50A		
Low voltage load disconnect	11,1V / 22,2V or 11,8V / 23,6V or Battery Life algorithm		
Low voltage load reconnect	13,1V / 26,2V or 14V / 28V or Battery Life algorithm		
Protection	Battery reverse polarity (fuse) 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		
Dimensions (h x w x d)	100 x 113 x 40 mm		
STANDARDS			
Safety	EN/IEC 62109		

1a) If more PV power is connected, the controller will limit input power to the stated maximum.
1b) PV voltage must exceed Vbat + 5V for the controller to start.
Thereafter minimum PV voltage is Vbat + 1V
2) A PV array with a higher short circuit current may damage the controller.

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