BlueSolar Charge Controllers with screw- or MC4 PV connection

MPPT 150/60 and MPPT 150/70

www.victronenergy.com

Solar Charge Controller
MPPT 150/70-Tr

Solar Charge Controller
MPPT 150/70-MC4

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.

Advanced Maximum Power Point Detection in case of partial shading conditions

If partial shading occurs, two or more maximum power points may be present on the power-voltage curve. Conventional MPPTs tend to lock to a local MPP, which may not be the optimum MPP.
The innovative BlueSolar algorithm will always maximize energy harvest by locking to the optimum MPP.

Outstanding conversion efficiency

No cooling fan. Maximum efficiency exceeds 98 %.

Flexible charge algorithm

Fully programmable charge algorithm (see the software page on our website), and eight pre-programmed algorithms, selectable with a rotary switch (see manual for details).

Extensive electronic protection

Over-temperature protection and power derating when temperature is high. PV short circuit and PV reverse polarity protection. PV reverse current protection.

Internal temperature sensor and optional external battery voltage, temperature and current sensing via Bluetooth

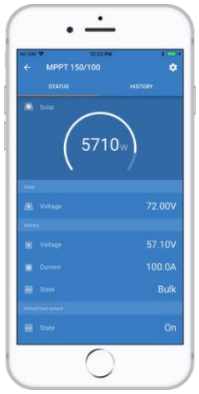
A Smart Battery Sense or a BMV-712 Smart Battery Monitor can be used to communicate battery voltage and temperature (and current, in case of a BMV-712 or a SmartShunt) to one or more BlueSolar Charge Controllers. (VE.Direct Bluetooth Smart dongle needed)

Real-time data 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

Bluetooth sensing:
Smart Battery Sense



Bluetooth sensing:
BMV-712 Smart Battery Monitor
or SmartShunt

BlueSolar Charge Controller	MPPT 150/60	MPPT 150/70
Battery voltage	12 / 24 / 48 V Auto Select (software tool needed to select 36 V)	
Rated charge current	60 A	70 A
Nominal PV power, 12 V 1a,b)	860 W	1000 W
Nominal PV power, 24 V 1a,b)	1720 W	2000 W
Nominal PV power, 48 V 1a,b)	3440 W	4000 W
Max. PV short circuit current 2)	50 A	50 A
Maximum PV open circuit voltage	150 V absolute maximum coldest conditions 145 V start-up and operating maximum	
Maximum efficiency	98 %	
Self-consumption	10 mA	
Charge voltage 'absorption'	Default setting: 14,4 / 28,8 / 43,2 / 57,6 V (adjustable)	
Charge voltage 'float'	Default setting: 13,8 / 27,6 / 41,4 / 55,2 V (adjustable)	
Charge algorithm	multi-stage adaptive	
Temperature compensation	-16 mV / -32 mV / -64 mV / °C	
Protection	PV reverse polarity / Output short circuit / Over temperature	
Operating temperature	-30 to +60 °C (full rated output up to 40 °C)	
Humidity	95 %, non-condensing	
Data comm. port and remote on-off	VE.Direct (see the data communication whitepaper on our website)	
Parallel operation	Yes (not synchronized)	
ENCLOSURE		
Colour	Blue (RAL 5012)	
PV terminals 3)	35 mm² / AWG2 (Tr models) Two sets of MC4 connectors (MC4 models)	
Battery terminals	35 mm² / AWG2	
Protection category	IP43 (electronic components), IP22 (connection area)	
Weight	3 kg	
Dimensions (h x w x d) in mm	Tr models: 185 x 250 x 95	MC4 models: 215 x 250 x 95
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) PV voltage must exceed Vbat + 5 V for the controller to start.
Thereafter minimum PV voltage is Vbat + 1 V.
2) A PV array with a higher short circuit current may damage the controller.
3) MC4 models: several splitter pairs may be needed to parallel the strings of solar panels.
Maximum current per MC4 connector: 30 A (the MC4 connectors are parallel connected to one MPPT tracker)

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