SmartSolar Charge Controllers with load output
MPPT 75/10, 75/15, 100/15, 100/20

www.victronenergy.com

Bluetooth Smart built-in: dongle not needed
The wireless solution to set-up, monitor and update the controller using Apple and Android smartphones, tablets or other devices.

VE.Direct
For a wired data connection to a Color Control panel, PC or other devices

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.

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

SmartSolar Charge Controller
MPPT 75/15

SmartSolar Charge Controller	MPPT 75/10	MPPT 75/15	MPPT 100/15	MPPT 100/20
Battery voltage	12/24V Auto Select			
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
Max. PV short circuit current 2)	13A	15A	15A	20A
Automatic load disconnect	Yes, maximum load 15A			20A
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 load current	15A			20A
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		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			

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 higher short circuit current may damage the controller in case of reverse polarity connection of the PV array.

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