

# BLUESOLAR PWM

Three models: 5A, 10A or 20A at 12V or 24V \*



Regulator Solar PWM Victron Energy BlueSolar



Regulator Victron BlueSolar PWM DUO



Display Regulator Solar Victron BlueSolar DUO



Regulator Solar Victron BlueSolar PWM 48V



Regulator Solar Victron BlueSolar PWM Pro

- Low cost PWM controller
- Internal temperature sensor
- Three stage battery charging (bulk, absorption, float)
- Protected against over current
- Protected against short circuit
- Protected against reverse polarity connection of the solar panels and/or battery
- With low voltage load disconnect output
- Optional remote display (20A model only)

# PWM LIGHT SPECIFICATIONS

BlueSolar PWM-Light	12/24-5	12/24-10	12/24-20	12/24-30
Battery voltage	12/24 V, with automatic system voltage detection			
Rated charge current	5 A	10 A	20 A	30 A
Automatic load disconnect	Yes			
Maximum solar voltage	28 / 55 V (Use 36 cell solar panels for 12 volts, 72 cell solar panels for 24 volts)			
Self-consumption	< 10 mA			
Load output	Manual control + low voltage disconnect			
Protection	Battery reverse polarity (fuse) Output short circuit Over temperature			
Overload protection	Shut down after 60 s in case of 130% load Shut down after 5 s in case of 160% load Short circuit: immediate shut down			
Grounding	Common positive			
Operating temp. range	-20 to 50 °C (full load)			
Humidity (non-condensing)	Max. 95 %			
<b>Battery</b>				
Charge voltage "absorption"	14,2 / 28,4 V			
Charge voltage "float"	13,8 / 27,6 V			
Low voltage disconnect	11,2 / 22,4 V			
Low voltage load reconnect	12,6 / 25,2 V (manual) 13,1 / 26,2 (automatic)			
<b>Enclosure</b>				
Protection class	IP20			
Terminal size	5 mm <sup>2</sup> / AWG 10			
Weight	0,15 Kgr.		0,2 Kgr	
Dimensions (h x w x d)	70 x 133 x 33,5 mm			
<b>Standards</b>				
Security	IEC 62109-1			
EMC	EN 61000-6-1, EN 61000-6-3			

# PWM LIGHT 48V SPECIFICATIONS

BlueSolar PWM-Light 48V	48-10	48-20	48-30
Battery voltage		48 V	
Rated charge current	10 A	20 A	30 A
Automatic load disconnect		Yes	
Maximum solar voltage		100 V	
Self-consumption		< 10 mA	
Load output		Manual control + low voltage disconnect	
Protection		Battery reverse polarity (fuse) Output short circuit Over temperature	
Overload protection		Shut down after 60 s in case of 130% load Shut down after 5 s in case of 160% load Short circuit: immediate shut down	
Grounding		Common positive	
Operating temp. range		-20 to 50 °C (full load)	
Humidity (non-condensing)		Max. 95 %	
<b>Battery</b>			
Charge voltage "Bulk"		58,0 V	
Charge voltage "absorption"		56,8 V	
Charge voltage "float"		55,2 V	
Low voltage disconnect		44,8 V	
Low voltage load reconnect		50,4 V (manual) 52,4 V (automatic)	
<b>Enclosure</b>			
Protection class		IP20	
Terminal size		6 mm <sup>2</sup> / AWG 10	
Weight		0,17 Kgr.	
Dimensions (h x w x d)		95 x 140 x 33,5 mm	
<b>Standards</b>			
Security		IEC 62109-1	
EMC		EN 61000-6-1, EN 61000-6-3	

# PWM PRO SPECIFICATIONS

BlueSolar PWM-Pro	12/24-5	12/24-10	12/24-20	12/24-30
Battery voltage	12/24 V, with automatic system voltage detection			
Rated charge current	5 A	10 A	20 A	30 A
Automatic load disconnect	Yes			
Maximum solar voltage	28 / 55 V (Use 36 cell solar panels for 12 volts, 72 cell solar panels for 24 volts)			
Self-consumption	< 10 mA			
Load output	Manual control + low voltage disconnect			
Protection	Battery reverse polarity (fuse) Output short circuit Over temperature			
Battery temperature sensor	Optional (article SCC940100100)			
Temperature compensation	-30 mV/°C resp. -60 mV/°C (If temperature sensor installed)			
Remote panel	Optional (article SCC900300000)			
Grounding	Common positive			
Operating temp. range	-20 to 50 °C (full load)			
Humidity (non-condensing)	Max. 98 %			
<b>Battery</b>				
Charge voltage "absorption"	14,4 / 28,8 V			
Charge voltage "float"	13,8 / 27,6 V			
Equalization voltage	14,6 / 29,2 V			
Low voltage load disconnect	12,6 / 25,2 V			
Low voltage load reconnect	13,1 / 26,2 V			
<b>Enclosure</b>				
Protection class	IP30			
Terminal size	4 mm <sup>2</sup>	4 mm <sup>2</sup>	10 mm <sup>2</sup>	10 mm <sup>2</sup>
Weight	0,13 Kgr.		0,3 Kg	0,5 Kg
Dimensions (h x w x d)	138 x 70 x 37 mm		160 x 82 x 48 mm	200 x 100 x 57 mm
<b>Standards</b>				
Security	IEC 62109-1			
EMC	EN 61000-6-1, EN 61000-6-3			

## PWM LCD & USB SPECIFICATIONS

BlueSolar PWM LCD & USB	12/24-5	12/24-10	12/24-20	12/24-30	48-10	48-20	48-30
Battery Voltage	12/24v. with automatic system voltage detection						48 V
Rated charge current	5 A	10 A	20 A	30 A	10 A	20 A	30 A
Automatic load disconnect	Yes						
Maximum solar voltage	28 / 55 V (1)					100 V (1)	
Self-consumption	< 10 mA						
Load output	Manual control + low voltage disconnect + timer						
Protection	Battery reverse polarity (fuse) Output short circuit Timer						
Overload protection	Shut down after 60 sec in case of 130 % load Shut down load after 5 sec in case of 160 % load Short circuit: immediate shut down						
Grounding	Common positive						
Operating temperature range	-35 to 60 °C (full load)						
Humidity (non-condensating)	Max. 95 %						
<b>Battery</b>							
Charge voltage "absorption"	14,4 / 28,8 V					57,6 V	
Charge voltage "float" (2)	13,7 / 27,4 V					54,8 V	
Low voltage load disconnect	11,2 / 22,4 V					44,8 V	
Low voltage load reconnect	12,6 / 25, 2V					50,4 V	
<b>USB</b>							
Voltage	5 V						
Current	2 A (total from 2 outputs)						
<b>Enclosure</b>							
Protection class	IP20						
Terminal size	6 mm <sup>2</sup> / AWG 10					16 mm <sup>2</sup> / AWG 6	
Weight	0,15 Kg					0,3 Kg	
Dimensions (h x w x d)	96 x 169 x 36 mm					101 x 184 x 47 mm	
<b>Standards</b>							
Safety	EN60335 - IEC 62109-1						
EMC	EN 61000-6-1, EN 61000-6-3, ISO 7637-2						

1) For 12V use 36 cell solar panels. For 24V use 72 cell solar panels or 2x 36 cell in series For 48V use 2x 72 cell solar panels or 4x 36 cell in series

2) The controller switches to the lower float voltage level 2 hours after the absorption voltage has been reached. Whenever the battery voltage becomes lower than 13V, a new charge cycle is triggered.

## DOWNLOADS

CATÁLOGO GENERAL 2020

 [Catalogo-Bornay-0520.pdf](#)

Size: 21.51 MiB