



BlueSolar Pro Remote Panel

For BlueSolar PWM-Pro charge controllers 12/24V 5, 10, 20, 30A
Article number SCC900300000

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1. Important safety instructions

Read all instructions before starting the installation.

Keep the controller away from rain, exposure, severe dust, vibration, corrosive gas and intense electromagnetic interference.

2. Installation

Please see section 8 for mounting dimensions

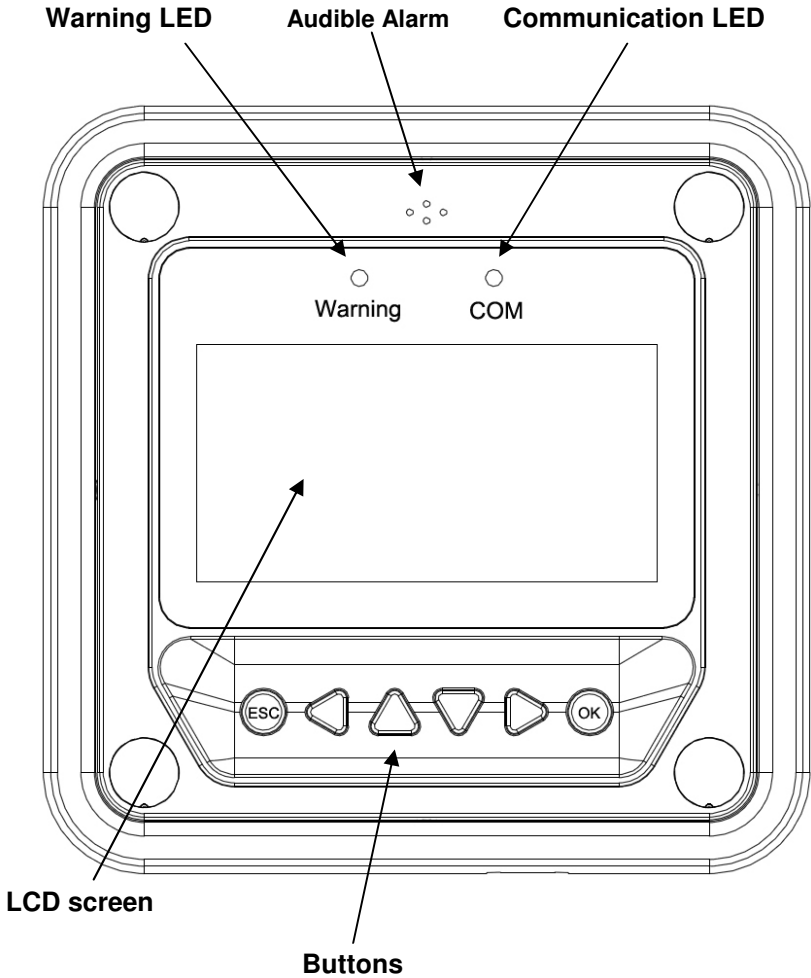
Connection to the BlueSolar PWM-Pro charge controller:

The panel must be connected to the controller with a standard RJ45 UTP cable.

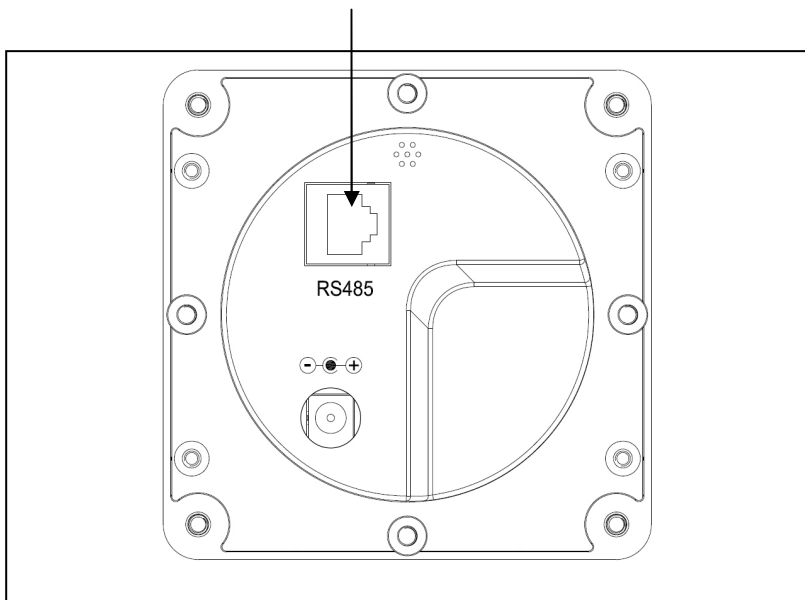


3. Product features

3.1. General



RS485 communication and power interface



Warning LED

The warning indicator LED flashes in case of failure of the connected charge controller.

Audible alarm

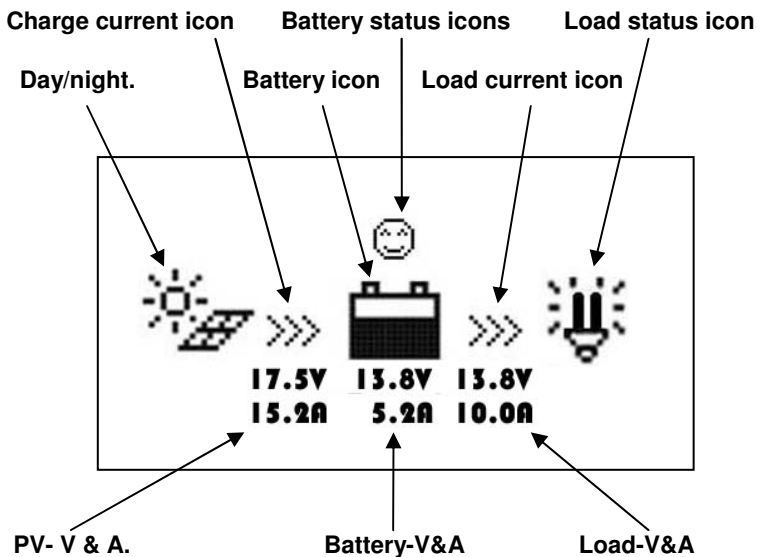
The audible failure alarm can be activated or deactivated.

Communication LED

Indicates communication status when the display is connected with the charge controller.

3.2. Display

After connecting the remote panel, the default monitoring display will be shown:



Day and night icons

☾ - Night, ☀ - day. If the voltage of the solar array is above 1V, the daytime icon is shown.

Battery icon

The battery icon shows the state of charge of the battery. For this function the correct battery capacity must be set (see section 5.4) and all loads must be connected to the load output (i.e. not directly to the battery).

Note: When the battery is fully discharged, the icon displayed is ☒.

Battery status icons



- Normal voltage.



- Under voltage,



- Over discharge

Load status icon

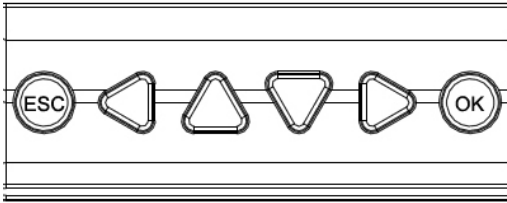


- Load output "on"

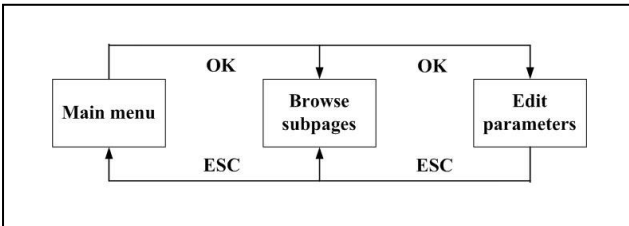


- load output "off"

3.3. Buttons

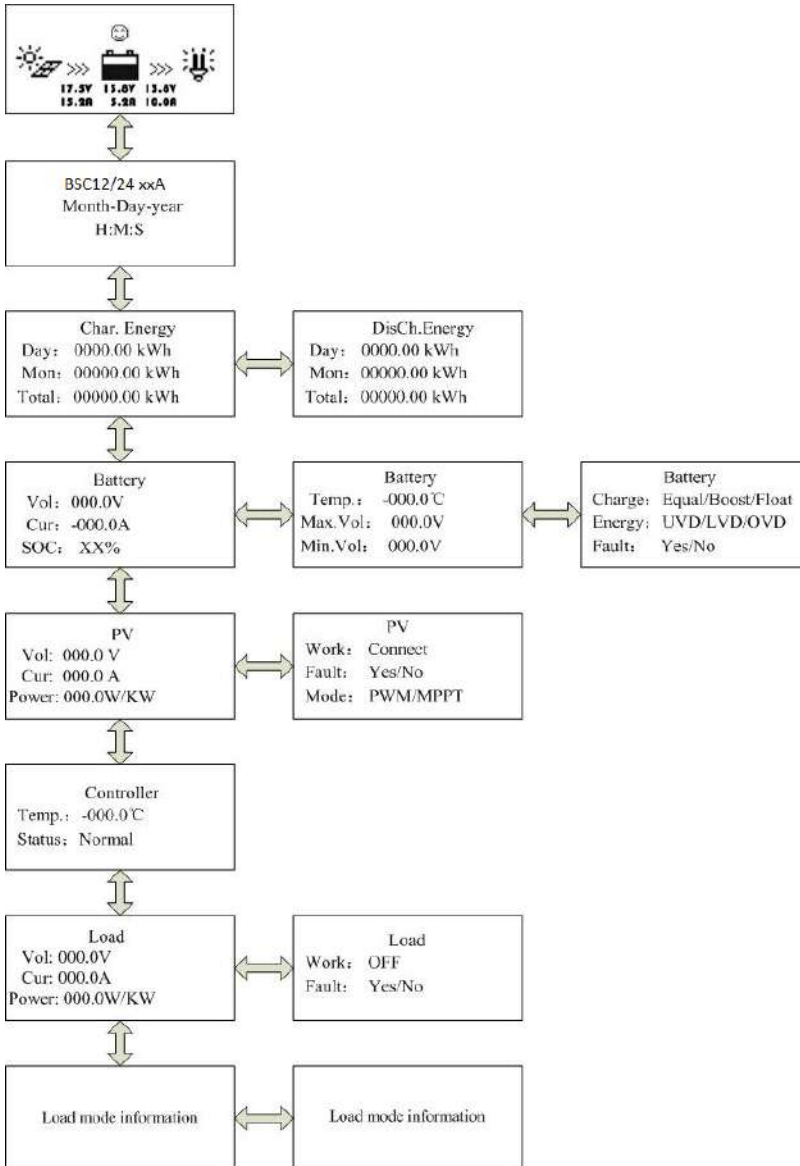


Operation is visualized in the schematic diagram below:



4. Monitoring

The default monitoring display and monitoring subpages can be accessed with the UP/DOWN and LEFT/RIGHT buttons. See the diagram on the next page.



5. Full setup details

5.1. Main menu

When in monitoring mode, the main menu is accessed by pressing the ESC button.

The UP and DOWN buttons are used to browse through the main menu:

- 1 Monitoring**
- 2 Device information**
- 3 Test operation**
- 4 Control parameters**
- 5 Load set**
- 6 Device parameters**
- 7 Device password**
- 8 Charge mode**
- 9 Factory reset**
- 10 Failure information**
- 11 Meter parameters**

The OK and ESC buttons are respectively used to enter or exit the corresponding pages of the menu items.

A password must be entered to change settings. When on a settings page, press OK to access the password page and fill in the password to enable changing of settings.

The default password is 000000

5.2 Device information

The charge controller model, ratings and serial number are displayed (press the DOWN button to display the serial number).

5.3 Test Operation

When the load output is set on manual control (default setting, see section 5,5), the output can be switched ON or OFF with the orange switch button on the Charge Controller. The low voltage cut-off is also operational.

The manual control function is disabled when other load output settings are chosen (see section 5.5).

However, when other load output settings have been chosen, the load output can be tested (i.e. switched ON and OFF) after switching back to Manual Control.

5.4 Control Parameters

The table below shows the list of battery related parameters that can be modified.

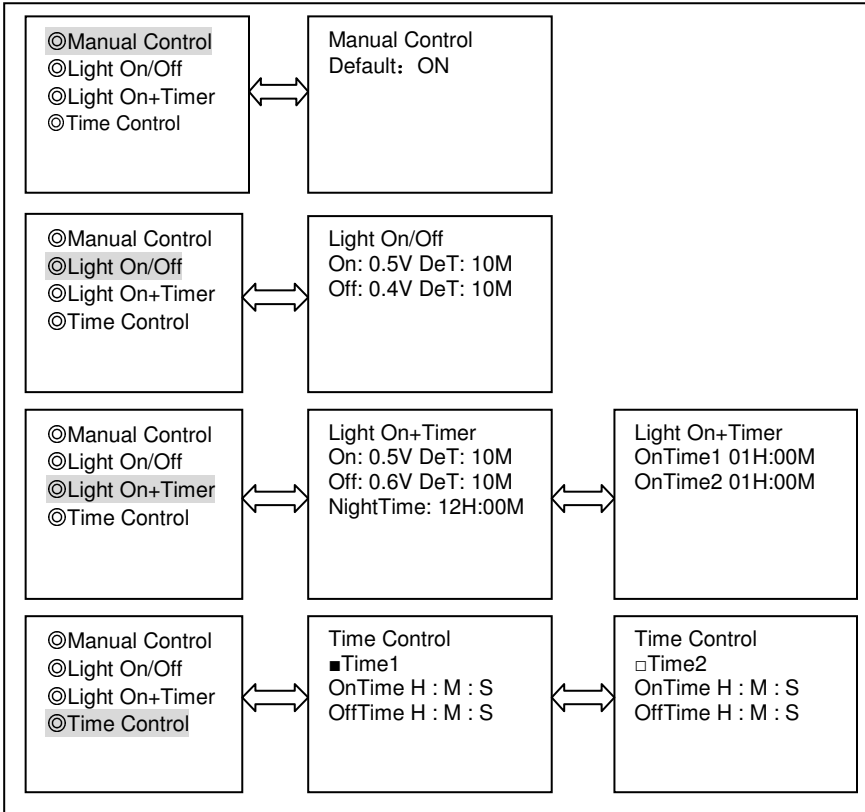
(press the DOWN or UP button to scroll through the parameters)

Parameter		Default setting		
Battery type	Gel	Sealed (AGM)	Flooded	User defined
Battery capacity (Ah)	200Ah			1~9999
Temperature compensation coefficient	-3mV/°C per 2V cell			0~9
Rated voltage (system voltage)	Auto			12V/24V
Over voltage load disconnect	16.0V			9~17V
Charge limit (highest charge voltage including temp. compensation)	15.0V			9~17V
Over voltage load reconnect	15.0V			9~17V
Equalize charge	—	14.6V	14.8V	9~17V
Boost charge (absorption charge)	14.2V	14.4V	14.6V	9~17V
Float charge	13.8V	13.8V	13.8V	9~17V
Boost trigger voltage (starts new charge cycle)	13.2V			9~17V
Low voltage load reconnect	12.6V			9~17V
Under voltage warning reset	12.2V			9~17V
Under voltage warning	12.0V			9~17V
Low voltage load disconnect (nominal value at 25°C)	11.1V			9~17V
Discharge limit (lowest low voltage load disconnect including temp. compensation)	10.6V			9~17V
Equalize duration	—	2 hrs.	2 hrs.	0~3 hrs.
Boost/absorption duration	2 hrs.	2 hrs.	2 hrs.	0~3 hrs.

Multiply voltages by 2 for a 24V system

5.5 Load output setting

The load output setting options are shown below:



Option 1: Manual Control

When the load output is set on Manual Control (default setting), the output can be switched ON or OFF with the orange switch button on the Charge Controller. The low voltage cut-off is also operational.

Option 2: Light On/Off

This is a simple load output On/Off option, based on the solar input voltage of the Controller (= output voltage of the solar panel).

- When, at dusk, the input voltage of the Controller becomes lower than the light On voltage (default 0.50V), the load output is switched on.
- When, at dawn, the input voltage of the Controller becomes higher than the light Off voltage (default 0.40V), the load output is switched off.
- In order to prevent unwanted switching a confirmation time (DeT) can be set: default 10 minutes, range 0 – 99 minutes.

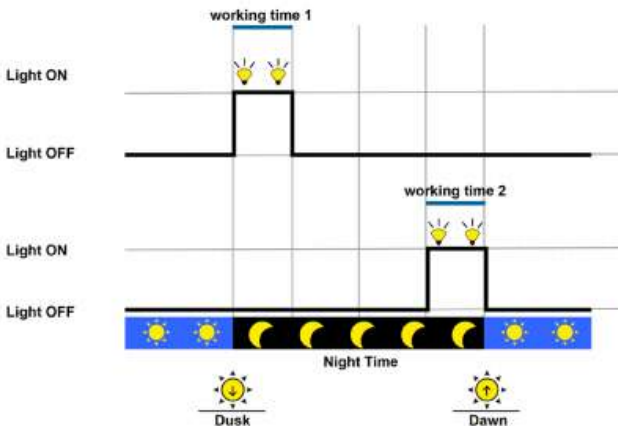
Option 3: Light On+Timer

This option allows for a pre-set On-time after dusk and a pre-set Off-time before dawn.

The dusk and dawn switching moments and confirmation time are set as under option 2.

The remaining parameters are set as follows:

- NightTime: initial setting of the night duration, the controller will subsequently adjust NightTime to the actual duration of the night.
- On Time 1: On period after dusk.
- On Time 2: On period before dawn.



Option 4: Time control

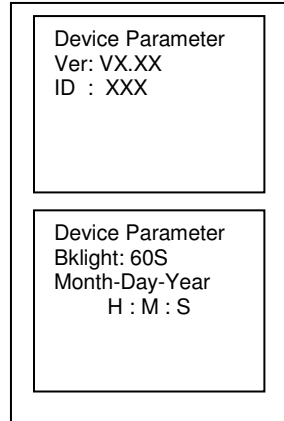
This option uses the internal clock (see section 5.6) to set one (Time1 only) or two on-time periods.

5.6 Device Parameters

The first screen displays the software version and communication ID number of the Charge Controller.

The second screen allows setting of the backlight timer, and local date & time (use the DOWN button to go to the second screen).

The above data are stored in the Charge Controller.



5.7 Device Password

The password is needed to change settings of the charge controller. The default password is "000000". The password is stored in the Charge Controller

5.8 Charge mode

This page is intended for future applications. Please do not change.

5.9 Factory reset

Allows reset of the charge controller to the default settings.

5.10 Failure Information

Displays failures such as Over Voltage, Over Load or Short Circuit. (automatic reset when the fault is corrected).

5.11 Parameters

The first screen displays the type, software version and serial number of the remote meter.

The second screen allows modification of

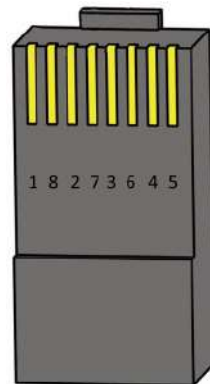
- Switch-Pages (refresh time interval of the monitoring pages, default 0 seconds)
- Backlight duration (default 20 seconds).
- Audible alarm ON/OFF (default OFF).

6 Technical Specifications

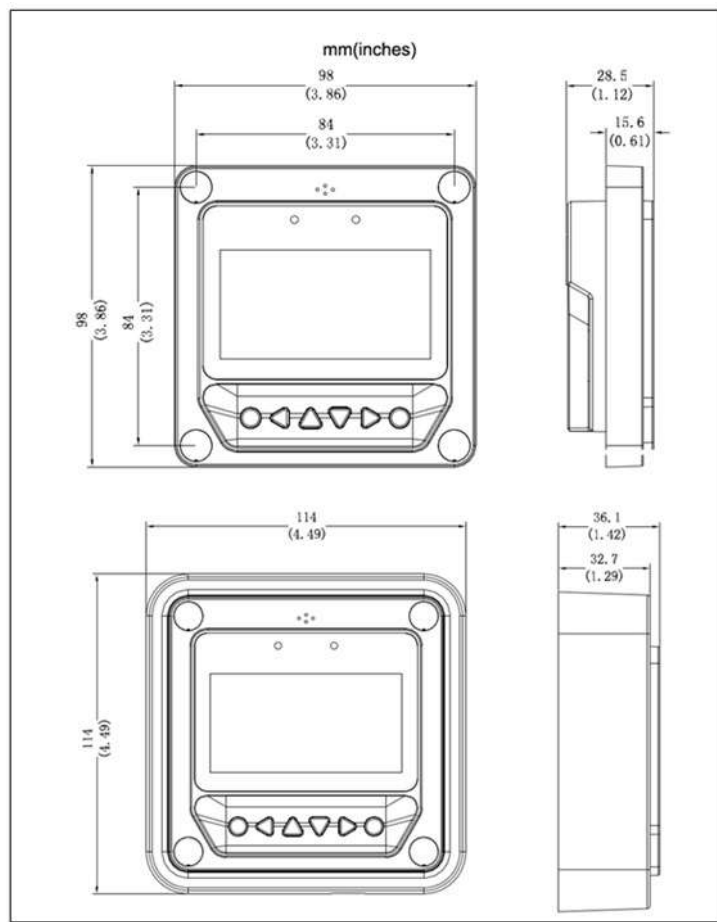
Self-consumption	backlight and acoustic alarm on max. 65mA
	Backlight on max. 23mA
	Backlight off max. 15mA
Faceplate dimensions	98 x 98 mm / 3.86 x 3.86 inch
Frame dimensions	114 x 114 mm / 4.49 x 4.49 inch
Connector type	RJ45
Cable length	Max. 20 m
Weight	0.2 Kg
Ambient Temperature	-20°C~+70°C / -4°F~158°F

7 RS-485 connector pinout:

Pin No.	
1	Power: +12V
2	RS485 B
3	RS485 A
4	GND
5	GND
6	RS485 A
7	RS485 B
8	Power: +12V



8 Dimensions:



Victron Energy Blue Power

Distributor:

Serial number:

Version : 02

Date : 01 September 2014

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