



LightCatcher Solar
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PULSE-365+

High Quality PWM Charge Controller

Charge Controller Specifications

TECHNICAL INFORMATION (12/24V AUTO)

RATED INPUT CURRENT	30 AMPS AT 12/24 VOLTS
MAX LOAD OUTPUT CURRENT	30 AMPS
MAX SOLAR PANEL INPUT VOLTAGE	23V FOR 12V BATTERY, 46V FOR 24V BATTERY
BATTERY VOLTAGE:	12V/24V AUTO RECOGNITION
USB OUTPUT	DUAL OUTPUTS, 5V, 2.5A MAX
OPERATING TEMPERATURE	-30 TO 135 F

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SAFETY INFORMATION

Battery must be atleast 65% charged prior to connecting to controller. Connecting a completely dead battery may permanently damage the controller as well as the battery. Controller is only suitable for regulating power from solar modules, never connect another power source to the controller. For max efficiency and performance, use LightCatcher solar modules only. Never install controller in a sealed location with batteries. Controller is suitable for the following battery types:

- b1 Setting: Lead acid batteries (AGM, GEL, etc.)
- b2 Setting: Lithium ion battery (3 strings of 11.1V lithium batteries)
- b3 Setting: Lithium iron phosphate (LiFePO4)

INSTALLATION INSTRUCTIONS

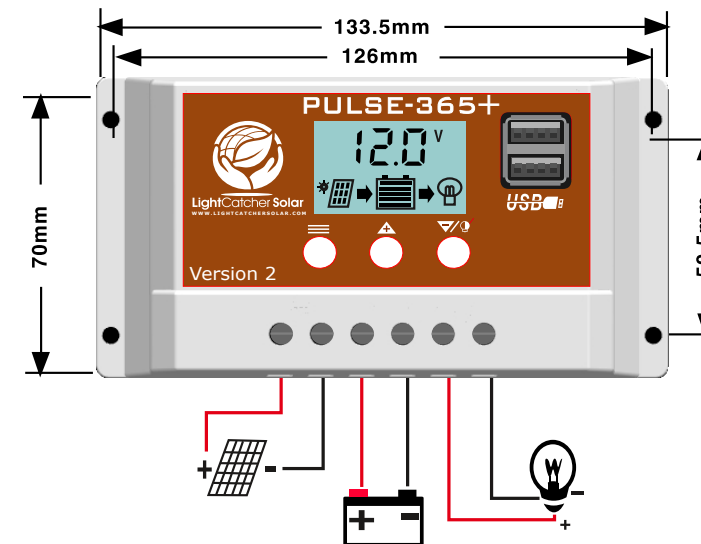
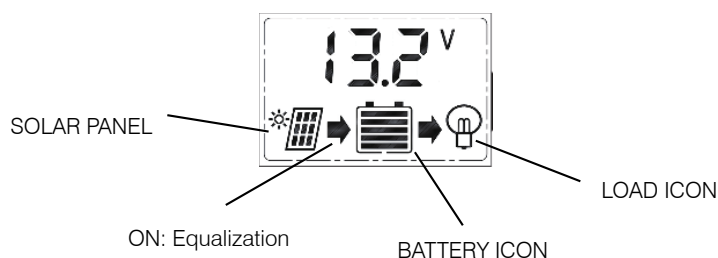
Mount the charge controller onto a clean, flat surface. It is very important to allow enough space both above and below the charge controller to ensure maximum air flow. After proper mounting, connect the battery to the charge controller terminals labeled with the battery symbol, while observing polarity. Be careful not to switch the polarities of the battery and do not allow the bare wires to touch the metal casing of the charge controller or each other. Once connected, the LCD will display a battery icon, indicating that the battery has been connected. Make sure you only connect a fully charged battery (65% full minimum).

WARNING! BATTERY MUST BE CONNECTED PRIOR TO CONNECTING SOLAR PANELS

While observing polarity, connect solar (PV array) leads to the solar terminals on the controller. Once connected, the LCD should display a solid solar panel icon. (The panel icon may not appear if the panel is in total darkness).

Optional: Connect DC load. Load can only be within the range of the battery voltage. An inverter should **NOT** be connected to the controller load, instead, it should be connected directly to the battery. Do not connect reactive loads to the controller (Motors, Fans, etc)

USB: You may use the USB port to charge your mobile devices once the battery is connected. USB acts as a load that is always on.





SETTINGS


Toggle the settings button to select a parameter, click and hold settings for 5 seconds to modify the selected parameter. It is recommended that you use default parameters.


To change load settings, toggle the settings button til a numerical value is displayed on the LCD. The load can be programmed as follows:


- 24H: Load output on all times (May be switched off by clicking the minus sign)
- xxH: Where xx is a numerical value greater than 0. Load is on for xx hours after sunset. 0H: Dusk til dawn


 Main Display: Typically, this is the display displayed once all components are connected accordingly.

 Float Voltage: This value may be adjusted according to battery datasheet, however, it is recommended that default value is unchanged.

 Load Reconnect: This value is the voltage of the battery at which the load may be reconnected after the battery is charged. You may set this voltage according to your needs.

 Load Disconnect: The voltage of the battery at which the load is disconnected. To preserve the life of the battery, It is recommended that the battery is not fully discharged.

 Battery settings: This is used to select the battery type. b1 for lead acid, b2 for Lithium Ion (3 string at 11.1V), b3 for LiFePO4 (4 string at 12.8v).

 Load Settings: This value may be set to operate the load as desired. The value represents the number of hours at which the load is on after sunset. 0H will turn load on from dusk to dawn.