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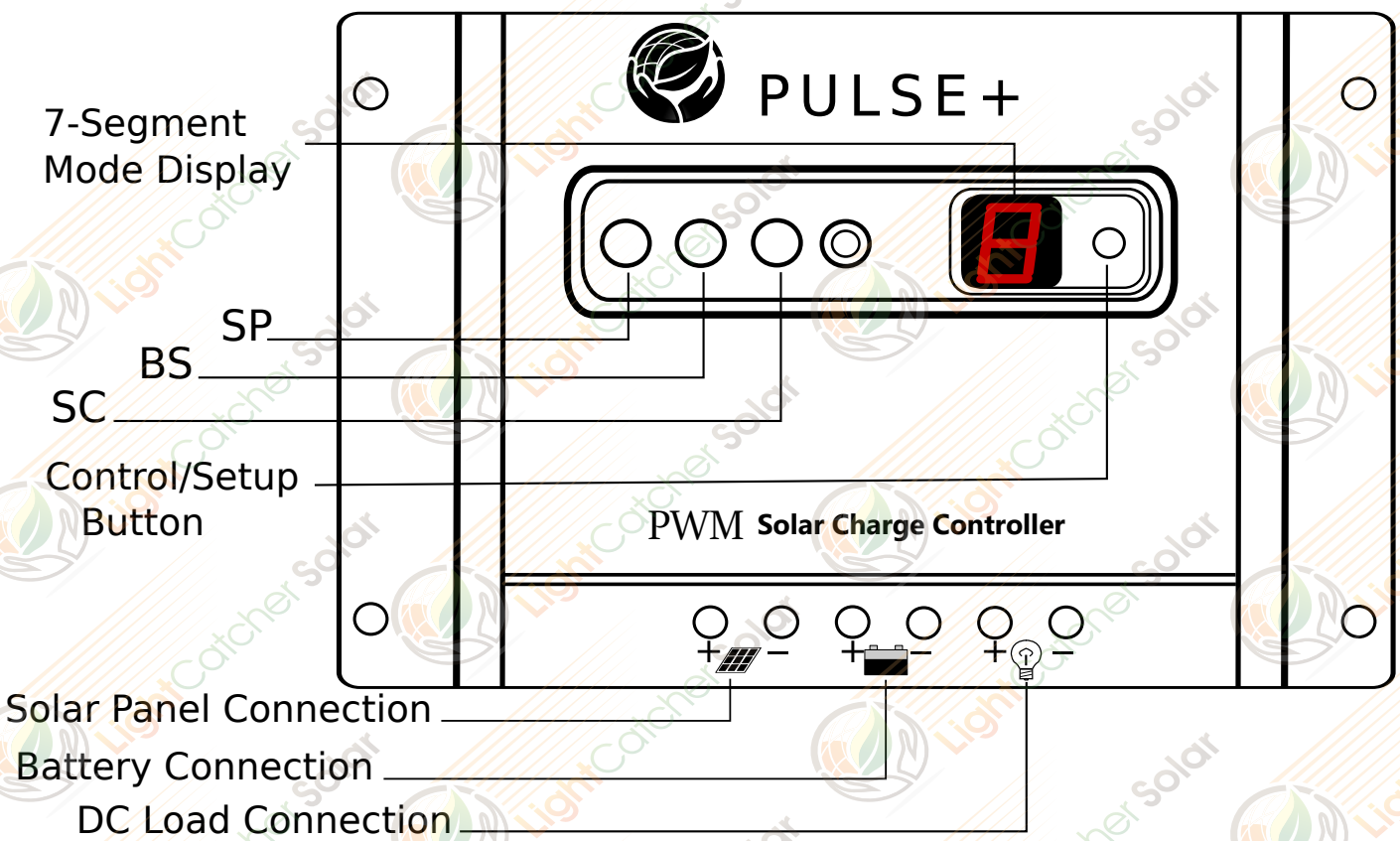
PULSE+ 30 AMPS PWM SOLAR CHARGE CONTROLLER



SP: PANEL STATUS INDICATOR

OFF: Disconnected
ON: Adequate power from solar panel, charger charging battery
FLASHING: Battery fully charged, Charger off

BS: BATTERY STATUS INDICATOR

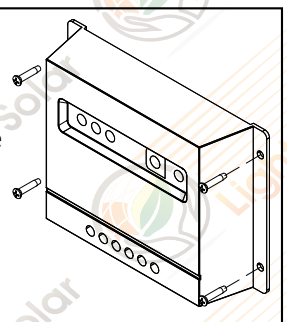
OFF: Disconnected
GREEN ON: Battery charging
FLASHING GREEN: Battery fully charged
ORANGE ON: Battery level low
RED ON: Battery charge too low, turns load off automatically

LS: LOAD STATUS INDICATOR

OFF: Disconnected
ORANGE ON: Output load fully on
RED FLASHING (SLOW): Overload, output off
RED FLASHING (FAST): Load is short-circuited, output off

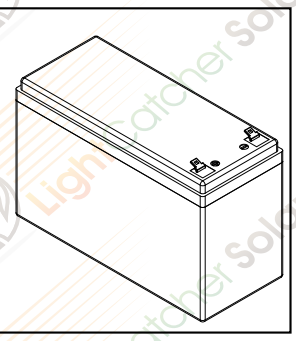
STEP 1: MOUNT CONTROLLER

Mount charge controller onto a clean flat surface. Allow enough space around charge controller to ensure adequate airflow. Charge controller should be installed in well-ventilated, clean area that is easily accessible.



STEP 2: CONNECT BATTERY

While observing polarity, Connect the battery bank to the charge controller battery terminals. It is extremely important that the polarities of the controller and battery are not switched.



STEP 3: CONNECT SOLAR PANEL

While observing polarity, Connect solar panel extension cables to charge controller PV terminals. If panel produces enough energy, a green LED will light up indicating that solar panel is connected accordingly.

STEP 4: CONNECT LOAD

Connect a 12VDC or a 24VDC load to this these terminals. The maximum rated current for the Pulse+ is 30 amperes. Because of current surges, it is important to stay bellow that limit, LightCatcher-Solar recomends that you should stay within 70% of the max rated current.

STEP 5: ENJOY SOLAR POWER!

After completing connections as shown in figure one, the charge controller will start initiating charge to your battery or batteries accordingly. The solar panel status indicator LED will turn on (or start flashing if battery is fully charged) and the battery status indicator LED will turn green (or flash green if battery is fully charged). You may also press the ON/OFF/Setup button to change the operating mode of the controller to control the load output. For more on modes of operation, please refer to Mode Operation table below.

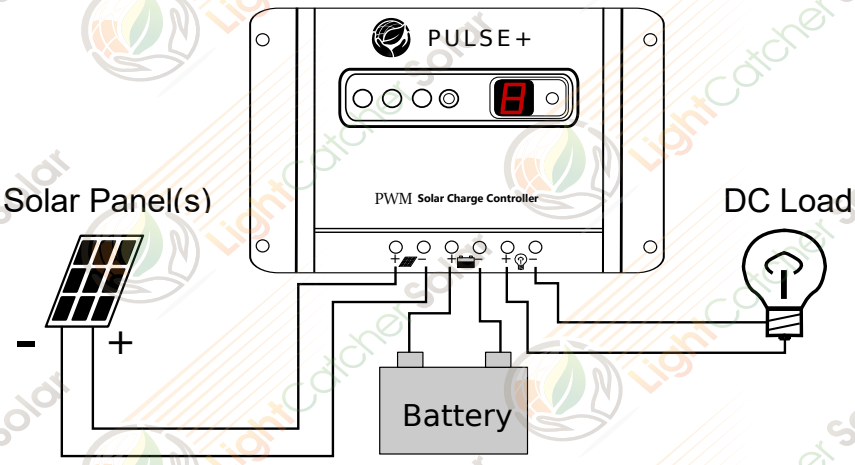


Figure 1.Typical wiring diagram

CONTROLLER WORK MODES DESCRIPTION TABLE

7-Segment Mode Display	Description of Operation
0	Charge only mode, Load output turned off & battery is charged accordingly
1-9	Battery charge on & load on for set number of hours as determined by selected number
H	Manual load control, press ON/OFF button to toggle load output
L	Light Controlled output will turn off output when solar panel is receiving adequate sunlight. This is mostly used for light control applications
D	Debug mode for debugging purpose