POWERTECH

Miniature 12V 3A PWM
Solar Charge Controller
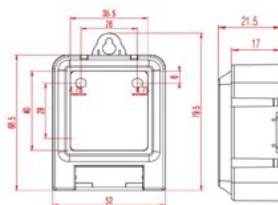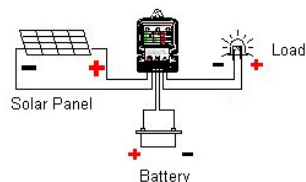### MP3762
User Manual

Introduction:
This compact solar controller uses Pulse Width Modulation (PWM) to manage battery charging from a connected solar panel. It features light and timer control, similar to street lights, and three charging states (bulk, equalise, and float charging). It provides all the important safety features such as overcharge, over-discharge, over-current, short-circuit, and reverse-polarity protection.

Installation Size & Connection:
1. Installation environment: controller should be installed in a dry and ventilated place.
2. Installation size shown below.
3. Connection method (as shown in the figure below)
A. Firstly,connect battery correctly (positive on the left). Load remains long off during
   daytime, but also when it under voltage and over voltage. Otherwise, please
   check all the connection carefully.
B. Secondly, connect solar panels properly (positive on the left), charge indicator LED will light up
   indicating charging status. Otherwise,please check all the connection carefully.
C. At last, connect load, make sure connection is right (shown in bulb, positive on the left), lamp
   luminous. Load will remain long off not only during daytime, but also when system reaches under
   or over voltage. Otherwise, please check all the connection carefully.
Note: Above connection steps ABC should be followed in order, otherwise, controller will be damaged.
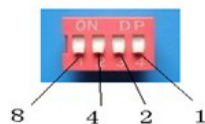
Connection and dimensions:

LED Status Indication:

LED	State	Function
Charge	Off	During night or no connection with battery
	Long bright	Battery charge in balance state
Power	Long bright (Green LED)	Controller have normal output
	Long off (Green LED)	Controller output protection

Setting Instructions:
This controller has an inbuilt dial switch, number 8,4,2,1 represent hours. Customer should open outer shell before setting time. You can see dial switch after opening outer shell. Kindly find following detail operation as follows: The following dial switch,1, 2, 3, 4, as shown in the diagram means setting time, 8, 4, 2, 1. For example, if customers want to set 6 hours, flick dial up button 2 and 3, LED will last 6 hours. If 11 hours needed, dial up button 8, 2 and 1. LED will work 11 hours. If customers dial all button (8, 4, 2, 1) up, controller will enter into light control mode. Otherwise, all button (8, 4, 2, 1) be dialed down, controller will come into home system mode, load will have continuous output last 24hours.

Function:
1. The model integrates household type and street lamp type design in one controller.
2. The controller can be used with 12V battery system.
3. The controller has light control and time control.
4. The controller has many protective measures,such as overcharge, discharge, over current, short circuit, reverse polarity.
5. The controller with precise design and high protective measures.
6. Three stage PWM charger.

Safety Advice:
1. The controller has reverse connection protection, however avoid reverse polarity as this can cause damage to load.
2. If battery is found doesn't work properly or doesn't work, check all the connections. Use of solar panel is a strict NO. Controller will be damaged, if both of solar panel and battery connection in reverse direction.
3. To avoid battery short circuit accidentally at any time because battery stores up lots of energy.
4. Battery will produce some flammable gas when it's charged fully, so, keep fires away, prevent explosion from this situation.
5. Follow suggestions of battery manufacturer, keep children away.

Specifications:
Rated Voltage:	12V
Bulk Charging Voltage:	14.8V
Equilibrium Charging:	14.5V
Float Charging Voltage:	13.7V
Under Voltage:	10.8V
Under Recover Voltage:	13V
Non–Load Current:	≤6mA
Charging Circuit Voltage drop:	≤0.2V
Discharge Circuit Voltage drop:	≤0.1V
Maximum Charging Current:	3A
Maximum Load Current:	3A
Controller Protection:	Overcharge, over-discharge, over-current, short-circuit, reversed
Charging Mode:	PWM Charging Mode
IP Rating:	IP22
Weight:	33g
Dimensions:	52(W) x 22(H) x 80(D)mm