

TDSB80

- (2) 60W solar panel provides a charge for the 80Ah BATTERIES.



1. Brand MCU control, standby ultra-low power consumption;
2. The charging principle adopts a three-stage charging algorithm to charge the battery once a week, which can effectively prevent the battery from being unbalanced and vulcanized, and increase the battery life;
3. The power MOSFET is used as an electronic switch without any mechanical switch and without any protective action delay;
4. Charge and discharge green and red LED indicator, discharge light control + timing, pure light control, normally open mode can be manually adjusted

Peak power (Pmax)	60W	Test criteria	Irradiance 1000W/M2	Operating current	1.66(A)
Crest voltage (Vmp)	18 (V)	Max system voltage	600 (V)	Open-circuit voltage	21.4 (V)
Short-circuit current	1.83 (A)	Solar Cell Quantity	36 (4*9)	Dimension	26*21*1(inch)
Glass	3.2mm (Ultra-white textured tempered glass)	Frame	Aluminum alloy frame Strong impact resistance	Weight	8.4lb

Charging Mode	PWM mode
System Current	3A
System Voltage	7.4V、11.1V、14.8V
Power Input	≤18W、≤18W、≤36W
Input withstand voltage	≤25V
Overload protection/Short circuit	1.5 times rated current delay for 5 minutes off,
Protection	Automatic recovery after 5 minutes; ≥3 times rated current short circuit protection action
Charge loop drop	≤0.7V
Discharge circuit voltage drop	≤0.1V
Overvoltage protection voltage	5.5 (3.7V), 9.4 (7.4V), 13.6 (11.1V), 17.8 (14.8V)
Overvoltage recovery voltage	5.0 (3.7V) 、 8.9(7.4V) 、 13.1 (11.1V) 、 17.3 (14.8V)
Charge cut-off Voltage	4.2 (3.7V) 、 8.4(7.4V)、 12.6 (11.1V) 、 16.8 (14.8V)
Over-discharge protection Voltage	3.2 (3.7V) 、 6.0(7.4V)、 9.0 (11.1V) 、 12.0 (14.8V)
Over-Discharge Recovery Voltage	3.7 (3.7V) 、 7.4(7.4V)、 11.1 (11.1V) 、 14.8 (14.8V)
Charging Return Voltage	3.7 (3.7V) 、 7.4(7.4V)、 11.1 (11.1V) 、 14.8 (14.8V)
Daytime identification voltage	3.0 (3.7V) 、 3.5 (7.4V) 、 7 (11.1V/14.8V)
Night identifying voltage	1.0 (3.7 V)、 1.5 (7.4V) 、 3 (11.1V/14.8V)
Operation Temperature	-86°F~+131°F
Storage Temperature	-113°F~+158°F
Operating Relative Humidity	≤90%RH、 no condensation
IP Grade	IP30
External Dimensions	2.1*2.7*.86 inch
Installation Cabling	AWG22~14/2mm ²
Weight	70.54 lb

Controller Indicators Description and Troubleshooting

Indicator No.1 (CHARGE): When there is sun, the solar panel has voltage output, this indicator will

light red Indicator No. 2 (BATTERY): battery level indicator

- a. Flashing red light: battery power $\leq 25\%$
- b. Red and green flashing alternately: battery power $\leq 50\%$
- c. Flashing green light: battery power $\leq 75\%$
- d. Steady green light: battery power $> 75\%$

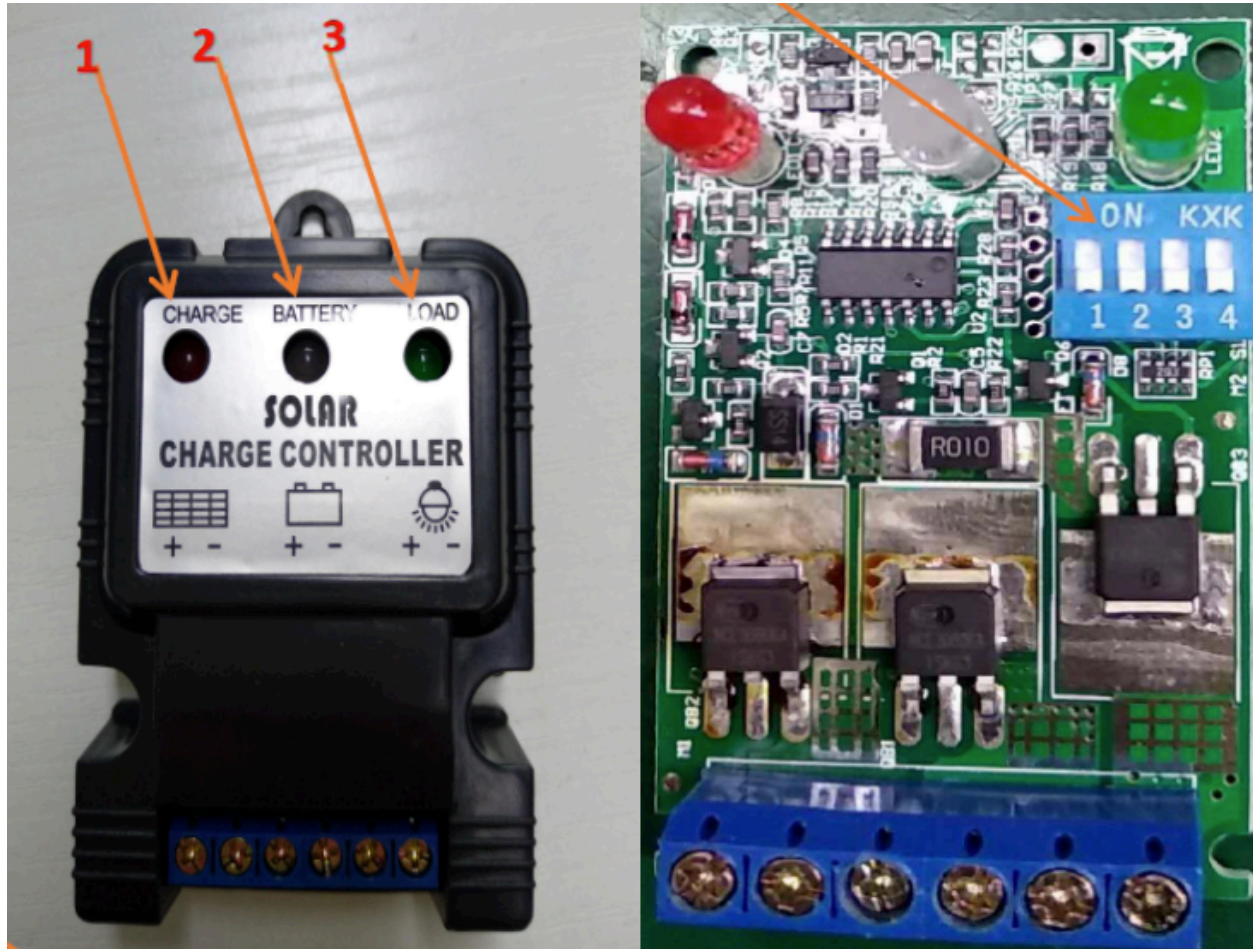
Indicator No. 3 (LOAD): voltage output indicator, when the controller has power output, this indicator will

light green

Troubleshooting:

1. Three indicator lights flash alternately (With sunlight)
 - a. The battery cable is open
 - b. No battery
 - c. Damaged battery
2. After inserting the solar panel, the output light (LOAD) goes out (With sunlight)
 - a. Controller mode is wrong
=> Tune to the normally open mode, all dial to the 1234 side
3. The first two lights (Charge & Battery) are on, the last one (Load) is off (With sunlight)
 - a. Battery has no power and is charging
 - b. Controller is broken

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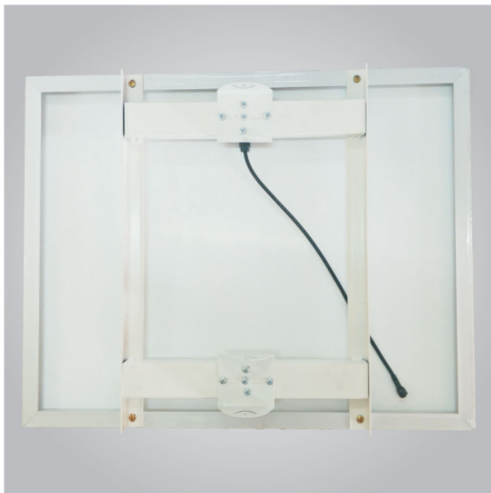
Double Solar Panel Installation Guide



1. Fixed double crossbeam



2. Bracket finished



3. Prepare Double Solar Panels



4. Full set finished



5. Installation diagram of bullet camera



6. Installation diagram for PTZ



1. Fix bracket on the support.



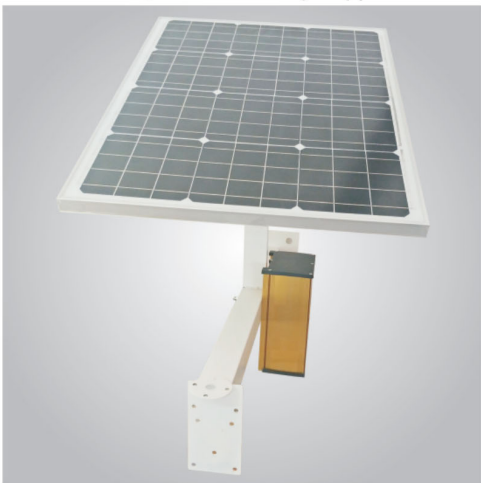
2. Prepare the solar panel with bracket fixed



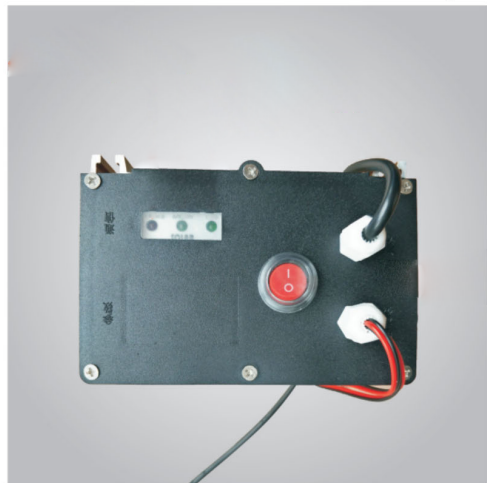
3. Install solar panel to battery support bracket.



4. Connect the black cable to solar panel



5. Get full set ready



6. Battery Box

NOTES:

1. When unpacking, take out all the screws and put them together to avoid losing them.
2. When installing, the black power terminal should be on top of the solar panel to avoid a short circuit caused by rain leaking in.
3. The solar panel should be installed in a place with sufficient sunlight, neither on the wall, nor under the tree and other places with insufficient light. The front of the solar panel should be at an angle of 60° to the place where the sun rises, to ensure that the sun shines on the panel for 10 hours during the day, improve the energy conversion rate, and the longer life time of the battery.
4. In case of continuous overcast and rainy days, photovoltaic charging is not possible, you can take the battery indoors and charge it with a regular lithium battery charger.
5. Waterproof measures should be taken for the line interface. which can be wrapped with waterproof tape to avoid water ingress.