

SOLAR CONTROLLER

User-Manual



Model No.: DT12/2420LI-A

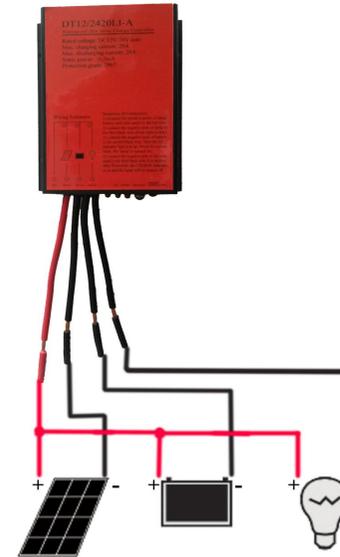
1. DESCRIPTION

This controller adopts fully sealed waterproof design and infrared remote control technology. Without buttons and equipment exposed outside, the product is really waterproof and dustproof and anticorrosive. The minimum charging current can be up to 10mA, which assures normal charging in the poor light in cloudy and rainy days.

2. FEATURES

- 1) This controller adopts fully sealed waterproof design, and protection grade reaches IP67, which assures that the controller can be used in any bad conditions;
- 2) This controller adopts aluminum housing design, and is filled with high heat conductivity sealant, which assures great heat dissipation;
- 3) This controller adopts intelligent program control, which assures high stability;
- 4) This controller adopts intelligent PWM charging mode, which assures high charging efficiency and great low current charging ability;
- 5) Flexible and adjustable working parameter makes the controller adapt to different solar systems;
- 6) External temperature sensor assures real-time temperature compensation;
- 7) This controller can withstand from -35°C to 60°C high and low temperature, so it can adapt to extreme temperature.

3. INSTALLATION



- 1) Connect the positive poles of lamp, battery and solar panel to the red wire;
- 2) Connect the negative pole of lamp to the first black wire (from right to left);
- 3) Connect the negative pole of battery to the second black wire. Then the IDLE indicator is lit up. About 30 seconds later, the lamp is turned on;
- 4) Connect the negative pole of solar panel to the third black wire. If at daytime, after 70 seconds, the CHARGE indicator is on and the lamp will be turned off.

4. NOTES

- 1) Before using the controller, in order to avoid components damage because of mismatched parameters, please confirm the product's working parameters have been set according to your needs.
- 2) Please connect wires in order. Wrong wire connection leads to system's misjudgment and controller's damage.

5. INDICATORS

State	Idle (green)	Charge (green)	Discharge (red)	Remarks
Idle	on	off	off	Normal. Happen when sunlight is weak.
Charge	off	on	off	Normal

State	Idle (green)	Charge (green)	Discharge (red)	Remarks
Discharge	off	off	on	Normal
Low voltage of Battery	on	on	Slow flicker	Normal
finish discharging	on	on	off	Normal
output end short circuit protection	off	off	Fast flicker	Abnormal
Abnormal input voltage protection	on	Fast flicker	off	Abnormal. Check whether battery's voltage is 12V or 24V
Over current protection of Charging	off	Slow flicker	off	Abnormal. Check whether solar panel is out of the range of this model.
unactivated	Fast flicker	Fast flicker	Fast flicker	Abnormal. Model is wrong. Please contact the manufacturer.
24 hours working mode	off	on	on	Normal. This mode is for solar power system
1) No flicker means OK; 2) Slow flicker (2 seconds) means recoverable error. There is no need to solve the error manually; 3) Fast flicker (0.5 seconds) means unrecoverable error. The error need to be solved manually.				

6. SPECIFICATIONS

Model	DT12/2420LI-A
Rated working voltage	DC12V / DC24V
Self consumption	6.5mA
Max. charging current	20A (Max. solar panel 12V 340WP / 24V 680WP)
Max. discharging current	20A (Max. load 12V 200W / 24V 400W)
Working temperature	-35℃ to 60℃
Charging mode	PWM
Working mode 1	Light controlling and time controlling, 3 time frames (for solar street light)
Working mode 2	24 hours (for solar power system)

Over-charging voltage protection	14.5V/29.0V (normal temperature 25℃ , with temperature compensation)
Under voltage protection	Users can set it according to their needs (factory default 11V/22V)
Exit under voltage protection	Users can set it according to their needs (factory default 12.5V/25V)
Intensity of illumination for turning on lights	Users can set it according to their needs (factory default 5lux)
Intensity of illumination for turning off lights	Intensity of illumination for turning on lights plus 10lux
Weight	263g
Size	97mm×76mm×23mm

7. APPLICATION

Solar power system, solar street light and solar garden light and so on

8. SAFETY AND PROTECTION

Lightning protection, overcharge and over discharge protection, reverse polarity protection, and reverse current protection at night

9. WARRANTY

Two years since the date of ex-factory