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Model

NSC-120



Instructions for Use Of NSC Series All-in-One Constant Current Controller for Solar Street Light

Overview:

The NSC series waterproof all-in-one constant current controller integrates solar charge and discharge management, LED step-up constant current drive and other functions. It is widely used for solar street lights, solar garden lights, etc., providing high reliability, high efficiency, high precision, ease of installation and maintenance and other benefits.

Features:

- High accuracy and high efficiency PWM charge with constant voltage and limited current
- Multi-period programmable load power/time control
- Charge and discharge high and low temperature protection
- Load intelligent power mode, with load power adjustable automatically according to the battery level
- High precision digital step-up constant current control algorithm, ensuring high efficiency and high constant current accuracy
- Infrared wireless communication, allowing for setting/reading parameters, reading status, etc.
- Multiple protections such as battery/PV reverse polarity protection, LED short-circuit/open-circuit/limited power protection, etc.
- All-aluminum housing, with IP67 rating, allowing for use in a variety of harsh environments.
- External indicator, infrared sending and receiving device optional

Technical Parameters:

Items	Values
Model	NSC-120
System voltage	12V/24V
Zero load loss	< 10mA/12V; < 12mA/24V;
Load current	50mA ~ 3960mA
Load voltage	12V system: 15V ~ 60V 24V system: 30V ~ 60V
Maximum power of load	60W/12V;120W/24V
Load conversion efficiency	90% ~ 96%
Load current accuracy	< 3%
Maximum charge current	20A
Solar input voltage	≤ 55V
Step-up charge voltage/charge voltage	14.4V (lead acid battery); 12.5V (lithium battery) (settable)
Charge return voltage/floating charge voltage	13.8V (lead-acid battery); 12.0V (lithium battery) (settable)
Over discharge voltage	11.0V (lead-acid battery); 9.2V (lithium battery) (settable)
Over discharge return voltage	12.6V (lead acid battery); 10.2V (lithium battery) (settable)
Light control voltage	5V ~ 11V(settable)
Light control delay	1min ~ 60min(settable)
Operating temperature	-35°C ~ +65°C ;
IP rating	IP67
Weight	280g
Controller dimensions (mm)	100×82×20
Controller installation size (mm)	86×75
Installation hole diameter (mm)	Φ3.5

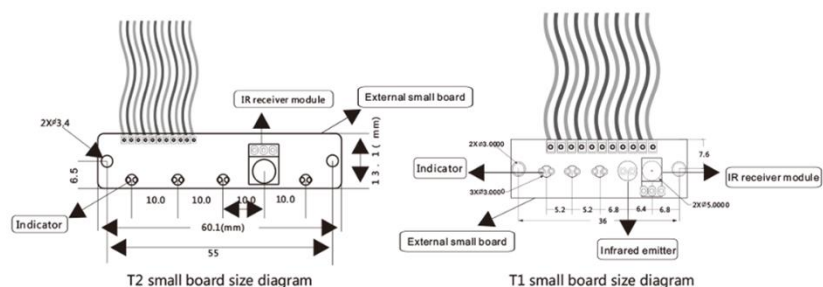
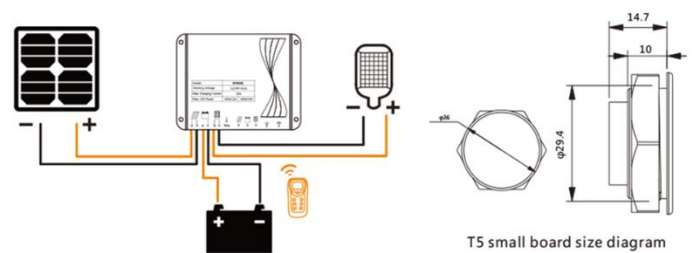
Indicators Description:

LED indicator	Indication content	Status	Function
	Charging indication	Steady on	Solar panel voltage is higher than light control voltage
		Off	Solar panel voltage is lower than light control voltage
		Slow Flash	In charging
		Quick Flash	System over-voltage
	Battery indication	Steady on	Battery works properly
		Off	Battery is not connected/ Lithium battery protection board enabled
		Quick Flash	Battery over-discharge
	Load indication	Steady on	Load is turned on
		Slow Flash	LED load is open circuited
		Quick Flash	LED load is short circuited
		Off	Load is turned off

T5 indicator plate- Red and blue indicators

Color	Status	Description
Blue	Steady on	Load is turned on
	Single flash	Battery works properly, in standby mode
	Slow flash	In charging
	Quick flash	Lithium battery bms overcharge protection or Lithium battery full charge
Red	Slow flash	Load is open circuited/short circuited
	Quick flash	Battery over discharge

Wiring and Panel Description:



Wiring sequence: Firstly connect the load, then the battery and finally the solar panel.

Note: In order to avoid short circuit between the leads, please connect one lead and wind with insulating tape before connecting the next one!!



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