

SR-DH100



Instructions for Use Of SN/DH Series All-in-One Constant Current Controller for Solar Street Light

Overview:

The SN/DH 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 IP68 rating, allowing for use in a variety of harsh environments.
- External indicator, infrared sending and receiving device optional

SR-DH100

Technical Parameters:

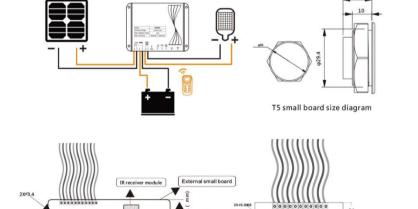
| Items | Values | | | | |
|---|---|---------------|---|------------------|------------------|
| Model | SN40 | SN20 | DH60A | DH100 | DH120 |
| System voltage | 12V | | 12V/24V | | |
| Zero load loss | < 10mA/12V | | < 10mA/12V; < 12mA/24V; | | |
| Load current | 50mA ~ 2000mA | 50mA ~ 1400mA | 50mA ~ 2640mA | 50mA ~ 3300mA | 50mA ~ 3960mA |
| Load voltage | 15V ~ 45V | | 12V system: 15V ~ 60V 24V system: 30V ~ 60V | | |
| Maximum power of load | 40W | 20W | 40W/12V;60W/24V | 50W/12V;100W/24V | 60W/12V;120W/24V |
| Load conversion efficiency | 90% ~ 96% | | | | |
| Load current accuracy | < 3% | | | | |
| Maximum charge current | 10A | 6A | 10A | 15A | 20A |
| Solar input voltage | ≤ 25V | | ≤ 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 | 3V ~ 11V(settable) | | 5V ~ 11V(settable) | | |
| Light control delay | 0s ~ 59s/1min ~ 60min(se | | ettable) | 1min ~ 60r | min(settable) |
| Operating temperature | -35°C ~ +65°C ; | | | | |
| IP rating | IP68 | | | | |
| Weight | 150g | | 170g | 28 | 0g |
| Controller dimensions (mm) | 58×82×17 | | 58×82×20 | 100×8 | 32×20 |
| Controller installation size (mm) | 43×75 | | 43×75 | ×75 86×75 | |
| Installation hole diameter (mm) | Ф3.5 | | | | |

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 |
| | | Steady on | Battery works properly |
| | Battery indication | 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 | | |
| | Steady on | Load is turned on | | |
| | Single flash | Battery works properly, in standby mode | | |
| Blue | | 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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T2 small board size diagram

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T1 small board size diagram