

## Overview

Sky Dream DN series adopts common negative design that can charge duo battery at the same time (SD-DN in short). The SD-DN series controller is a PWM charge controller with built-in LCD display that adopts the most advanced digital technique. The intelligent charging process has been optimized for long battery life and improved system performance. Duo battery charging technology enables it to be widely used on RV, caravan, ship and other occasions.

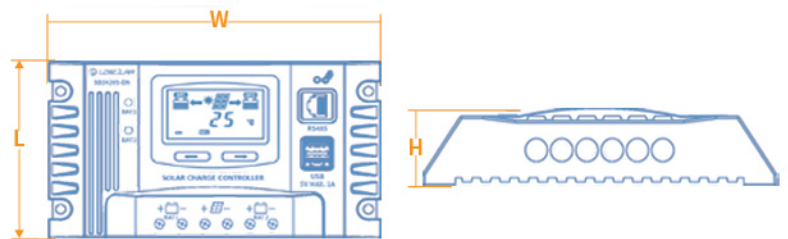
## Features

- ▶ Adopt high quality components of ST, Samsung and Fenghua Hi-Tech, ensure product using lifespan.
- ▶ 3-Stage intelligent PWM charging: Bulk, Boost and Float charging mode.
- ▶ Support 5 battery type: Sealed, Gel, Flooded and LiFePO4, Li(NiCoMn)O2 battery.
- ▶ Support startup from solar panel
- ▶ New LCD display design, dynamically displaying two battery's operating data and working condition.
- ▶ Double USB design, the power supply charge for more electronic devices.
- ▶ RJ45 supports optional Bluetooth and WiFi
- ▶ A variety of charging modes enable users to easily set the charging priority of the battery
- ▶ Two LEDs indicate the operating status of both batteries
- ▶ With humanized button settings, operation will be more comfortable and convenient.
- ▶ Energy statistics and working record function.
- ▶ Battery temperature compensation function.
- ▶ 12 Electronic protections.



## Mechanical size

Model	SD2420S-DN
Charge and load current	20A
Size (L×W×H)mm	92*168*34
Mounting hole size	Φ5mm
Weight(g)	350
Terminal scale	10mm <sup>2</sup>



▶ Please refer to the indicator diagram on the right

▶ Dimension reference drawing

## Application scenario



Solar RV



Solar boat



System With Battery Backup



Smart charging to two independent batteries at the same time

# Safety Protection



Over Charging Protection



Over Discharging Protection



Overload Protection



Short Circuit Protection



Solar Reverse Connected Protection



Battery Reverse Connected Protection



Battery Over-Voltage Protection



Temperature Compensation



Over Temperature Protection



Thunder Protection



Reverse Flow of Current Protection

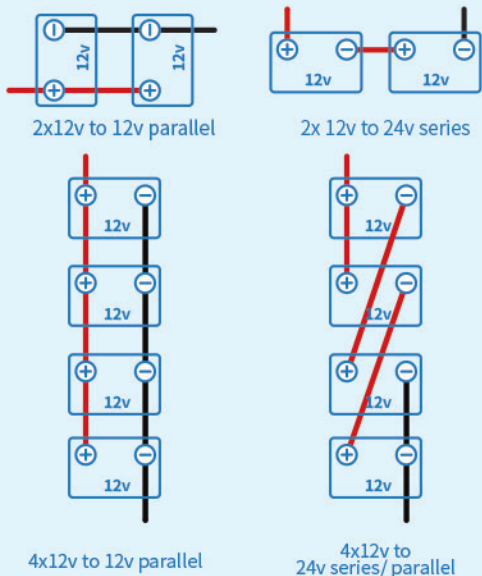


Solar Short Circuit Protection

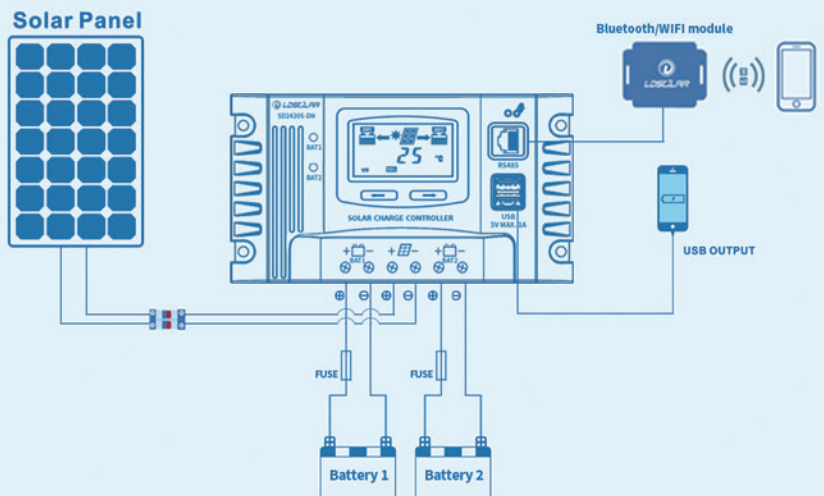
# Technical specifications

Model	SD2420S-DN
Rated Current	20A
System Voltage	12V/24V Auto(Default) Manual set
Rated Power	300W/12V 600W/24V
Self-consumption	<10mA
Solar Input Voltage	<55V
Max.allowable voltage of the battery	<34V
Battery Type	Sealed(Default)/Gel/Flooded/LiFePO4/ Li(NiCoMn)O2/ User
LVD	11.0V ADJ 9V...12V ; x2/24V ;
LVR	12.6V ADJ 11V...13.5V ; x2/24V ;
Float Voltage	13.8V ADJ 13V... 15V ; x2/24V ;
Boost Voltage	14.4V ADJ 13V...17V ; x2/24 ; battery voltage less than 12.6v auto boost 2hours
Battery Over Voltage Protection	16.5V ; x2/24V
Temperature Consumption	-24 mV /°C for 12Vsystem ; x2/24V
Communication port	RJ45
USB Port	USB 5V1A
Grounding	Common negative
WorkingTemperature	-20°C—+55°C
Waterproof grade	IP32
Size ( LxWx H)mm	168x92x34
Weight (g)	320
Terminal scale	10mm <sup>2</sup>

# Connection



● Example Wiring Methods



● Connection diagram