

Overview

Sky Dream Series (SD in short) is our newly designed PWM solar controllers. Its specialty lies in the inner 32 bits CPU, which enables the controllers to work faster and more stable. Besides, our unique Red&Black big terminals design facilitate your connection in real application. It can be applied in the solar system which has higher standard over the stability and reliability.

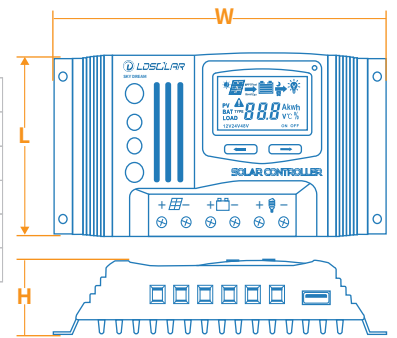
Features

- ▶ 32 bits CPU, sampling precision is higher, operation speed is faster
- ▶ 12V/24VDC 24V/48V Automatic Identification System Voltage
- ▶ 3 stages PWM charging: Bulk, Boost, Float
- ▶ Sealed, Gel, Flooded and lithium battery selection procedure
- ▶ Humanized LCD display, dynamic display operation data and working state.
- ▶ Built-in operation log, account system working state
- ▶ Multi load control mode: Normal mode, Sensor mode, Timer mode
- ▶ Temperature Compensation Function and Controller Over Temperature Protection Function
- ▶ Fullset digital protection functions: Overcharging, Over-discharging, Overload, Short Circuit, Reverse Connection, Controller Over-Temperature and so on.
- ▶ Max 16mm² connectors, colorful connector distinguish plus and minus poles.
- ▶ 5V 1A USB output



Mechanical size

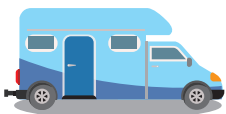
Model	SD2410C/SD2420C/SD2430C	SD2430S	SD2440S	SD2450S/SD2460S	SD4830S	SD4840S	SD4850S/SD4860S
Charge and load current	10A/20A/30A	30A	40A	50A/60A	30A	40A	50A/60A
Size (L×W×H)mm	190×108×41.5	200×98×47.5	200×98×47.5	200×127×53	200×98×47.5	200×106×41.5	200×127×53
Mounting hole size	Φ5mm						
Weight(g)	245/320/330	440/480	620/740	450/490	730/750		
Terminal scale	10mm ² /8AWG	16mm ² /6AWG	25mm ² /4AWG	16mm ² /6AWG	25mm ² /4AWG		



▶ Please refer to the indicator diagram on the right

▶ Dimension reference drawing

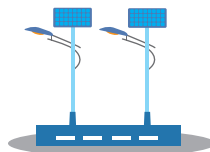
Application scenario



Solar RV



Household solar energy



Solar street lamp



Solar Power Generator



Solar boat

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

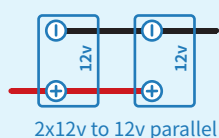


Solar Short Circuit Protection

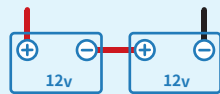
Technical specifications

Model	SD2410C	SD2420C	SD2430C	SD2430S	SD2440S	SD2450S	SD2460S	SD4830S	SD4840S	SD4850S	SD4860S
System Voltage	12V/24V DC auto							24V/48V DC auto			
PV Max Input Voltage	55V							100V			
Self-consumption	<10mA										
Max Charging current	10A	20A	30A	30A	40A	50A	60A	30A	40A	50A	60A
Max Discharging current	10A	20A	20A	30A	40A	50A	60A	30A	40A	50A	60A
Battery type	Sealed(Default)/Gel/Flood/Lithium										
LVD※*	11.0V ADJ 9V...12V ; x2/24V ; x4/48V										
LVR※*	12.6V ADJ 11V...13.5V ; x2/24V ; x4/48V										
Float Voltage※*	13.8V ADJ 13V... 15V ; x2/24V ; M/48V										
Boost Voltage※*	14.4V ADJ 13V...17V ; x2/24 ; x4/48V battery voltage less than 12.6v auto boost 2hours										
Battery Over Voltage ※*	16.5V ; x2/24V ; x4/48V										
Reverse Connection Protection	yes										
Load Over Current Protection	Yes, each 30s auto restart again										
Controller Over Temperature	yes										
USB Output	5VDC/1A 2PCS			5VDC/1A 1PC			/				
Charging Type	PWM										
Charge circuit voltage drop	≤0.25V										
Discharge circuit voltage drop	≤0.1V										
Temperature Consumption#	For 12Vsystem:-24mV /°C ; x2/24V ; x4/48V										
Relative humidity	≤95%, N.C.										
WorkingTemperature	-20°C~+55°C(Product can work continuously at full load)										
LCD temperature range	-20°C~+70°C										
Waterproof grade	IP32										

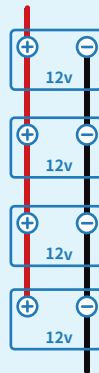
Connection



2x12v to 12v parallel



2x 12v to 24v series



4x12v to 12v parallel



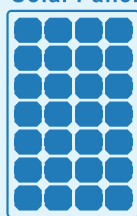
4x12v to 48v series



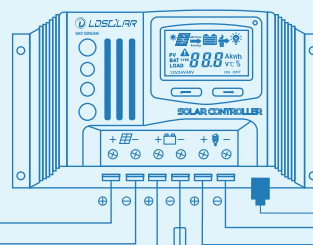
4x12v to 24v series/parallel

Example Wiring Methods

Solar Panel



USB OUTPUT



FUSE



Battery



Load

Connection diagram