Smart Solar Charge Controller

SR-SL2410/SR-SL2420

SR-SL2420

SR-SL2410

| PWM | Auto 12V/24V | | INPUT 55V Max. | IP68 | | | | Li |

Main features

1. The design of IP68 waterproof level and aluminum shell helps effectively prevent erosion.

2. 12 V/24 V system voltage.

3. LED numeric display and waterproof keys are easy to use.

4. An upgraded 3-stage PWM charging algorithm applies an equalizing charge to the battery every week, effectively preventing the battery from non-equalization and sulfuration and therefore extending the battery's service life.

5. Up to 5 load working modes facilitate the product's application to different types of road lamps and monitoring devices.

6. Charging program options are available for sealed, GEL and flooded lead-acid batteries and ternary-material lithium and lithium iron phosphate batteries.

7. An external temperature sensor helps deliver high-precision temperature compensation.

8. Parameter settings of power-down saving functions eliminate the trouble of repeated settings, making operation easy and   convenient.

9. Various kinds of state indicators.

10. Overcharge, over-discharge and overload protection, as well as short-circuit and reverse-connection protection.
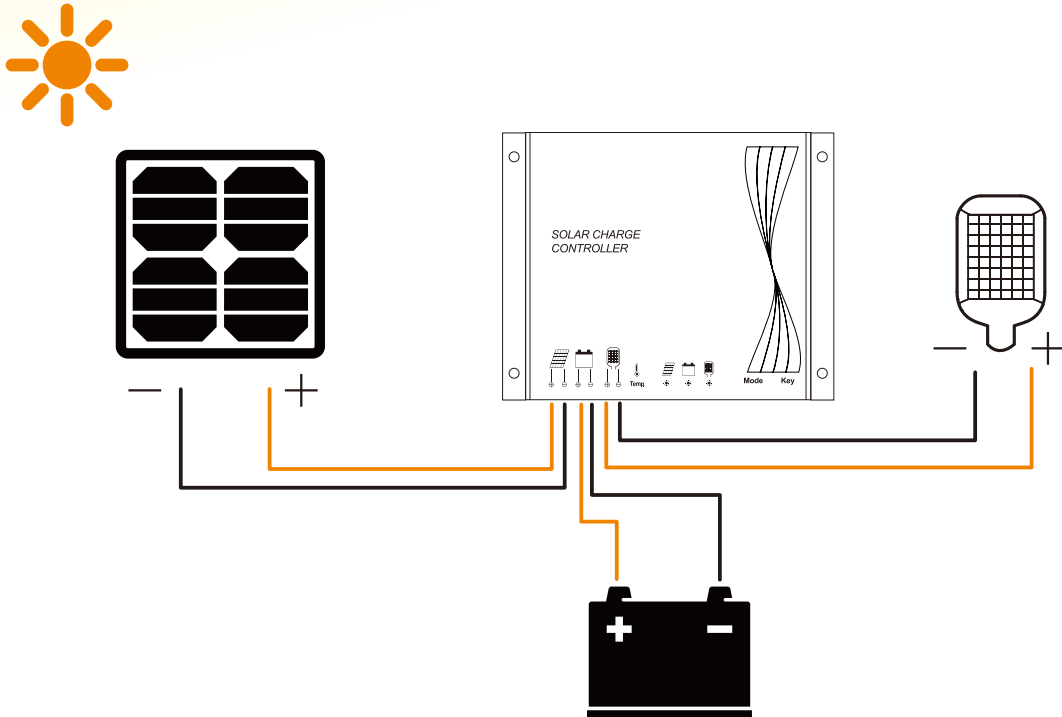
11. TVS lighting protection.

Product Picture

Charge indicator

Battery indicator

Load indicator

Key

Mode

Connection leads

Temperature sensor

Product Detail

Wiring diagram is as below

Status Indication

LED lamp	Indications	Status	Functions
	Charging	Steady on	Solar panel of voltage
		Steady off	Solar panel of no voltage
		Slow flashing	Charging in process
		Quick flashing	System over voltage
	Battery	Steady on	Normal battery function
		Steady off	Battery not connected
		Slow flashing	Battery under voltage
		Quick flashing	Battery over discharged
	Load	Steady on	Load turned on
		Steady off	Load turned off
		Slow flashing	Overload protection
		Quick flashing	Short-circuit protection

Installation Dimension
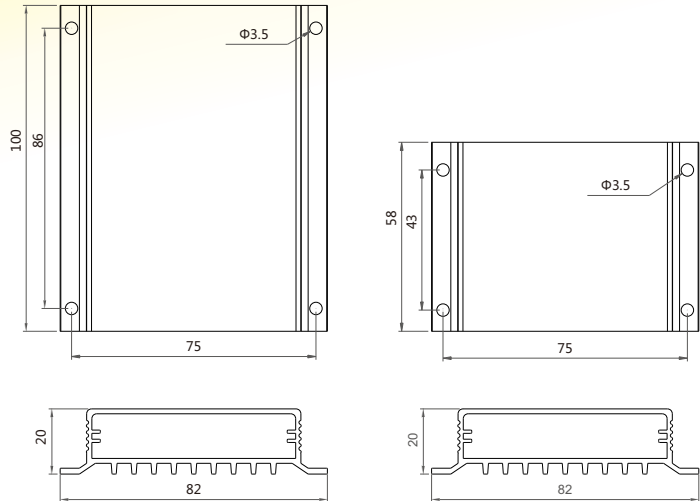
The size of SR-SL20A is as follows :
Boundary dimension : 82×100×20(mm)
Installation dimension : 86×75(mm)
Installation aperture : 3.5(mm)

The size of SR-SL10A is as follows :
Boundary dimension : 82×58×20(mm)
Installation dimension : 43×75(mm)
Installation aperture : 3.5(mm)

The Parameters

Battery type	Sealed	GEL	Flooded	Ternary-material lithium	Lithium iron phosphate
System current	10A;20A				
No-load loss	10mA/12V;13mA/24V				
Solar energy input voltage	< 55V				
System voltage	12V/24V Auto	12V/24V Auto	12V/24V Auto	3 and 4 strings: 12 V system 7 strings: 24 V system	4 strings: 12 V system 8 strings: 24V system
Overvoltage protection	17.0V	17.0V	17.0V	4.2V*N+2.0V	3.65V*N+2.0V
Equalizing charging voltage	14.6V	—	14.8V	—	—
Boost charging voltage	14.4V	14.2V	14.6V	—	—
Floating charging voltage	13.8V	13.8V	13.8V	—	—
Overcharge voltage	—	—	—	4.2V*N	3.65V*N
Overcharge recovery	—	—	—	3.9V*N	3.4V*N
Boost charging recovery voltage	13.2V	13.2V	13.2V	—	—
Over-discharge recovery voltage	12.5V	12.5V	12.5V	3.3V*N	3.0V*N
Undervoltage	12.0V	12.0V	12.0V	3.2V*N	2.8*N
Over-discharge voltage	11.0V	11.0V	11.0V	3.0V*N	2.5V*N
Temperature compensation	-4.0mv/℃/2V	-4.0mv/℃/2V	-4.0mv/℃/2V	—	—
Equalizing charging duration	1hour	—	1hour	—	—
Boost charging duration	4hours	4hours	4hours	—	—
Light controlled voltage	Light controlled on 5 V, light controlled off 6 V				
Light control judgment time	1min				
Overload and short-circuit protection	1.25 times of rated current: 30 s; 1.5 times of rated current: 5 s of overload protection; Over 3 times of rated current: short-circuit protection.				
Operating temperature	-35℃ to +65℃;				
Protection degree	IP68				
Weight	140g(10A)		300g(20A)		
Dimensions	82×58×20(mm)/10A		82×100×20(mm)/20A		

For the above parameters, the ambient temperature is 12 ℃, the system voltage is 12 V, and the lithium battery parameters are single-piece ones.