

# Smart-DC series

## Solar charge controller



### Functions

Smart-DC series intelligent solar controller, is programmable and especially for boost mode LED solar street light system.

It comes with some outstanding features, such as:

- Can output constant current
- Adjustable 5-stage timer for load output
- Human infrared induction.
- Monitoring of the running status and parameters
- Suitable for Gel, Liquid, AGM and Lithium battery
- 12V/24V system voltage automatic recognition
- Automatic temperature compensation(Liquid/GEL)
- Four stages charge: fast, boost, equal, float(Liquid/GEL)
- If battery voltage is low, it can be set to dimming automatically
- Dimming start voltage and percentage can be set
- Auto sleeping during transportation(Lithium)
- When BMS power off because of LVD, it can activate the system automatically (Lithium)
- Charging target and recovery voltage can be set(Lithium)
- 0°C Charging Protection(Lithium)
- Day/Night threshold can adjust automatically
- Configurable with an LCD remote programmer
- Waterproof IP67, Strong and durable aluminum case
- Full automatic electronic protect function



PWM

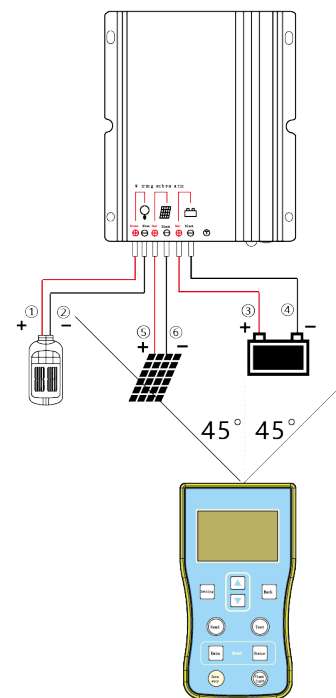
Auto  
12V/24V

IP67

Auto dimming

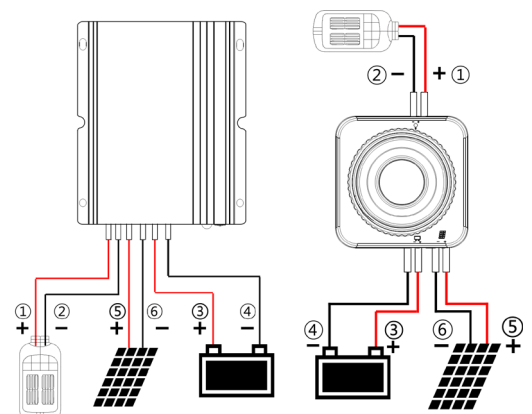
Infrared  
remote control

### Remote controller



When Smart-DC series controller is connected to the system, you can setting the controller with S/SG-Unit remote controller, as shown below! Detailed setting operations, please read S/SG-Unit User Manual.

The following diagram provides an overview of the terminals. Please make sure to follow the proper order of connection.



## Technical Data

Model	SMR1006-DCN5ELIG	SMR1006-DCN5XLIG		
Battery Parameters	Max Charging Current	10A		
	System Voltage	12V	12V/24V automatical recognition	
	Max. battery voltage	20V	40V	
	Battery type	Gel, Liquid, AGM and Lithium		
	Gel, Liquid and AGM	Fast Charging Voltage	<14.5V@25°C	<14.5/29V@25°C
		Boost Voltage	14.5V@25°C	14.5/29V@25°C
		Equalization Voltage	14.8V@25°C	14.8/29.6V @25°C (Liquid, AGM)
		Float Voltage	13.7V@25°C	13.7/27.4V@25°C
		Low Volt. Disconnect	10.8~11.8V	10.8~11.8V/21.6~23.6V(Programmable)
		Reconnect Voltage	11.4~12.8V	11.4~12.8V/22.8~25.6V(Programmable)
		Overcharge Protect	15.5V	15.5/31.0V
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)	
	Lithium	Charging voltage target	10.0~17.0V(Programmable)	10.2~32.0V(Programmable)
		Charging voltage recovery	8.5~16.8V (Programmable)	9.8~31.8V(Programmable)
		Low voltage disconnect	8.0~15.0V (Programmable)	9.4~30.0V(Programmable)
Low voltage reconnect		8.6~16.0V (Programmable)	10.0~31.0V(Programmable)	
0°C Charging protection		Yes, No, Slow(Programmable)		
Panel Parameters	Max. panel voltage	25V	25V/50V	
	Day/Night threshold	3~8/6~16V(Programmable)		
	Day/Night delay time	0~30min (Programmable)		
Load Parameters	Output power	1~40W	1~60W	
	Output current	0.15~2.0A(Programmable)		
	Min. Load current	50mA (Dimming)		
	Output voltage DC	( Battery voltage + 2V)~55V		
	Current precision	±2%		
	Auto dimming	Yes, No(Programmable)		
	Dimming	0~100%(Programmable)		
	Voltage of start dimming	Lithium: 9.0~Charging voltage target (Programmable)		
		Gel, AGM and Liquid:	11.8~12.5/23.6~25.0V(Programmable)	Lithium: 9.5~CVT
	Dimming percentage	1~20% (Programmable)		
	Work Mode	5 Stages,D2D, T0T(Programmable)		
Max. LED driver efficiency	95%			
System Parameters	Remote control mode	Wireless remote control, 0~30 meters can be set		
	Dimensions	85.8*55*23.1mm	85*72*22.6mm	
	Weight	200g	255g	
	Wire size	2.5mm <sup>2</sup>		
	Self consumption	6-17mA	6-20mA	
	Ambient temperature	-35°C~+60 °C		
	Degree of protection	IP67		
	Max. Altitude	4000m		

## Technical Data

	Model	SMR1012-DCN5LiG	SMR2012-DCN5LiG	
Battery Parameters	Max Charging Current	10A	20A	
	System Voltage	12V/24V automatical recognition		
	Max. battery voltage	40V		
	Battery type	Gel, Liquid, AGM and Lithium		
	Gel, Liquid and AGM	Fast Charging Voltage	<14.5/29V@25°C	
		Boost Voltage	14.5/29V@25°C	
		Equalization Voltage	14.8/29.6V @25°C (Liquid, AGM)	
		Float Voltage	13.7/27.4V@25°C	
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V(Programmable)	
		Reconnect Voltage	11.4~12.8V/22.8~25.6V(Programmable)	
		Overcharge Protect	15.5/31.0V	
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)	
	Lithium	Charging voltage target	10.2~32.0V(Programmable)	
		Charging voltage recovery	9.8~31.8V(Programmable)	
Low voltage disconnect		9.2~30.0V(Programmable)		
Low voltage reconnect		10.0~31.0V(Programmable)		
0°C Charging protection		Yes, No,Slow(Programmable)		
Panel Parameters	Max. panel voltage	25V/50V		
	Day/Night threshold	3~8/6~16V(Programmable)		
	Day/Night delay time	0~30min (Programmable)		
Load Parameters	Output power	3~60/3~120W		
	Output current	0.15~4.0A(Programmable)		
	Min. Load current	100mA (Dimming)		
	Output voltage DC	( Battery voltage + 2V) ~55V		
	Current precision	±2%		
	Auto dimming	Yes, No(Programmable)		
	Dimming	0~100%(Programmable)		
	Voltage of start dimming	Lithium: 9.5~Charging voltage target (Programmable)		
		Gel, AGM and Liquid: 11.8~12.5/23.6~25.0V(Programmable)		
	Dimming percentage	1~20% (Programmable)		
Work Mode	5 Stages,D2D, T0T(Programmable)			
Max. LED driver efficiency	95%			
System Parameters	Remote control mode	Wireless remote control,0~30 meters can be set		
	Dimensions	103*85*25mm		
	Weight	200g		
	Wire size	2.5mm <sup>2</sup>	4mm <sup>2</sup>	
	Self consumption	6-17mA		
	Ambient temperature	-35°C~+60 °C		
	Degree of protection	IP67		
	Max. Altitude	4000m		

## Technical Data

	Item	SMR1006-DCN5MLiR	SMR1006-DCN5MLIE	SMR1006-DCN5MLIEG
Battery Parameters	Max Charging Current	10A	8A	
	System Voltage	12V		
	Max. battery voltage	20V		
	Battery type	Lithium		
	Charging voltage target	10.0~17.0V(Programmable)		
	Charging voltage recovery	8.5~16.8V(Programmable)		
	Low voltage disconnect	8.0~15.0V(Programmable)		
	Low voltage reconnect	8.6~16.0V(Programmable)		
	0°C Charging protection	Yes, No, Slow(Programmable)		
Panel Parameters	Max. panel voltage	25V		
	Day/Night threshold	3~8V(Programmable)		
	Day/Night delay time	0~30min (Programmable)		
Load Parameters	Output power	1~30W		
	Output current	0.15~2.0A(Programmable)	0.15~1.3A(Programmable)	
	Min. Load current	50mA(Dimming)		
	Output voltage DC	(Vbat + 2V)~55V	(Vbat + 2V)~33V	
	Current precision	±2%		
	Auto dimming	Yes,No,365	Yes,No(Programmable)	
	Dimming	0~100%(Programmable)		
	Voltage of start dimming	9.0~Charging voltage target (Programmable)		
	Dimming percentage	1~20% (Programmable)	--	
	Induction delay off time	10~150s(Programmable)	--	
	Dimming when no people	0~100%(Programmable)		
	Work Mode	5 Stages,D2D, T0T(Programmable)		
	Max. LED driver efficiency	95%		
System Parameters	Remote control mode	Infrared		Wireless remote control, 0~30 meters can be set
	Dimensions	68*68*39mm	76.4*52*20.7mm	
	Weight	150g	125g	
	Wire size	2.5mm <sup>2</sup>		
	Self consumption	6-14mA	6-11mA	6-35mA
	Ambient temperature	-35°C~+60 °C		
	Degree of protection	IP67		
	Max. Altitude	4000m		