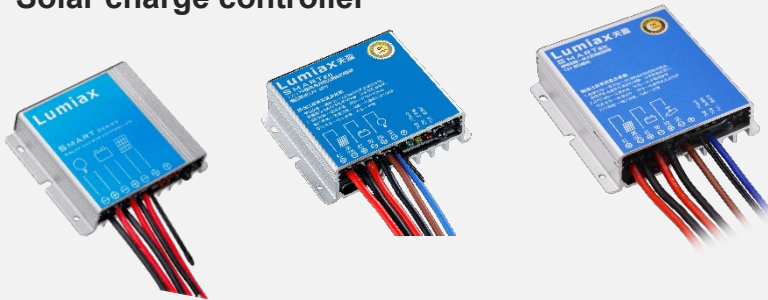


Smart series

Solar charge controller



Smart10-N5/RS485
Smart20-N5/RS485

Smart25-V3212

Smart15-V1212

Description of Function

Smart-N5 series intelligent solar controller, is programmable and especially for solar light system.

It comes with some outstanding features, such as:

- Suitable for Liquid, AGM, GEL and Lithium battery
- 12/24V system voltage automatic recognition
- Automatic temperature compensation(Liquid/AGM/GEL)
- Four stages charge: fast, boost, equal, float(Liquid/AGM/GEL)
- When BMS power off because of LVD, it can activate the system automatically(Lithium)
- Charging target and recovery voltage can be set(Lithium)
- Day/Night threshold can adjust automatically
- Remote Unit to configure, with LCD display
- Full automatic electronic protect function
- 5 stages time can be adjusted
- Can read parameters and running status
- 12/24V system voltage automatic recognition
- IP67, Strong and durable aluminum case



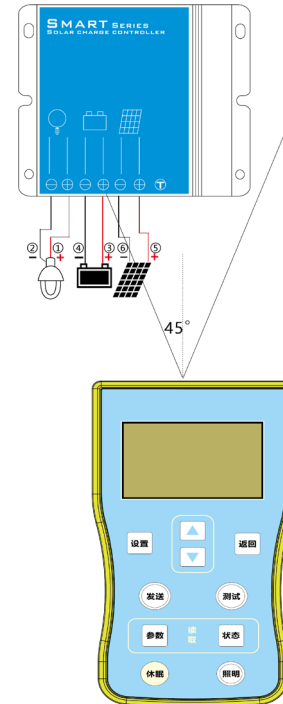
PWM

Auto
12V/24V

IP67

Infrared
remote control

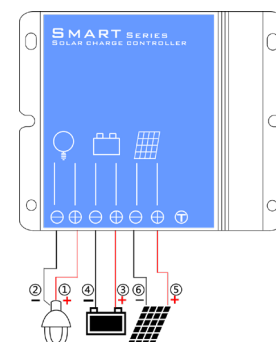
Remote controller



When Smart-N5 series controller is connected to the system, you can setting the controller with S-Unit infrared remote controller. Detailed setting operations, please read S-Unit User Manual.

Remark: Be sure to set only one Smart-N5 unit at a time.

The following diagrams provide an overview of the connections and the proper order.



Technical Data

	Item	SMR10-N5	SMR20-N5	
Battery Parameters	Max. Current	10A	20A	
	System Voltage	12/24V		
	Max. battery voltage	40V		
	Battery type	Liquid, AGM, GEL and Lithium(Programmable)		
	Liquid, AGM, GEL	Fast Voltage	<14.5V/29.0V (25°C)	
		Boost Voltage	14.5V/29.0V (25°C)	
		Equal Voltage	14.8V/29.6V (25°C) (Liquid)	
		Float Voltage	13.7V/27.4V (25°C)	
		Overcharge Protect	15.5/31.0V	
		Low voltage disconnect	10.8~11.8V/21.6~23.6V; SOC1~5	
		Low voltage reconnect	11.4~12.8V/22.8~25.6V(Programmable)	
	Temp compensation	-4.17 mV/K per cell (Boost, Equal) ; -3.33 mV/K per cell (Float)		
	Lithium	Charging voltage target	11.0~32.0V(Programmable)	
		Charging voltage recovery	9.5~31.8V(Programmable)	
Low voltage disconnect		8.0 ~30.0V(Programmable)		
Low voltage reconnect		8.6 ~ 31.0V(Programmable)		
Panel Parameters	Day/Night threshold	Liquid,AGM, GEL: 3.0~8.0V/6.0~16.0V(Programmable) Lithium: 3.0~20.0V(Programmable)		
	Day/Night delay time	0~30min(Programmable)		
	Max. panel voltage	25V/50V		
System Parameters	Dimensions	82*68*18.6mm		
	Weight	190g		
	Wire size	2.5mm ²	4mm ²	
	Self consumption	10mA		
	Ambient temperature	-35°C~+60 °C		
	Degree of protection	IP67		
Max. Altitude	4000m			

Technical Data

	Item	SMR10-RS485	SMR20-RS485	
Battery Parameters	Max. Current	10A	20A	
	System Voltage	12/24V		
	Max. battery voltage	40V		
	Battery type	Liquid, AGM, GEL and Lithium(default: Gel)		
	Liquid, AGM, GEL	Fast Voltage	<14.5V/29.0V (25°C)	
		Boost Voltage	14.5V/29.0V(default:14.5/29V)	
		Equal Voltage	14.8V/29.6V (25°C) (Liquid) (default:14.8/29.6V)	
		Float Voltage	13.7V/27.4V (25°C) (default:13.7/27.4V)	
		Overcharge Protect	15.3/31.3V	
		Low voltage disconnect	10.8~11.8V/21.6~23.6V(default: 11.2/22.4V)	
		Low voltage reconnect	11.4~12.8V/22.8~25.6V (default: 12.0/24.0V)	
		Temp compensation	-4.17 mV/K per cell (Boost, Equal) ; -3.33 mV/K per cell (Float)	
	Lithium	Charging voltage target	11.0~32.0V(default: 14.4V)	
		Charging voltage recovery	9.5~31.8V(default: 14.0V)	
		Low voltage disconnect	8.0 ~30.0V(default: 10.6V)	
0°C Charge Protection		Yes, No, Slow(Programmable)		
Low voltage reconnect		8.6 ~ 31.0V(default: 12.0V)		
Panel Parameters	Day/Night threshold	Liquid,AGM, GEL: 3.0~8.0V/6.0~16.0V(Programmable) Lithium: 3.0~20.0V(Programmable)		
	Day/Night delay time	0~30min(default: 0min)		
	Max. panel voltage	25V/50V		
System Parameters	Dimensions	82*68*18.6mm		
	Weight	190g		
	Wire size	2.5mm ²	4mm ²	
	Self consumption	10mA		
	Grounding type	Negative grounding		
	Ambient temperature	-35°C~+60 °C		
	Degree of protection	IP67		
Max. Altitude	4000m			

Technical Data

	Item	SMR25-V3212	SMR15-V1212	
Battery Parameters	System Volt	3.2V	12V	
	Max Charging Current	20A	15A	
	MAX Volt. on Bat. Terminal	10V	20V	
	Battery Type	Lithium	Gel, AGM, Liquid and Lithium	
	Gel, AGM, Liquid	Fast Charging Volt	--	<14.5V@25°C
		Boost Volt	--	14.5V @25°C
		Equalization Volt	--	14.8V @25°C (Liquid, AGM)
		Float Volt	--	13.7V @25°C
		Low Volt. Disconnect	--	10.8~11.8V (Programmable)
		Reconnect Volt.	--	11.4~12.8V (Programmable)
		Overcharge Protect	--	15.5V
	Lithium	Temp. Compensation	--	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)
		Charging Volt. target	3.0~9.0V (Programmable)	10.0~17.0V (Programmable, Default: 12.6V)
Charging Volt. recovery		2.9~8.9V (Programmable)	8.5~16.8V (Programmable, Default: 12.4V)	
Low Volt. disconnect		2.6~7.2V (Programmable)	8.0~15.0V (Programmable, Default: 9.0V)	
Low Volt. reconnect		2.8~7.4V (Programmable)	8.6~16.0V (Programmable, Default: 9.8V)	
0°C Charging protection	Yes, No, Slow (Programmable)			
Panel Parameters	Max Volt. on PV terminal	7V/15V	23V	
	Dusk/Dawn detect volt	1.0~3.0V (Programmable)	3.0~8.0V (Programmable)	
	Day/Night delay time	0~30min (Programmable)		
Load Parameters	Max output current	1.6A	4A	
	Output Volt.	12±0.5V		
	Output current	1~20W	1~48W	
	Max load driver efficiency	92%@3.2V	95%@12V	
	Work mode	Stantard(24H),Day Mode,Night Mode,Day+Night Mode (Programmable)		
System Parameters	Self consumption	8mA@Transport Mode		
	Dimensions	76.4*61*20.7mm	76.4*74.5*20.7mm	
	Weight	150g	190g	
	Wire size	4mm ²		
	Ambient temperature	-35~+60°C		
	Ambient humidity	0~100%RH		
	Protection degree	IP67		
Max Altitude	4000m			