

## Solar Charge Controller

# Solar Amp B



Japanese Patent Applied 2013-035410

### The World's Lightest & Compact

Solar Amp B is the lightest controller in the world. The appearance is just as a business card and beautiful, so that you could make your control box smaller.

### Simple Installation

Solar Amp B is very simple to use. Do not need any setting. Just connect to photovoltaic module, battery and DC load.

### Low Self-Consumption

The self-consumption current of Solar Amp B is about 2mA. This contributes to the long-term stabilization and performance increase of your PV systems.

### Rich Protection Circuitry

- High Voltage Protection
- Over Discharge Protection
- High Temperature Protection
- Reverse Polarity Protection
- Overload Protection
- Short-circuit Protection
- Surge Protection

### Various Product Lineup

You can choose the best from four models according to the system voltage(12V/24V), load operation, and capacity.

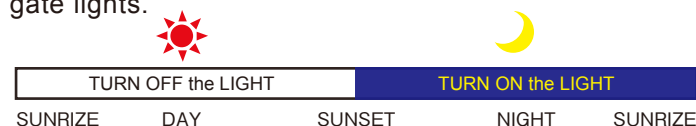
Maximum Control Current & Load Operation	System Voltage		
	12V	24V	
10A	Always ON	SA-BA10	SA-BB10
	Dusk To Down	SA-BC10	SA-BD10
20A	Always ON	SA-BA20	—
	Dusk To Down	SA-BC20	—

### Over Discharged Battery Recovery

Solar Amp B has the battery recovery function. This is convenient for the system in areas where routine maintenance is difficult.

### Night Lighting Control Function

Solar Amp B turns on the light from dusk to dawn automatically. This function is appropriate with solar lighting system such as solar streetlights and solar gate lights.



### LED Indication

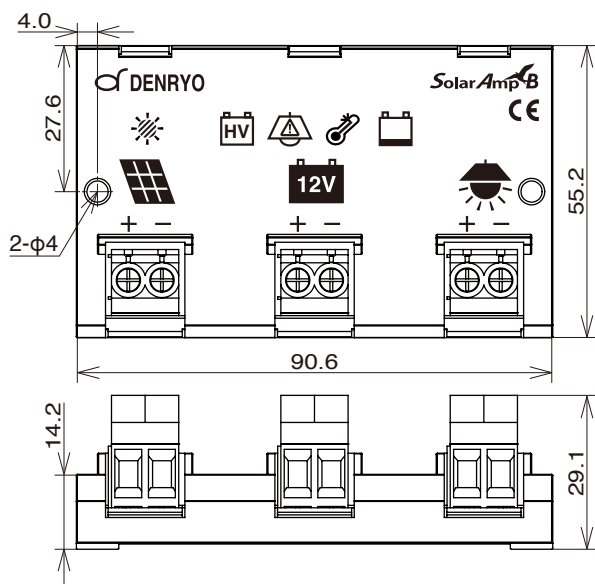
Solar Amp B has 5 LEDs(3 colors) to indicate charging status, battery status, and load status.

LED/Color	Indication		Status	
①  Charging GRN		Flashing	Charging	
		Solid	Full Battery(Charging)	
②  High Volatage RED		Solid	OFF	OFF
		Flashing	OFF	OFF※ <sup>1</sup>
③  Over Load RED		Solid	OFF	OFF
		Flashing	ON※ <sup>2</sup>	ON
④  High Temp. YEL		Flashing	ON※ <sup>2</sup>	ON
		Solid	OFF	ON
⑤  Low Volatage YEL		Flashing	ON	ON
		Solid	ON	OFF

※<sup>1</sup> The load is reconnected automatically by every 3 seconds in 10 minutes. If over load remains, LED become solid; and disconnects

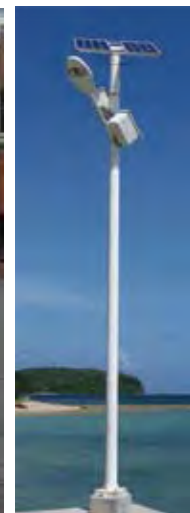
※<sup>2</sup> The bulk charging current is limited to 80%

## Dimensions



## Applications

SolarAmp B is in use for many stand alone PV systems such as solar home system in remote area and solar street light and measuring system with PV.



## Specifications

Model	SA-BA10	SA-BC10	SA-BA20	SA-BC20	SA-BB10	SA-BD10
System Voltage	12V		12V		24V	
Max. Input Voltage	25V		25V		50V	
Min. Input Battery Voltage	6V		6V		8V	
Max. Input Current	10A		20A		10A	
Max. Load Current	10A		20A		10A	
Self-consumption Current	2mA (Typical)					
Load Operation	Always ON	Dusk to Dawn	Always ON	Dusk to Dawn	Always ON	Dusk to Dawn
Charging Algorithm	3-stage (Bulk, Absorption, Float)					
Bulk Charging Voltage	14.4V		14.4V		28.8V	
Float Charging Voltage	13.7V		13.7V		27.4V	
High Voltage Protection	18V		18V		36V	
Over Discharge Protection	Warning	11.8V		11.8V		23.6V
	Error	11.5V		11.5V		23V
	Recovery	12.5V		12.5V		25V
High Temp. Protection	60°C (Warning) / 80°C (Error) / 60°C (Recovery)					
Battery Type	Lead Acid Battery					
Wire Size	Maximum	# 12AWG		# 10AWG		# 12AWG
	Minimum	# 18AWG		# 12AWG		# 18AWG
Grounding	Positive Ground					
Temperature Coefficient	-30mV/°C		-30mV/°C		-30mV/°C	
Operation Temperature	-20°C to +60°C					
Storage Temperature	-30°C to +70°C					
Humidity	5 to 95%RH (non-condensing)					
Dimensions (W x H x D)	91×55×29mm					
Weight	65g		70g		65g	
Certifications						

◆Specifications and appearance are subject to change without prior notice.

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