

Expand Electrification Life for You

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.

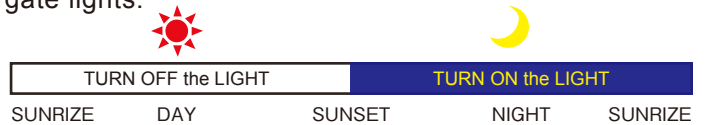
| Maximum Control Current & Load Operation | System Voltage | | |
|--|----------------|---------|---------|
| | 12V | 24V | |
| 10A | Always ON | SA-BA10 | SA-BB10 |
| | Dusk To Down | SA-BC10 | SA-BD10 |
| 20A | Always ON | SA-BA20 | — |
| | Dusk To Down | SA-BC20 | — |

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.

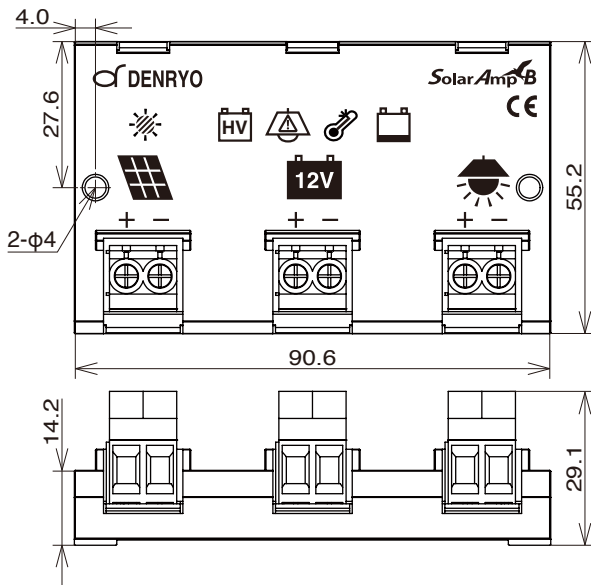
| LED/Color | Indication | | Status | |
|----------------------|------------|-----------------|------------------------|-------------------|
| ① Charging GRN | | Flashing | Charging | |
| | | Solid | Full Battery(Charging) | |
| LED/Color | Indication | Charging Status | Load Status | |
| ② High Volatage RED | | Solid | OFF | OFF |
| | | Flashing | OFF | OFF ^{※1} |
| ③ Over Load RED | | Solid | OFF | OFF |
| | | Flashing | ON ^{※2} | ON |
| ④ High Temp. YEL | | Flashing | ON ^{※2} | ON |
| | | Solid | OFF | ON |
| ⑤ Low Volatage YEL | | Flashing | ON | ON |
| | | Solid | ON | OFF |

※1 The load is reconnected automatically by every 3 seconds in 10 minutes.

If over load remains, LED become solid; and disconnects

※2 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 | | Warning | | 23.6V |
| | Error | 11.5V | | Error | | 23V |
| | Recovery | 12.5V | | Recovery | | 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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