

JAB Accessories

3 Cells in Series 18650 Lithium-ion Battery Balance and Protection Extension Board (AA-JA11113)



Key Features:

- High-accuracy voltage detection for each cell
- Overcurrent protection
- Overvoltage protection
- Undervoltage protection
- Over-temperature protection
- Breaking wire/short circuit protection
- Weight: 60g/0.13lbs ($\pm 10\%$)
- Size: 3.60inch X 2.70inch X 1.16inch

Distributors:



All Audio Amplifier boards are complied with ROHS and they are pre-tested with our power supply solution to comply with FCC and CE. We could provide FCC, CE and RoHS certifications for customers' convenience. The test reports will be provided upon requests by e-mails only for customers who apply for bulky purchasement of MOV USD\$10,000 or MOQ 500pcs.

Ready for:



Contact Info

- Email: info@wondom.com



Overview

The Lithium-ion battery balance and protection extension board is a protection module for rechargeable battery pack; it is highly integrated, and specially used for WONDOM's audio amplifier boards.

The Lithium-ion battery balance and protection extension board works constantly to monitor each cell's voltage, the current of charge or discharge, and the temperature of the environment to provide overcharge, over-discharge, discharge overcurrent, short circuit, charge overcurrent and over-temperature protections, etc.

The Lithium-ion battery balance and protection extension board provides external bleeding for cell-capacity balance function to avoid unbalanced capacity between each cell. Thus, the batteries can work for longer.

Note:

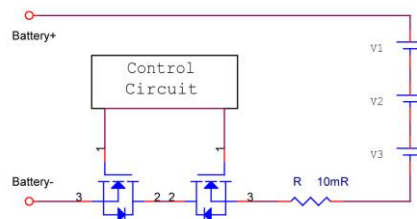
1. The battery balance and protection extension board doesn't have the charging function, so it is necessary to charge the battery by using Lithium-ion battery chargers. To get the function, you need to combine the battery balance and protection extension board with the JAB series amplifiers, on which MPPT charging ICs are integrated.
2. The battery balance and protection extension board doesn't contain the Lithium-ion batteries, so you need to prepare the Lithium-ion batteries with 3.6V typical working voltage and 4.2V overcharge protection voltage. Besides, any other batteries especially LiFePO4 battery are prohibited.
3. If the battery balance and protection extension board ever went into protection mode, connect it to the charger integrated in JAB mainboard and it will recover from the protection mode.
4. Please kindly be noted that the battery balance and protection extension boards cannot be connected in series or in parallel.
5. Sure Electronics don't provide technical support for any behavior of connecting the battery balance and protection extension board with the third party's chargers. Warranty will be lost due to this.

Electrical Specifications

Specifications typical @ +25°C unless otherwise noted. Specifications subject to change without notice.

Parameters	Conditions	Min.	Typ.	Max.	Units
Supply power	-	-	12.3	12.7	VDC
Idle power	V1=V2=V3=3.5V	-	-	25	uA
Standby power	V1=V2=V3=2V	-	-	10	uA
Maximum discharge current	-	-	-	10	A
Maximum charge current	-	-	-	5	A
Overcharge detection voltage	Single cell	-	4.235	-	V
Overcharge release voltage	Single cell	-	4.18	-	V
Overdischarge detection voltage	Single cell	-	2.8	-	V
Overdischarge release voltage	Single cell	-	3	-	V
Balance starting voltage	Single cell	-	4.18	-	V
Operating Temperature	-	-	20	50	°C
Storage Temperature	-	-20	20	105	°C
Thermal Temperature	-	-	150	-	°C

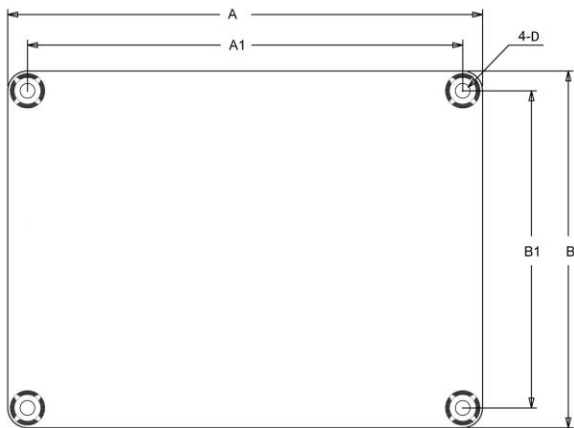
Application circuits



Remember to use solar batteries with float (open) voltage with 16.5V-21.5V, and use 10-100 Watt panels for this application. 3 cells lithium-ion batteries in series will provide more than 12.6V when fully charged.

All parameters were tested with a multimeter. For authorized distributors and OEM customers who need more detailed performance graphs and parameter settings, please send an inquiry e-mail to us. (Not available for retail customers)

Mechanical Dimensions

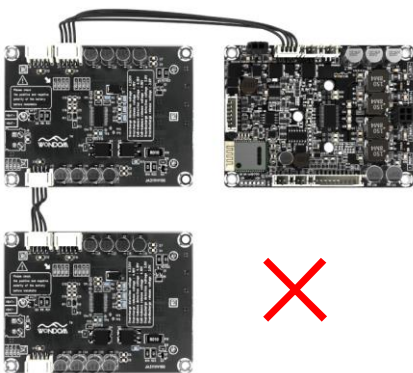


Dimensions	A (inch/mm)	A1 (inch/mm)	D (inch/mm)
		3.60/91.44	3.30/83.8
	B (inch/mm)	B1 (inch/mm)	
		2.70/68.6	2.40/61.0

Notes:

- All dimensions are typical in inches/mm
- Tolerance x.xx = ±0.02(±0.50)
- Height: 2.91inch/73.9mm
- For convenient installation, the battery balance and protection extension board can be used together with the L-type aluminum bracket.
- The battery balance and protection extension board isn't suitable for any other forms of batteries except the 18650 Lithium-ion battery with 3.6V typical working voltage and 4.2V overcharge protection voltage. If not, it will be damaged.
- LiFePO4 battery is highly prohibited for the battery balance and extension board. Please contact us if you have such requirements.

Connections

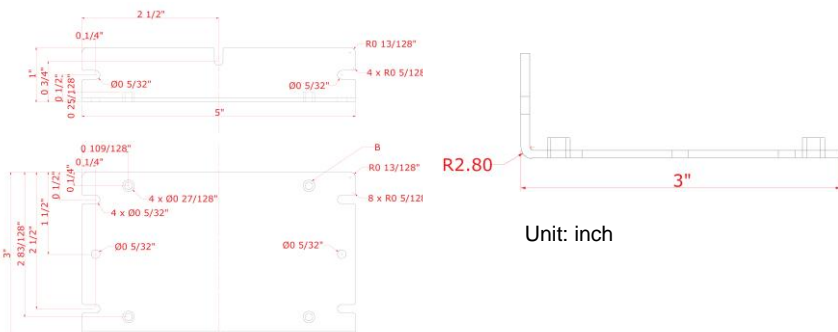


Warnings:

1. The battery balance and protection extension board can't be used in series or in parallel. It is highly prohibited to connect them in series or in parallel for safety.
2. The battery balance and protection extension board can be only used on the JAB amplifier boards. If the extension board is ruined because of incorrect use on other boards, the customers should take on full responsibility.

JAB Accessories

L-style Aluminum Bracket (AA-JA11115)



To improve the connection and measurement efficiency and save cost on installations, Sure Electronics provides a L-style aluminum bracket for JAB series. It will help much to assemble the audio amplifier board into a closed space like most Kiosk and Jukebox applications. The aluminum bracket supports vertical and horizontal installation ways to satisfy different installation requirements.

Note:

1. Dimensions: 5.0" x 3.0" x 1.0"
2. If you buy the L-type aluminum bracket separately, Sure Electronics will provide 4 M3 screws only. But if you buy the L-type aluminum bracket together with the the battery balance and protection extension board, Sure Electronics will provide 4 M3 screws and 8 M3 studs(M3 x 6mm+8mm for amplifier boards and M3 x 6mm+16mm for the battery balance and protection extension board) for convenient installation.

WONDOM Audio Technology

Make Your Audio Application Simple!

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