Battery Charging Series

3S 18650 Lithium Battery Charger and Balance Protection Board (PS-BC12111)
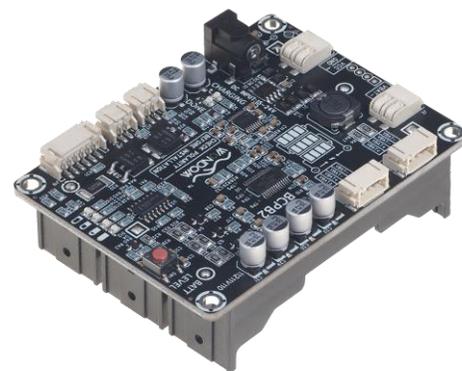
Key Features:
- Charging Voltage from 15V-24V
- Solar Charging Supported
- Three Ports for Discharging
- Battery Status Indicators
- Charging Indicator
- High-accuracy voltage detection for each cell
- Weight: 124g/0.27lbs (±10%)
- Size: 3.60 x 2.70 x 1.19 inches

Benefits:
- Overcharge/ Over-discharge Protection
- Overcurrent/ Overtemperature Protection

Applications:
- WONDOM JAB series
- Portable Bluetooth Speakers
- DIY Market
- Raspberry Pi
- Active Speaker

Distributors:

PARTS EXPRESS YOUR ELECTRONICS CONNECTION

MCM

AXIOMEDIA

HOBBYHIFILADEN

AUDIOPHONICS

Yokohama Bayside Net

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:

FC C E

Contact Info
- **Email:**
  info@wondom.com

WONDOM™

Overview

The 3S 18650 Lithium battery charger and balance protection board is a charging and protection module for 3 pcs Lithium batteries pack. It is highly integrated and can be used as portable power bank.

With MPPT charging ICs equipped, this board works as charger and supports 15-24V power supply for charging. Four indicators are equipped as battery status reminder.

The Lithium battery charger and balance protection 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, overcurrent and over-temperature protections, etc.

The battery charger and balance protection board is designed for 3 pcs 18650 Lithium batteries in series, which aren't included in the package. 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.

Note:
1. Sure Electronics don't provide technical support for any behavior of connecting the battery charger and balance protection board with power supply out of the recommended range. Warranty will be lost due to this.
2. Please check the battery polarity before installation.

Electrical Specifications

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

Parameters	Conditions	Min.	Typ.	Max.	Units
Charging Voltage	-	15	19	24	VDC
Idle power	V1=V2=V3=3.5V	-	-	25	uA
Standby power	V1=V2=V3=2V	-	-	10	uA
Maximum discharge current	-	-	-	10	A
Charge current	-	-	1.5	-	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	℃
Storage Temperature	-	-20	20	105	℃
Thermal Temperature	-	-	150	-	℃

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
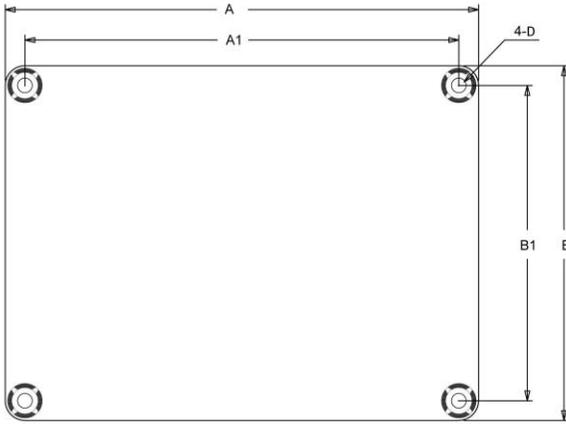
Dimensions	A (inch/mm)	A1 (inch/mm)	D (inch/mm)
	3.6/91.44	3.3/83.82	0.14/3.6
	B (inch/mm)	B1 (inch/mm)	
	2.7/68.58	2.4/60.96	

Notes:
· All dimensions are typical in inches/mm
· Tolerance x.xx = ±0.02(±0.50)
· Height: 1.19inch/30.1mm
· For convenient installation, the battery charger and balance protection board can be used together with the L-type aluminum bracket.

Connections

Charging：
· 15V-24V Power Adapter Connector
J1 OD/ID: 5.5mm/2.1mm
· 15V-24V Power Supply Connector
J3 WAGO-2060-2Pole-4mm Connector

Pin	Definition
1	VCC
2	GND

Discharging：
· Discharging Port
J2 WAGO-2060-2Pole-4mm Connector

Pin	Definition
1	VBAT+
2	VBAT-

· Discharging Port
J4 PH-2mm-4POS Connector
· Discharging Port
J5 PH-2mm-4POS Connector

Pin	Definition
1	VBAT+
2	VBAT+
3	VBAT-
4	VBAT-

Notes:
1. The function of J2, J4 and J5 are the same.
2. Please be noted that the battery charger and protection balance board cannot be connected with each other.

LED Indicators (A) for Battery Status:
Four LED Indicators are equipped as battery status reminder. Press and hold SW1 for reminding.

External Battery Status Indicators and Switch Port:
· J19 PH-2mm-6POS Connector
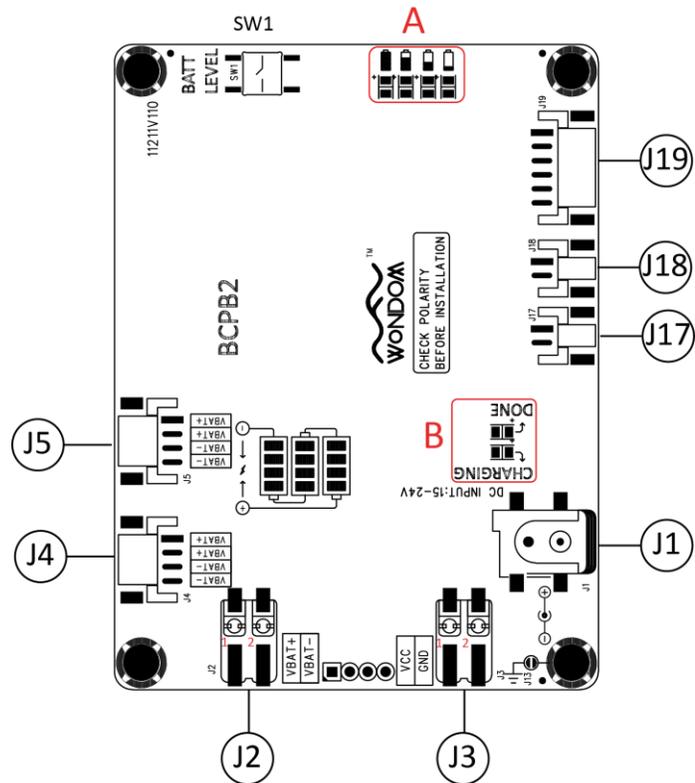
LED Indicators (B) for Charging:
Two LED Indicators are equipped as charging reminder. When connected with power supply for charging, the CHARGING indicator will be on; when charging is finished, the DONE indicator will be on.

External Charging Indicators Ports:
Charging Indicator
· J17 PH-2mm-2POS Connector

Charging Done Indicator
· J18 PH-2mm-2POS Connector