SUMAKE®

Professional & Industrial

OPERATION AND MAINTENANCE MANUAL

ITEM NO.: BC21L02, BC21L03 BC21L04

21V Li-ion BATTERY CHARGER

BC21L02, BC21L03

BC21L04

Icon Explanation

Read manual

Caution

Double insulation

Indoor use only

No humidity

No fire

No disassemble

No disposal

CE Certification

ETL Certification

Caut

Please read all instructions carefully before operate the rechargeable battery and charger. Also please follow all the instructions and pay attention to all the warring.

Important Notification

1. Please operate under the correct voltage to the charger in according with the operation manual.
2. When charging the battery, please make sure the grounding and safety components are properly attached before operate.
3. The charger should store in clean and dry area. Do not place heave stuff on the charger. Please do not charge the battery when the temperature is above 33℃.
4. Please do not place the charger in the poorly ventilated place, nor expose the charger in the dust or metal crumb.
5. Do not expose the charger directly under sun, high temperature, high humidity , and highly explosive gas.
6. Do not place charger on high shelf. The charger should be placed on the leveled, firmed spot that prevent children from reaching.
7. Do not abuse the cord. Never use the cord to carry, pull or unplug the charger. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
8. Please read all instructions carefully before operate the charger. Failure to follow all instructions listed below may result in electric shock fire and/or serious injure.
9. It is forbidden to use different brand of battery other then SUMAKE'on the charger. To disassemble and modify the charge are also not allowed.

Grounding Instruction

The charger needs to be grounded all the time in case of electrical shock. The grounding wire must be connected firmly with power supply equipment for effective grounding result. The leading wire with yellow-green color is a grounding wire. Never attempt to connect this yellow-green color wire on electrified connector.

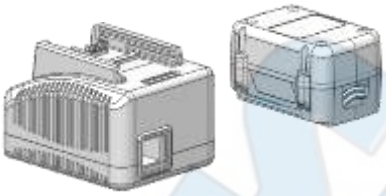
Caution

1. Please match the correct Lithium-ion rechargeable battery for this charger, which is only manufacture by SUMAKE. Do not apply different type or brand of battery on this charger, otherwise may cause error or danger
2. Please match the charger with the battery models The use of other than genuine SUMAKE replacement parts or battery may result in decreased tool performance and increased maintenance, and may invalidate all warranties.
3. Keep children, and bystanders away while charging the battery, in case of danger.
4. Please do not plug in the charger when the plug or users' hand is wet.
5. To disassemble or modify the charger's plug may cause danger or malfunction.
6. This charger only applies to the rechargeable battery of SUMAKE. Please do not apply the charger to other different brand of battery or for other propose.
7. Please do not attempt to disassemble or modify the charger and the rechargeable battery.

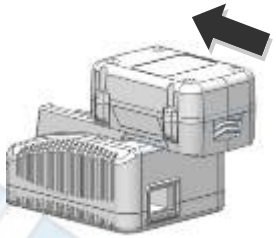
Operation Instruction

1. Please check the cord to see if there any damage before plug in the charger. Hold the plug of power cord while plugging in or unplugging the charger.
2. Do not place chargers near oil, chemical materials or heated objects, also please be alert not to scratch the power cord by sharp object.
3. When the charger is not in use, please unplug the power and store in dry safe place where it is not reachable by children.
4. Charger and battery assemble

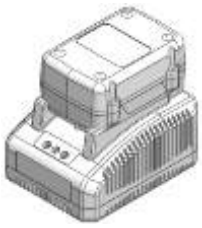
Assemble



(1) Match the battery to the charger's slide track.

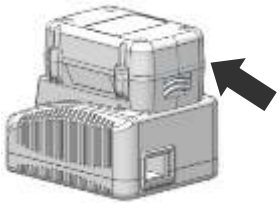


(2) The direction of the battery when insert, push all the way.

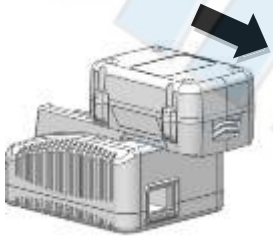


(3) inserting steps finished, the charger will identify the battery ID, when ID are matched, there will be a short beep sound.

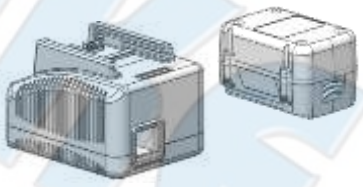
Decomposition



(1) Push up and hold the latch switch.



(2) The direction of battery when removing.



(3) Removing steps finished.

Contents

Charge station	1 pcs
Power cord	1 pcs
Operation manual	1 pcs
Warranty certification	1 pcs

Caution: Protection Functions

1.Over charged protection
2. Current protection
3. Shortage protection (fuse implement)
4. Battery reverse current protection
5. BC21L03/BC21L04 Built-in ID recognition feature protection
6. Temperature protection

Temperature protection detail explanation

(1) When the battery temperature is between 0-10℃, the charger will use low current to pre-charge the battery until the battery temperature higher than 10℃ , then the charger switch back to normal charging mode. When the battery temperature is below 0℃, the charger will stop charging the battery until the battery temperature is higher than 0℃.

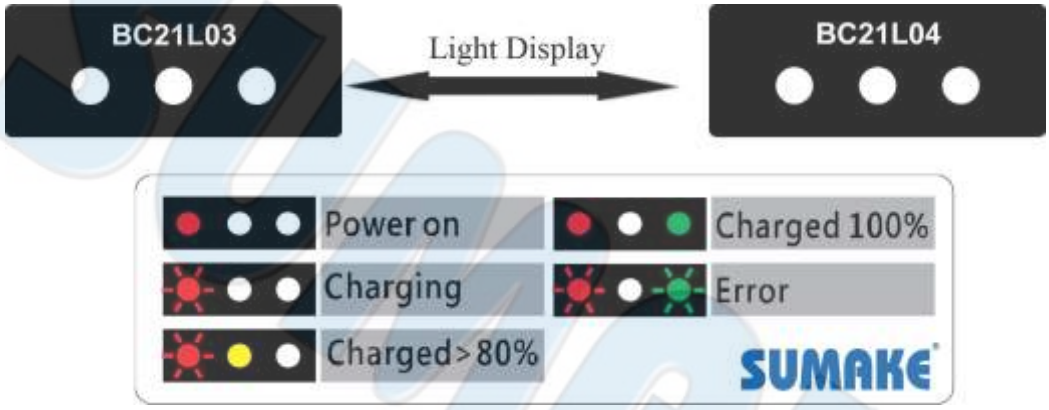
(2) When the battery temperature is above 45℃, the charger will automatically change to low current to charge the battery. When the battery temperature is exceed 50℃, the charger will stop charging the battery and make warring beep sound until the battery temperature drop down back to 40℃ , then the charger switches back to normal charging mode.

(3) When the charger temperature rises to 75℃, the charger will trigger protection mechanism to stop charging the battery and until the charger temperature drop down back to 65℃ , then the charger switches back to normal charging mode.

(4) When the charger voltage is lower than 15V, the charger will automatically change to low current to pre-charge the battery and until voltage is reach to 15V, then the charger switches back to fast charging mode.

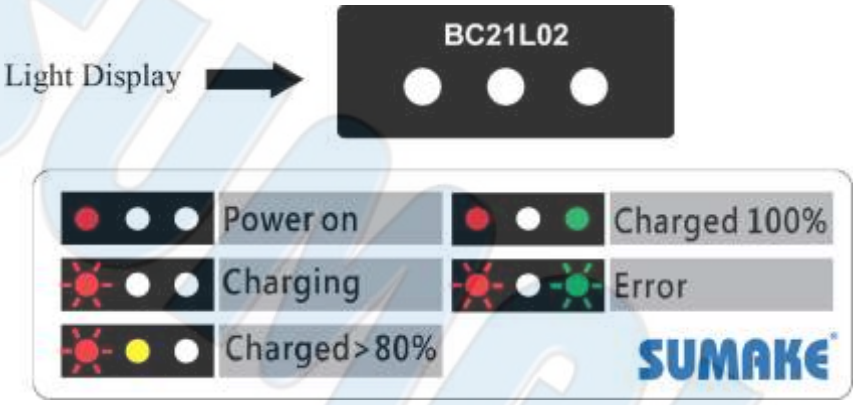
(5) When the charger detects the battery temperature is lower 0℃ or above 50℃, then the charging process will be stopped.

BC21L03, BC21LL04 Display Description



	Description	Beeps	Green light	Red light	Yellow light
Light Display and Warning Beep	Charging under 80%	----	OFF	Flash	OFF
	Charging over 80%	----	OFF	Flash	ON
	Charging Complete100%	Three seconds long beep	ON	ON	OFF
	Charging Error	Continuous short beeps	Flash	Flash	OFF
	ID matched	One short beep	----	----	----
	Idle mode	----	OFF	ON	OFF

BC21L02 Display Description



	Description	Green	Red	Yellow
Light Display	Charge under 80%	OFF	Flash	OFF
	Charge over 80%	OFF	Flash	ON
	Charging complete 100%	ON	ON	OFF
	Charging Error	Flash	Flash	OFF
	ID matched	----	----	----
	Idle mode	OFF	ON	OFF

Specification

Model	Charger Station		
	BC21L03	BC21L02	BC21L04
Battery Identification	Yes	No	Yes
Input Voltage	100V – 240VAC / 0.5A~1.2A		
Output Voltage	21VDC		
Output Current	3.2A		
Dimension	W ＊ L ＊ H 145mm＊115mm＊80mm		
Weight	550g	530g	530g
Battery Type	Li-ion		
Applicable Battery Models	Charging Time	Battery Capacity	Charger Model
BP1820L	Prox. 40min	1950 mAh	BC21L03 BC21L02
BP1841L	Prox. 80min	3900 mAh	BC21L03 BC21L02
BP1820L	Prox. 40min	1950 mAh	BC21L04
BP1822L	Prox. 40min	1950 mAh	BC21L04

Caution

SAVE THESE INSTRUCTIONS
DO NOT DESTROY

EU Declaration of Conformity (DOC)

We: **SUMAKE INDUSTRIAL CO., LTD.**
4F, No. 351, Yangguang St., Neihu District, Taipei City, Taiwan

declare in sole responsibility that the equipment

Equipment： **BATTERY CHARGER**

Model/ Serial No.： **BC21L02A, BC21L02B, BC21L02C, BC21L02D, BC21L02E, BC21L02F**
BC21L03A, BC21L03B, BC21L03C, BC21L03D, BC21L03E, BC21L03F
BC21L04A, BC21L04B, BC21L04C, BC21L04D, BC21L04E, BC21L04F

The object of the declaration described above is in conformity with the relevant union harmonization legislation:

- **Electromagnetic Compatibility 2014/30/EU**
- **Low Voltage Directive 2014/35/EU**
- **RoHS 2011/65/EU**

The following harmonised standards and technical specifications have been applied:

- **BS EN 55014-1:2017**
- **BS EN 61000-3-2:2014**
- **BS EN 61000-3-3:2013**
- **BS EN 55014-2:2015**
- **BS EN 60335-2-29:2021 + A1:2021 for used in conjunction with BS EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021**

Name and Signature/Position

Mike Su – Managing Director

Date and Place

2023/5/16

Taipei, Taiwan

NOTE

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