BCC6A
BATTERY CHARGER
USER MANUAL

Software Version

No.	Version	**Date**	**Note**
1	V1.0	2018-11-1	Original release.

Symbol Description

Symbol	Description
 Note	Remind operators to operate correctly, otherwise it may cause the equipment not to work correctly.
 Be care	It is indicated that potential hazards can damage equipment without proper precautions.
 Warning	It is indicated if appropriate preventive measures are not taken, potentially dangerous situations may result in death, serious personal injury or significant property losses.

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Warning

1. The installation of this equipment must be carried out by professionals.
2. When installing and operating the Charger, please read the entire instruction manual first.
3. Any maintenance and commissioning of the equipment must be familiar with all the equipment, safety standards and precautions in advance, otherwise it may cause personal injury or damage to related equipment.
4. This product is specially designed for charging lead-acid batteries. Because of the output contains impulse components, it can not be directly used as a power supply for electronic equipment without lead-acid batteries. Otherwise, it may cause interference or even damage to electronic devices.


Be Care

1. Please pay attention to prevent water or other liquid from being sprinkled on this charger.
2. When using this charger, we should pay attention to ventilation and heat dissipation and keep away from high temperature and heat radiation.

Catalogue

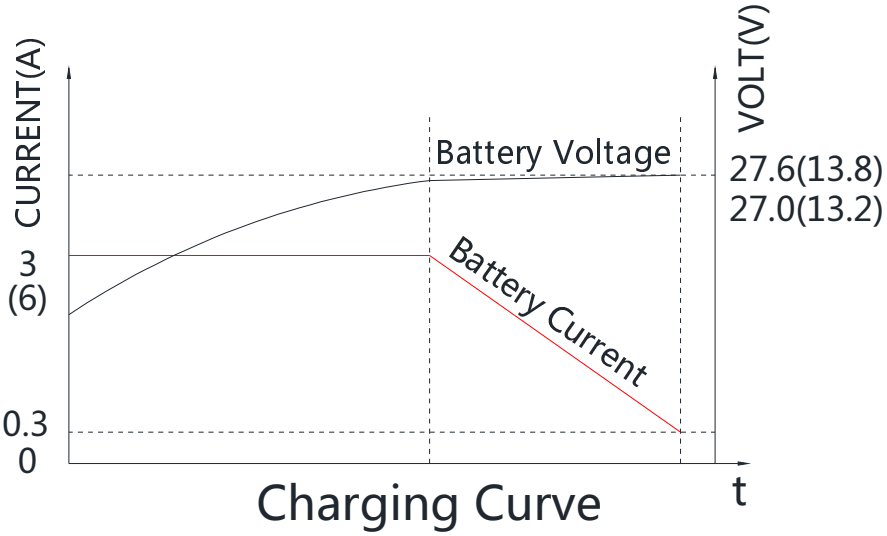
Summary

The charger is specially designed for the lead-acid battery used in the engine. It adopts the three-stage intelligent control mode of constant current fast charging, current limiting and trickle floating charging. It can be charged for a long time without damage to the battery. It can maintain the full state of the battery and ensure the service life of the battery. The charger can be used in parallel with the engine charging generator without disconnecting the charger during the operation of the engine.

Main Features

◆ The metal shell has good heat dissipation effect and strong anti-interference ability.
◆ Using advanced switching power supply mode, wide AC input voltage range.
◆ Three stage intelligent charging to maintain battery power automatically.
◆ With short circuit and reverse connection protection.
◆ It has charging voltage and charging current fine tuning function.
◆ It has LED led, which can indicate the working state of the charger.

Charging Principle



Charging Curve

The charger is designed according to the characteristics of the lead-acid battery used in the engine, and adopts the three-stage intelligent control mode of constant current fast charging, current limiting and trickle floating charging. When the battery voltage is lower than the preset value, the charging current decreases with the increase of the battery voltage and enters the current-limiting charging stage. Thereafter, the charging current only counteracts the self-discharge of the battery, and maintains the battery in full state without disconnecting the charger, which has no effect on the battery life.

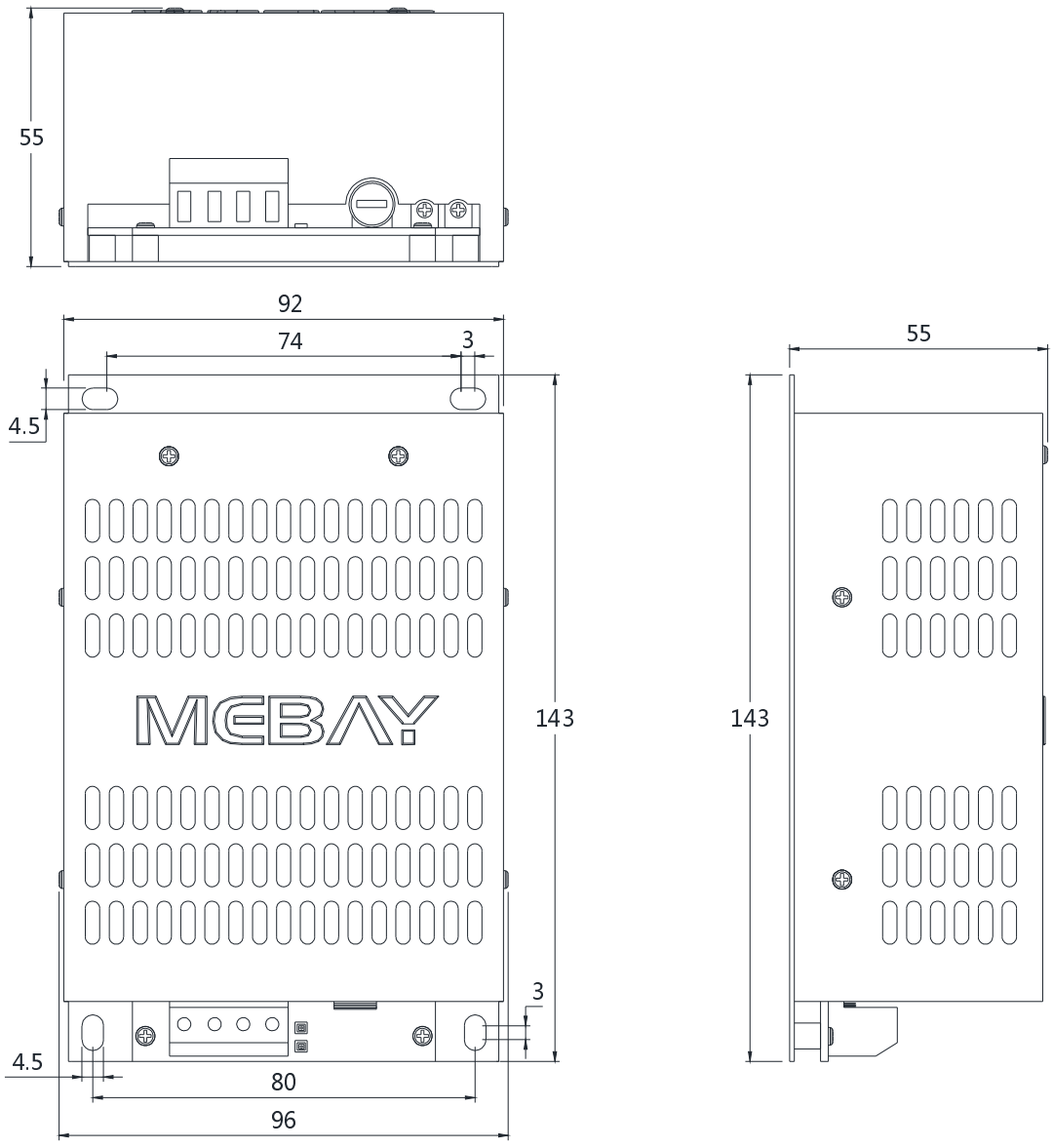
Specification

Category	Items	12V	24V
Input	Nominal AC Voltage	AC 95~280V	
	Max. AC Voltage	AC 90~305V	
	AC Frequency	50Hz/60Hz	
	Max. Input Current	2A	

	Max. Efficiency	82%	
Output	Charging Current	4A-6A,(Error±2%)	2A-3A,(Error ±2%)
	Factory Charging Current	6A	3A
	Max. Power	85W	
	Min. Voltage	7.5V	
	No-load Voltage	13.8V, (Error ±1%)	27.6V, (Error ±1%)
	No-load power consumption	<3W	
Insulation	Insulation Resistance	Between input and output, input and shell both are: DC500V 1min R_L>500MQ	
	Insulation Voltage	Between input and output, input and shell both are: AC 1600V 50Hz 1min Leakage current: I_L3.5mA.	
Working Condition	Working Temperature	-30-55°C	
	Storage Temperature	-40-85°C	
	Working Humidity	20%RH-93% RH(No condensation)	
Profile	Weight	0.65kg	
	Dimension	143mmx96mmx55mm(Length*Width*Height)	

Overall Dimension and Terminal connection

◆ **Overall Dimension:**



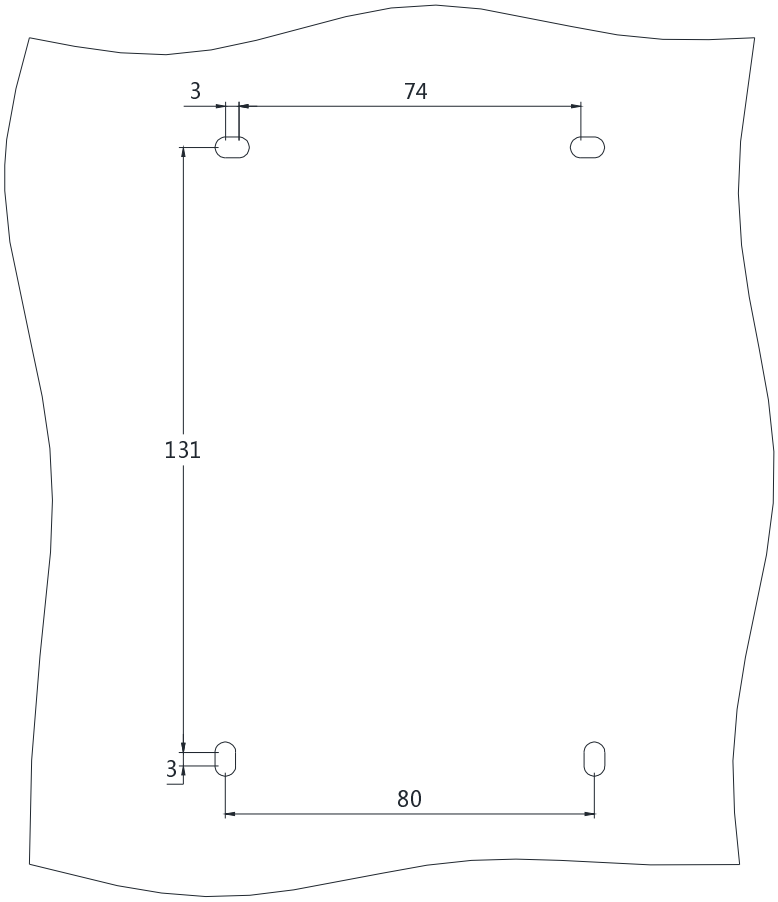
◆ **Descriptions of terminal connection**

No.	Function	Description	Cable cross sectional area
L	AC input L	AC input,MAX AC95-280V.	1.0mm^2
N	AC input N		1.0mm^2
B-	Battery B-	Battery positive and negative	1.5mm^2
B+	Battery B+		1.5mm^2

Installation instruction

◆ The battery charger is installed by four screws with the diameter of 4MM.

◆ Installation size as below :W75mm * H132mm

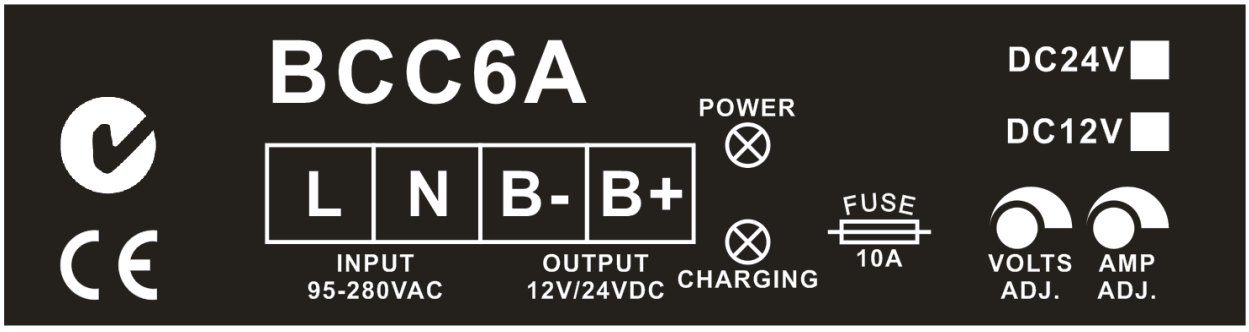


◆withstand and voltage test

If you need to test the system voltage withstand, please disconnect all the charger terminals to avoid high voltage into the damaged charger.

Panels and instructions

◆ Panel diagram



◆ POWER indicator function description

Indicator Status	Mani function
Illuminated	The charger works normally.
Eliminated	The charger is not energized or failed.

◆ CHARGING indicator function description

Indicator Status	Main function
Illuminated	The charger is in charging state, and the output current is >0.3A.
Eliminated	The charger is in floating charge state, and the output current is <0.3A.

Operation instruction

◆ **Charge voltage regulation:**

When the charger is installed on site for voltage regulation, the battery must be disconnected from the charger and the voltage potentiometer (VOLT) must be adjusted at the same time as the output voltage of the charger is measured until the appropriate value is reached.

Clockwise adjustment of the VOLT potentiometer can increase the output voltage and reduce the output voltage by counterclockwise adjustment.

◆ **Charge current regulation:**

When adjusting the current, please connect the charger output with the accumulator group correctly, adjust when the charging voltage is not higher than 25.0V (12.5V), adjust the current potentiometer (AMP) while measuring the charging current to achieve the appropriate charging current.

Clockwise adjustment of the AMP potentiometer can increase output current and counter clockwise adjustment to reduce output current.

◆ Export insurance replacement:

This charger has the output anti-contact anti-insurance FUSE (10A), when the output is connected back, the insurance will burn out, please connect the battery correctly, replace the fuse, the charger will return to normal work. The replacement steps are as follows:

1) Press hard on the slotted screwdriver, screw counter-clockwise and then take out the fuse.

2) Put a new fuse into the block, press the slotted screwdriver and screw clockwise.

Note:In-proper operation or over tightening may damage the block.

Warning: When replacing the fuse, be sure to disconnect the input power of the charger to avoid personal injury or equipment damage!

Note:

1) Because there is diode and current-limiting circuit inner the charger, it can be used together with charging generator, and there is no need to disconnect the charger when cranking.

2) During gen-set is running, high current will cause voltage drop in charging line, so recommend separately connecting to battery terminal to avoid disturbance on sampling precision.