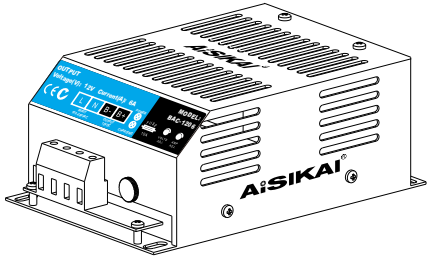
AiSIKAI®
POWER THE FUTURE

BAC SERIE
BATTERY CHARGER

PRODUCT INSTRUCTION
24V1.1



JIANGSU AISIKAI ELECTRIC CO., LTD.

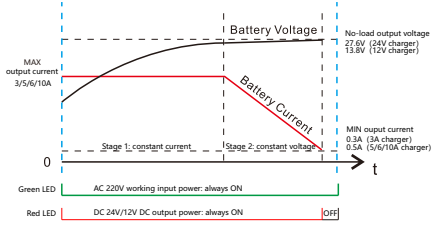
▶ OVERVIEW

BAC series switch battery chargers use the latest switch power .
devices. Designed according to the charge characteristics of the .
lead-acid battery for starting generators, BAC chargers are suitable for the long time supplement charge(floating charge) of the lead-acid battery. The maximum charging current is 6A for 12V and 10A for 24V.

▶ PERFORMANCE FEATURES

1. Designed in switch power structure. Wide range of the input voltage. Small volume, light weight and high effciency.
2. Automatic charge using the 2-stage charging method(i.e., constant current first and then constant voltage). The process is in full accordance with the battery charging characteristics, and can prevent overcharging of lead-acid battery and maximize battery life.
3. Have protection functions for short-circuit and reverse connection.
4. Charging voltage and current can be regulated by potentiometer on site.
5. LED display: Power indication and charging indication.
6. Horizontal instllation. Easy to install.

▶ CHARGING PRINCIPLE



Charging Curve

BAC chargers use 2-stage charging method which is in accordancewith the battery charging characteristics. When the battery voltage is under the threshold, the charging current is constant. When the batteryvoltage is higher than the threshold, the charging current decreases asthe battery voltage rises. When the charging current reaches the set value, the charger turns into the floating charging mode. At this time,charging current decreases gradually and the battery voltage rises gradually to the set value. When the charging current is lower than 0.3A(0.5A for 24V 5A), the battery is basically fullycharged (the charging indication LED turns OFF). Afterwards, the chargingcurrent only offsets the self-discharging of the battery and the long time chargingdoes no harm to the battery. The charger can maintain the batteryin a fullstate and ensure the battery life.

▶ SPECIFICATIONS

SPECIFICATION TABLE

Category	Items	12V	24V
Model	BAC	BAC-1206	BAC-2403/2405/2410
Input	Nominal input voltage	AC（95～280）V	
	Max input voltage	AC（90～305）V	
	Frequency	50Hz/60Hz	
	Max input current	2.5A	2.5A/2.5A/4A
	Efficiency	>85%	
Output	Charging current	4A～6A，error±2%	2A～3A/5A/10A，error±2%
	Factory charging current	6A	3A/5A/10A
	Max output power	135W	135W/135W/290W
	Min output voltage	7.5V	
	No-load output voltage	13.8V，error±1%	27.6V，error±1%
	No-load consumption	<3W	
Insulation	Insulation resistance	When between input and output, output and shell are both DC500V 1min, the insulation resistance RL≥50MΩ	
	Insulation voltage	When between input and output, output and shell are both AC1500V 50Hz 1min, the leakage current IL≤3.5mA	
Working conditions	Working temperature	(-30～+55)℃	
	Storage temperature	(-40～+85)℃	
	Working humidity	0%RH～95%RH(no condensation)	
Structure	Weight	0.65kg	0.65/0.65/1.15kg
	Dimensions(L*W*H mm)	143*96*55(3A/5A/6A); 205*146*55(10A);	

▶ CONFIGURATION

●Voltage regulation

When regulating voltage on site, it is needed to disconnect the battery from the charger. Measure the charger output voltage while regulating the voltage potentiometer (VOLT) until the appropriate value is reached.

●Current regulation

Connect the output to the battery. Measure the charging current when the charging voltage is not higher than 25.0V (12.5V). Regulate the current potentiometer (AMP) to set the appropriate charging current.

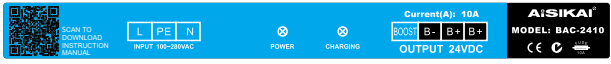
The output current can also be estimated according to the current potentiometer scale.

▶ OPERATION INSTRUCTIONS

BAC-1206、BAC-2403、BAC-2405



BAC-2410



1. Connect AC 220V to terminals L and N. BVR multiwire copper wires are recommended. Wires for 3A/5A/6A
chargers should be no thinner than 1mm2 ; wires for 10A chargers should be no thinner than 1.5mm2 .

2. Connect terminal B+ to “+”of battery; connect terminal B- to “-”of battery. BVR multiwire copper wires are recommended.Wires for 3A/5A/6A chargers should be no thinner than 1.5mm^2; wires for 10A chargers should be no thinner than 2.5mm^2.

3. POWER：green indicator of power status. On when charger works normally.

4. CHARGING：red indicator of charge status. On when the charge current is larger than 0.3A(0.5A).

5. VOLT：regulator potentiometer of charging voltage.

6. AMP： regulator potentiometer of charging current.

7. The output FUSE is 10A. The fuse will burn out if the output is wired reversely. At this time, there is no output voltage.After correcting the output wiring and replacing the fuse, the charger can work normally.

8. Steps of fuse replacement:

8.1. Use a screwdriver to press in slightly and screw counterclockwise a little. Then pull the fuse out.(unsuitable operation or excessive force may damage the fuse holder)

8.2. Insert the new fuse into the fuse holder. Use a screwdriver to press in slightly and screw clockwise a little.

Note:

1.The internal output of the charger is connected to diode and current limiting circuit. The charger can be used in parallel with the charging generator on the engine. It is not necessary to disconnect the charger when starting.

2.When used on generator sets, it is recommended to connect the charging calbe to the battery terminal separately, because a voltage drop will be generated on the charging cable due to the high charging current, which can affect the sensor sampling accuracy.

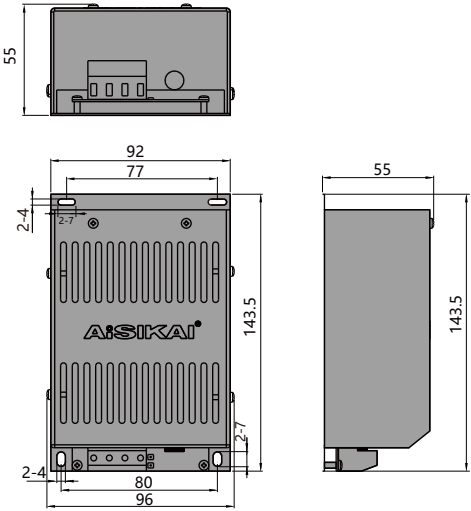
► MODEL SELECTION

When ordering, select the model according to the installation method and the voltageas the chart below.

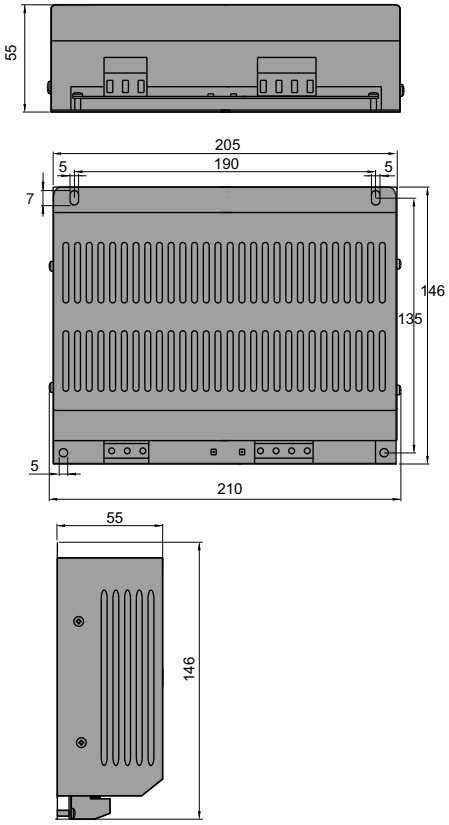
Model	Installation	Battery Type	Rated Output Current
BAC-1206	Horizontal	12V	6A
BAC-2403	Horizontal	24V	3A
BAC-2405	Horizontal	24V	5A
BAC-2410	Horizontal	24V	10A

►OUTLINE AND INSTALLATION DIMENSIONS

BAC-1206、BAC-2403、BAC-2405



BAC-2410



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