BACM2410

BATTERY CHARGER

USER MANUAL

ZHENGZHOU SMARTGEN TECHNOLOGY CO.,LTD

4 PARAMETERS CONFIGURATION

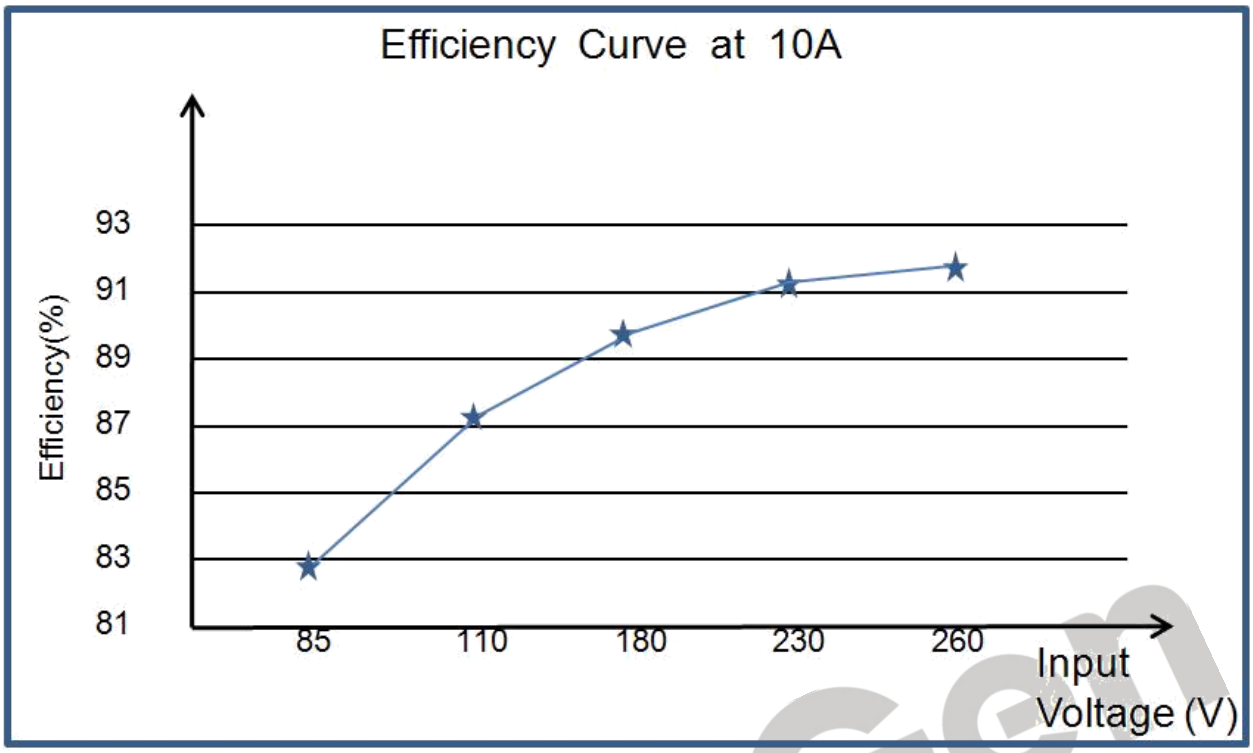
Items	Default	Adjustable Range	Description
Charging Stage	3	(2~3)	2: Two Stage; 3: Three Stage
Max. Rated Current	10.0A	Nonadjustable	Maximum charging current
Rated Current	100%	(0~100)%	Maximum charging current percentage
Absorption Charge Voltage	28.2V	(20~30)V	The charging voltage of “Constant Voltage”
Absorption Charge Delay	1	(0~1)	0: Disable; 1: Enable
Delay Setting	1.0h	(0.1~100)h	The charging time of “Constant Voltage”
Absorption Charge Complete Current	1	(0~1)	0: Disable; 1: Enable
Complete Current Setting	0.5A	(0.20~3.00)A	The transition current from “Absorption Charge” transfer to “Float Charge”.
Float Charge Voltage	27.0V	(20~30)V	The voltage of “Float Charge”
AUTO BOOST Voltage	25.6V	(20~30)V	When the charger is in “Float Mode”, it enters into “Quick Charge” if the battery voltage has fallen below the set value.
Trickle Charge	1	(0~1)	0: Disable; 1: Enable
Trickle Charge Voltage	22.0V	(20~30)V	The voltage of “Trickle Charge”
Trickle Charge Current	50%	(0~100)%	Maximum charging current percentage
Battery Detection	0	(0~1)	0: Disable; 1: Enable
Battery Under Voltage Warn	1	(0~1)	0: Disable; 1: Enable
Under Voltage Set Value	23.0V	(16.0~30.0)V	“Under voltage” alarm will be initiated if the battery voltage has fallen below the set value.
Under Voltage Delay	120s	(0~3600)s	“Under voltage” alarm will be initiated if the battery voltage has fallen below the set value and the delay timer has expired.
Under Voltage Return Value	24.0V	(16.0~30.0)V	The transition voltage from “under voltage” transfer to “normal voltage”.
Under Voltage Return Delay	10s	(0~3600)s	“Under voltage” alarm will be removed if the battery voltage has exceeded the return value and the delay timer has expired.
Temperature Sensor	1	(0~1)	0: Disable; 1: Enable
Temperature Compensation	1	(0~1)	0: Disable; 1: Enable
Temperature Compensation Set Value	0.036V/℃	(0.020~0.060)V/℃	The Compensation of every 1℃ change on 20℃ basis.

High Temp. Warn	1	(0~1)	0: Disable; 1: Enable
High Temp. Set Value	55℃	(0~80)℃	"High Temp." alarm will be initiated if the battery temperature has exceeded the set value.
High Temp. Delay	0.5s	(0~60.0)s	"High Temp." alarm will be initiated if the battery temperature has exceeded the set value and the delay timer has expired.
High Temp. Return Value	50℃	(0~80)℃	The transition temperature from "High Temp." transfer to "Normal Temp.".
High Temp. Return Delay	1s	(0~60.0)s	"High Temp." alarm will be removed if the battery temperature has fallen below the return value and the delay timer has expired.
Auxiliary Input Port	3	(0~3)	0、Not Used; 1、Shutdown: The battery charger enters into Standby Status if the input is active. 2、Enable Battery Detection: The battery charger enters into Standby Status if the input is active but there is no battery voltage signal. 3、Manual BOOST: The battery charger enters into BOOST if the input is active.
Auxiliary Input Port Delay	2.0s	(0~60.0)s	The corresponding action will be active if the input is active and the delay timer has expired.
Communication Address	10	1~250	RS485 Communication Address
Baud Rate	0	(0~2)	0、9600; 1、19200; 2、38400 (One Stop Bit)

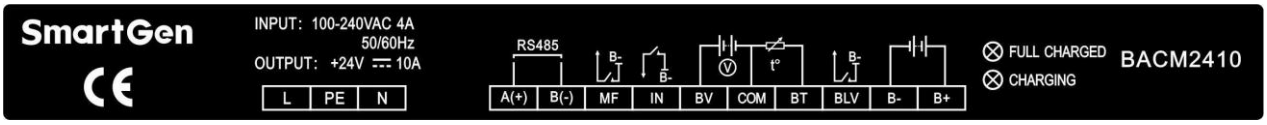
5 PARAMETERS SPECIFICATION

Items	Contents	Parameters	
Input Characteristics	Nominal AC Voltage	AC (100~240)V	
	Max. AC Voltage	AC (90~280)V	
	AC Frequency	50Hz/60Hz	
	Max. Active Power	340W	
	Max. Current	4A	
	Efficiency	AC 110V	AC 220V
		>86%	>88%
	Power Factor Calibration	AC 110V	AC 220V
		>0.99	>0.95
Output Characteristics	No-load Output Voltage	27V，Error±1%	
	Rated Charging Current	10A，Error±2%	
	Max. Output Power	290W	
Insulating Property	Insulation Resistance	Between input and output, input and shell, output and shell all are: R_L≧50MΩ	
	Insulation Voltage	Between input and output, input and shell both are: AC1600V 50Hz 1min leakage current: I_L≦3.5mA Between output and shell is: AC500V 50Hz 1min leakage current: I_L≦3.5mA	
Working Condition	Working Temperature	(-30~+55)°C	
	Storage Temperature	(-40~+85)°C	
	Working Humidity	20%RH~93%RH(No condensation)	
	Storage Humidity	10%RH~95%RH(No condensation)	
Shape Structure	Weight	1.17kg	
	Dimension	205.5mm×131mm×55mm (length*width*height)	

6 EFFICIENCY CURVE



7 OPERATION



BACM2410 MASK

Terminal	Function	Description
L	AC Terminals	Connect terminals L and N to AC voltage (100~240)V using greater than BVR 1.5mm^2 multi-strand copper line.
N		
PE	GND Terminals	Connect to shell internally.
A(+)	RS485 Communication Port	Standard RS485 communication port
B(-)		
MF	Mains Failure Output Port	It will output low level immediately when the AC input is interrupted.
IN	Auxiliary input port	Active when level is low.
BV	Battery Voltage Port	Connect to battery positive.
COM	Common Port	COM port of BV and BT terminal. Connect to battery negative.
BT	Temperature Sensor Port	Connect to PT1000 sensor
BLV	Battery Low Voltage Port	It will output low level when the battery voltage has fallen below the set value.
B-	Battery Negative	Connect to battery negative using greater than BVR 2.5mm^2 multi-strand copper lines.
B+	Battery Positive	Connect to battery positive using greater than BVR 2.5mm^2 multi-strand copper lines.
FULL CHARGED	Green LED Indicator	Full Charged Indicator
CHARGING	Red LED Indicator	Charging Indicator

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 genset is running, high current will cause voltage drop in charging line, so recommend separately connecting to battery terminal to avoid disturbance on sampling precision.

8 CONNECTION