



SmartGen
ideas for power

BCB20
BATTERY CHARGING BOX
USER MANUAL



SMARTGEN (ZHENGZHOU) TECHNOLOGY CO., LTD.

4 SPECIFICATION

Technical parameters are as follows,

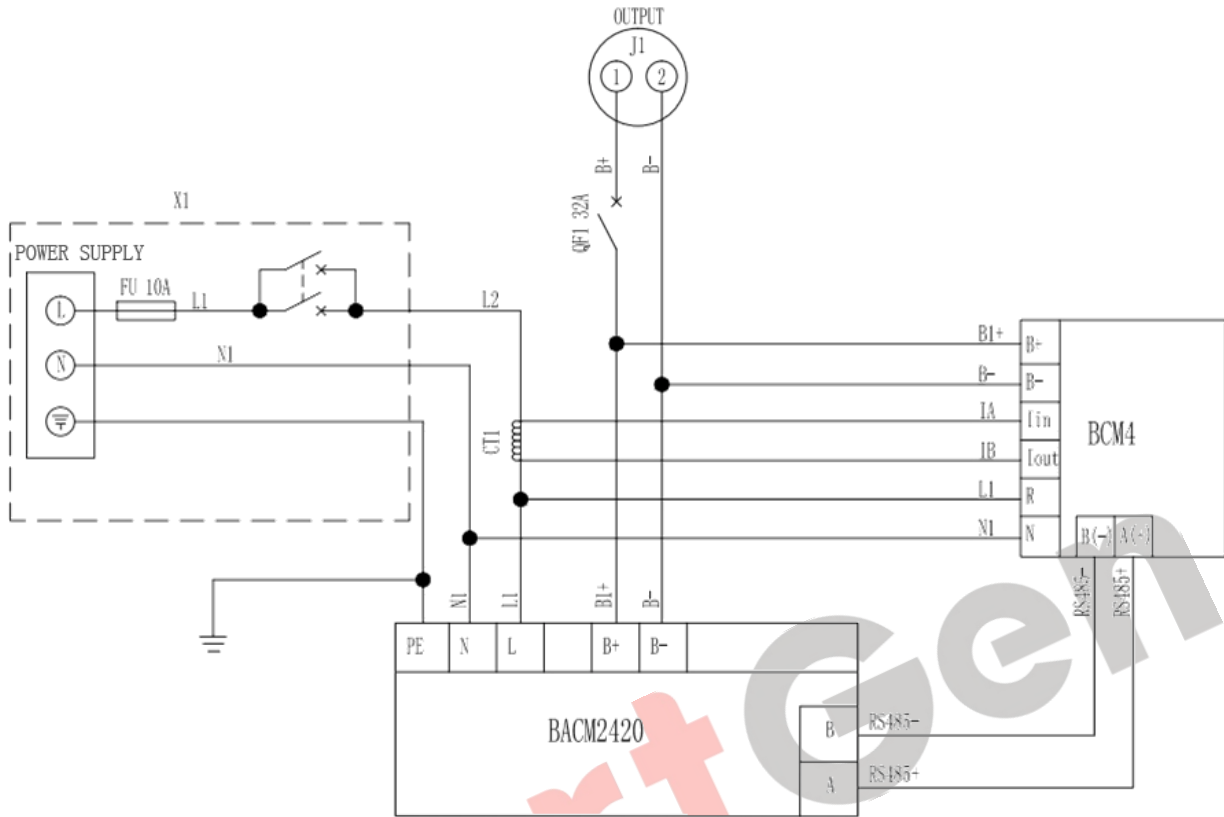
Category	Item	Parameter			
		24V		12V	
Input Performance	Nominal Input AC Volt Range	AC (100~277)V			
	Max Input AC Volt Range	AC (90~305)V			
	AC Frequency	50Hz/60Hz			
	Max Input kW	680W		340W	
	Max Input Current	7A		3.5A	
	Efficiency	AC 110V	AC 220V	AC 110V	AC 220V
		>85%	>87%	>80%	>81%
Power Factor Calibration	AC 110V	AC 220V	AC 110V	AC 220V	
	>0.99	>0.95	>0.99	>0.95	
Output Performance	No-load Output Volt	27V, error±1%		13.5V, error±1%	
	Rated Charging Current	20A, error±2%			
	Max Output Power	580W		290W	
Insulating Property	Insulation Resistance	Between input and output, input and shell all areDC500V10s,: insulation resistance $R_L \geq 1M\Omega$			
	Insulation Voltage	Between input and output, input and shell all are: DC3000V 50Hz 1min leakage current: $I_L \leq 3.5mA$ Between output and shell is: DC800V 50Hz 1min leakage current: $I_L \leq 3.5mA$			
Working Environment	Working Temperature	(-25~+55)°C			
	Storage Temperature	(-25~+70)°C			
	Working humidity	20%RH~93%RH(No condensation)			
Overall Structure	Weight	6.2kg			
	Dimension	315mm×213mm×222mm(L×W×H)			
Air Switch of Output End	Trip Current	32A			
Fuse of Input End	Fusing Current	10A			

Parameter content and range table is as follows,

Item	Parameter Range		Factory Default		Description
	24V	12V	24V	12V	
Module Backlight Set	(0-60)min		3min		0min always lights on
Language	(0~1)		0		0: Chinese 1: English
Output Current	Non-adjustable		20.0A		Max charging current
Charging Current	(0~100)%		100%		Max rated charging current percentage.
Battery Selection	(1~3)		2		1: 12V; 2: 24V; 3: Self-adaption
Charging Stage	(2~3)		3		2: Two-Stage; 3: Three-Stage
Absorption Charge Volt	(20~30)V	(10~15)V	28.2V	14.1V	Voltage value in constant volt charging mode.
Float Charge Volt	(20~30)V	(10~15)V	27.0V	13.5V	Voltage value in float charging mode.
Absorption Charge Time Enable	(0~1)		1		0: Disenable; 1: Enable
Absorption Charge Time Set	(0.1~100)h		1.0h		Constant volt charging time
Absorption Charge End Current Enable	(0~1)		1		0: Disenable; 1: Enable
Absorption Charge End Current Set	(0.20~3.00)A		0.5A		Current value when absorption charge turns to float charge.
Auto BOOST Volt Set	(20~30)V	(10~15)V	25.6V	12.8V	When battery charger in float charging status, battery turns to quick charging mode automatically as soon as battery volt drops to this value.
Auto BOOST Volt Delay	(0-3600)s		20s		Battery enters BOOST delay when battery volt drops to BOOST volt.
Low volt Trickle Charge Enable	(0~1)		1		0: Disenable; 1: Enable
Low Volt Trickle Charge Volt	(20~30)V	(10~15)V	22.0V	11.0V	Voltage value of trickle charging.
Low Volt Trickle Charge Current	(0~100)%		50%		Max rated charging current percentage.

8 WIRING CONNECTION DIAGRAM

Charger and controller internal wiring connection diagram is as follows,



9 OVERALL DIMENSION AND PANEL CUTOUT

