



Product Specifications

Power Base X20-A LV Series Home Energy Storage System

Version	Prepare	Check	Approve	Date
V1.0				2021-05-06





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1. Introduction

The Power Base X20-A LV series product is a 51.2V lithium iron phosphate battery storage system independently developed in-house by SHENZHEN GARAYE energy technology Co., Ltd, The rated voltage of the system is 51.2V, and the maximum which meets the requirements of 12kW power supply. Parallel of multi systems is supported.

2. Features

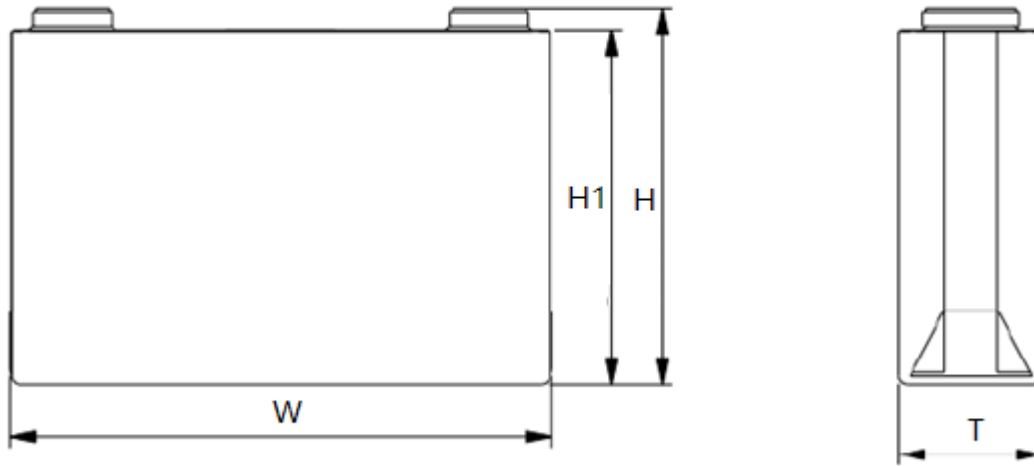
- Adopt high safety, long life, excellent performance LiFePO4 prismatic cells;
- Over 8000 times of cycle life;
- Intelligent BMS to ensure a safe reliable operation;
- Parallel on cabinet level available;
- Multiple communications including RS485, CAN、RS232;
- Modular rack design for easier installation and smaller landscape.





3. Specifications

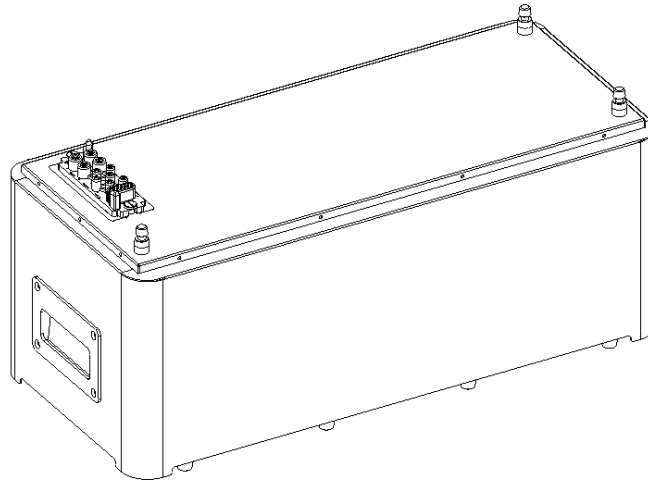
3.1. Cell Parameters



No.	Items		Parameters	
1	Cell Type		LiFePO4 Prismatic	
2	Nominal Voltage		3.2V	
3	Nominal Capacity		50Ah	100Ah
4	Maximum Charge Current	Continuous	50A	100A
5		Peak for 10s	100A	200A
6	Maximum Discharge Current	Continuous	50A	100A
		Peak for 30s	150A	300A
7	Dimensions (T*W*H)		39*148*101mm	27*174*207mm
8	Weight		1.18±0.05kg	2.18±0.05kg
9	Temperature Range	Charging	0°C ~ 55°C	
		Discharging	-20°C-55°C	
		Recommended Working	15°C ~ 35°C	

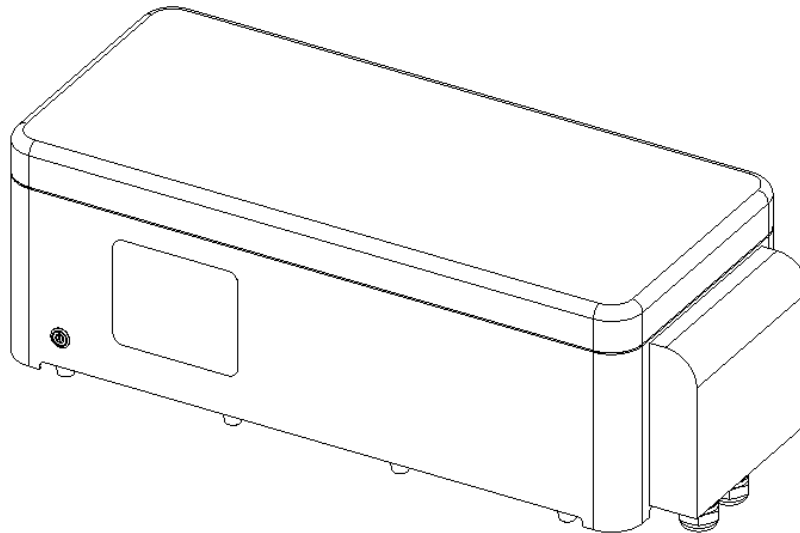


3.2. Battery Module Parameters



No.	Items	Parameters	
		GA-FS4850-16OSJ1	GA-FS48100-16OSJ1
1	Model	GA-FS4850-16OSJ1	GA-FS48100-16OSJ1
2	Cell Configuration	16S1P	16S1P
3	Nominal Capacity	50Ah	100Ah
4	Nominal Energy	2560Wh	5120Wh
5	Weight (Approx.)	34kg	49kg
6	Dimensions (W*D*H)	606*268*237±2mm	

3.3. Main Control Module Parameters



No.	Items	Parameters
1	Model	GA-MC100-200X1
2	Operation Voltage Range	33.6V~62.4V
3	Maximum Operation Current	≤300A
4	Communication	CAN、RS485、RS232
5	Weight(Approx.)	18kg
6	Dimensions (W*D*H)	645*268*211±2mm



3.4. System Parameters



General Specifications

No.	Items	Parameters								
1	Model	X20-A LV_50 Series				X20-A LV_100 Series				
2	Main Control Module	GA-MC100-300X1				GA-MC100-300X1				
3	Battery Module Type	GA-FS4850-16OSJ1				GA-FS48100-16OSJ1				
4	Battery Module Chemistry	LiFePO4								
5	Battery Module QTY	2	3	4	5	2	3	4	5	
6	Nominal Capacity(Ah)	100	150	200	250	200	300	400	500	
7	Nominal Energy(kWh)	5.12	7.68	10.24	12.8	10.24	15.36	20.48	25.6	
8	Voltage	Nominal(V)	51.2							
		Recommend Charging(V)	56.8							
		Max. Charging(V)	58.4							
		Discharge Cut-off(V)	46.8							
9	Current	Max. Charging(A)	90	125	165	200	165	200	300	300
		Max. Discharging(A)	90	125	165	200	165	200	300	300
		Peak for 10s(A)	115	175	200	250	200	250	350	350
10	Weight (Approx.)	208kg @12.8 kWh				283kg @25.6 kWh				
11	Dimensions (L*H*W))	645*1280 *268mm @5PC Battery Model								
12	Communication	RS485, CAN,RS232								

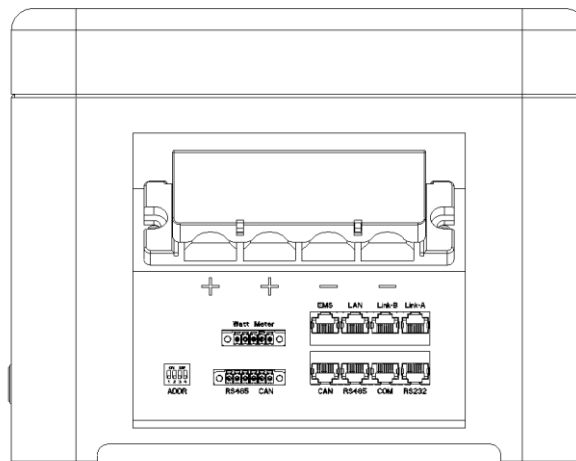


13	Cycle Life	≥8000 times @25°C
14	Designed Calendar Life	≥10 years
15	Safety Function	Over-charge, Over-discharge, Over-current, Low/High-temperature, Low-voltage, Short-circuit Protections
16	Parallel Capability	Maximum 10 units (Recommended 6 units)

3.4.1. Environment Specifications

No.	Items	Parameters
1	Charging Temperature Range	0°C~50°C
2	Discharging Temperature Range	-18°C~50°C
3	Best Operating Temperature Range	15°C~35°C
4	Storage Temperature Range	-20°C~55°C
5	Best Storage Temperature Range	10°C~30°C
6	Humidity	10%RH~90%RH
7	Altitude	0~2000m

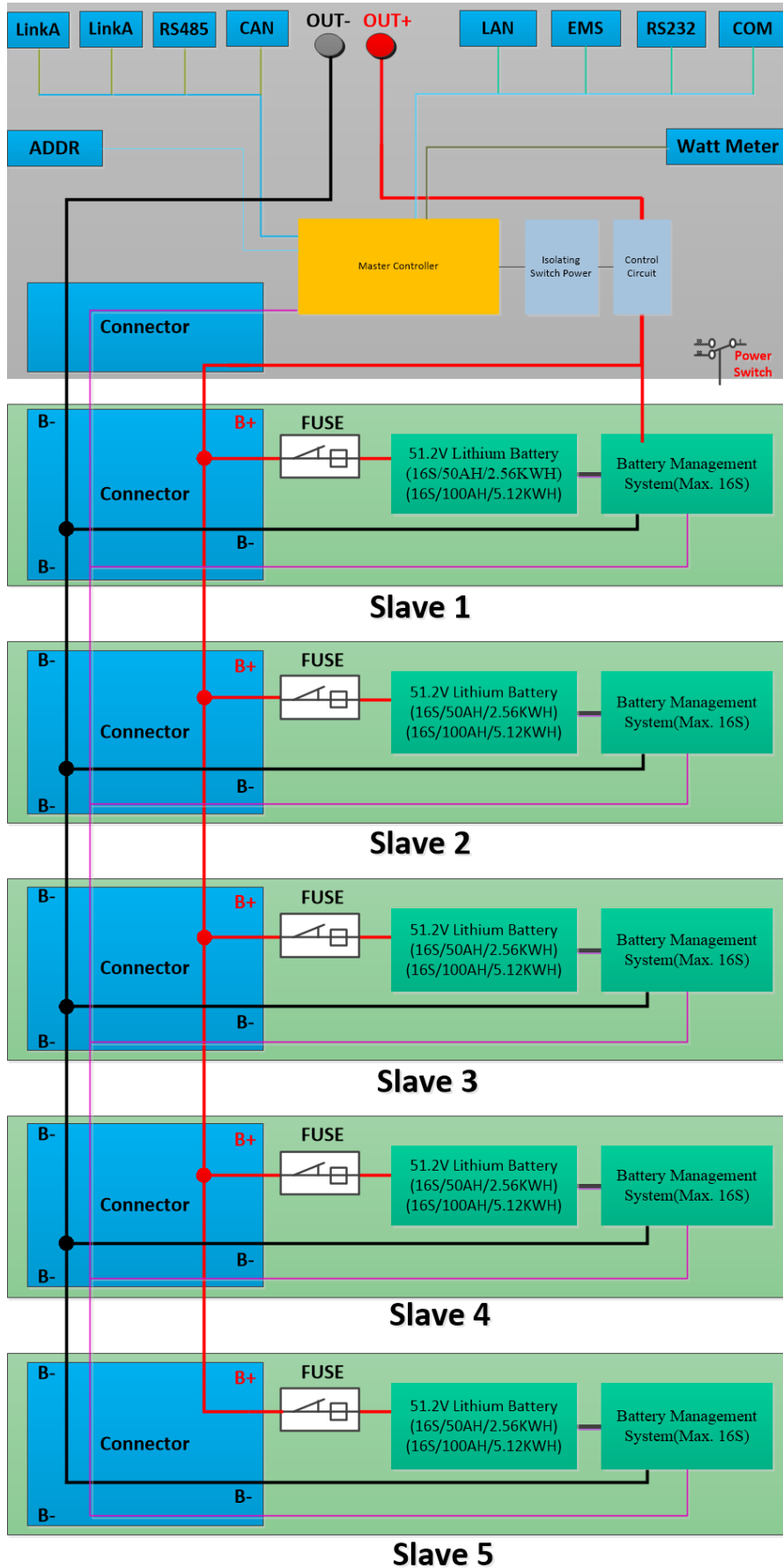
3.4.2. Interface View



No.	Items	Instructions
1	Link-A	Multi-device parallel connection
2	Link-B	Multi-device parallel connection
3	LAN	TCP/IP communication connection
4	EMS	EMS communication connection
5	Watt Meter	Watt Meter connection
6	RS232	RS232 communication connection
7	COM	Upper computer communication connection
8	RS485	Inverter RS485 communication connection
9	CAN	Inverter CAN communication connection
10	ADDR	Address Dial Switch
11	+	Power anode*2
12	-	Power cathode*2



4. Electrical Schematic





5. Product Application

