



Product Specifications

Power Base MAX15080A

HV Energy Storage System

Version	Prepare	Check	Approve	Date
V1.0	ZJM			2021-04-03
V1.1	ZJM			2021-04-28



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6.	Product Application	错误!未定义书签。



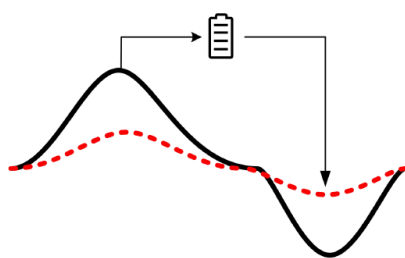
1. Product Overview

Power Base Max15080A is a new lithium-iron phosphate battery storage system under the self-research and development procedure of GARAYE consisting of highly efficient photovoltaic controller(100kW), high cycle life lithium iron phosphate battery pack(150kWh), and PCS (80kW). Output voltage range 200VAC ~ 480VAC & 50Hz / 60Hz (adjustable). This product can be used in most national power grid connected applications, also used in peak-clipping-valley-filling, micro-grid, standby power and self-use application.

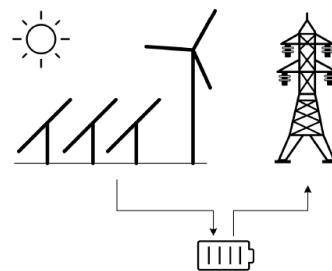
2. Product Characteristics

- The energy storage system is equipped with IP55 protection and constant temperature function of air conditioning, which is suitable for typhoon coastal areas;
- The charging unit of the energy storage system is designed with high efficiency, high power density and lightweight hardware architecture. The photovoltaic controller is equipped with short-circuit, open-circuit and attenuation prediction functions of PV panels, and dynamic MPPT self-adaptive learning and optimization functions. The range of MPPT input voltage is 300VDC ~ 850VDC, which can meet more application scenarios;
- The output unit of the energy storage system is composed of high-power PCS (80kW), and the output voltage range is 200VAC ~ 480VAC & 50Hz/60Hz(adjustable), which is suitable for most grid-connected applications of the national grid;
- Multiple systems in parallel are supported, maximum 20 in parallel;
- The energy storage unit adopts lithium iron phosphate battery pack with high safety and long life;
- The system has remote intelligent monitoring, which can realize the whole life cycle of products and services from installation and deployment, system operation, intelligent operation and maintenance, statistical analysis and fault repair.

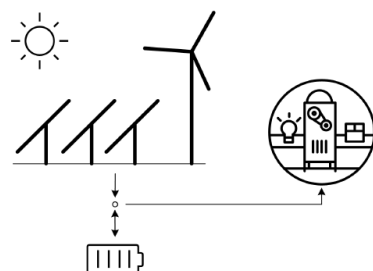
3. Application



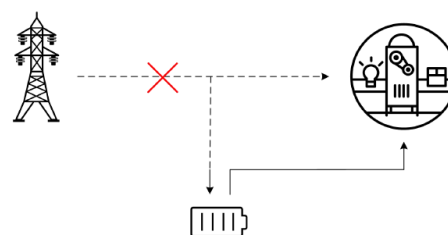
Demand Charge Management



Customer Self Supply



Micro-Grid

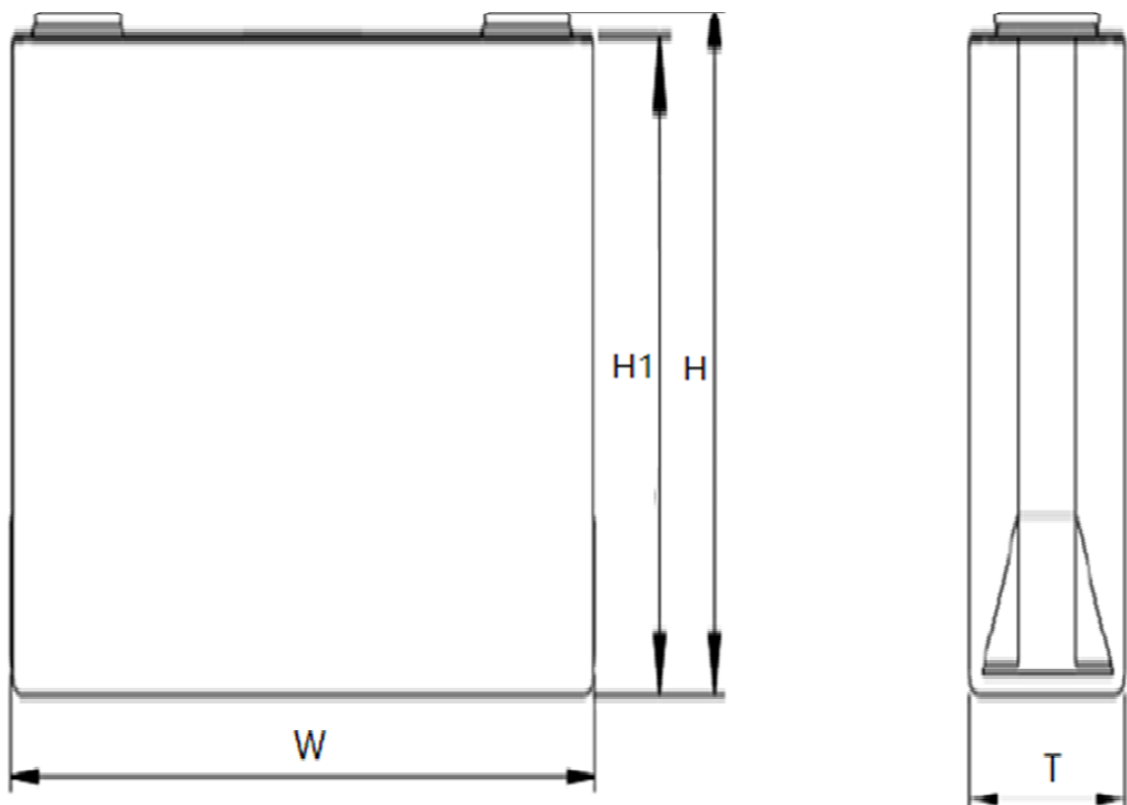


Backup power



4. Specifications

4.1. Cell Parameters





No.	Items		Parameters
1	Cell Type		LiFePO4 Prismatic
2	Nominal Voltage		3.2V
3	Nominal Capacity		280Ah
4	Maximum Charge Current	Continuous	280A
5		Peak for 30s SOC ≤ 80%	560A
6	Maximum Discharge Current	Continuous	280A
		Peak for 30s SOC ≤ 80%	560A
7	Dimensions	T	71.55±1.5mm
		W	173.93±0.3mm
		H	207.23±0.5mm
		H1	204.59±0.5mm
8	Weight		5.34±0.15kg
9	Temperature Range	Charging	0°C ~ 55°C
		Discharging	-20°C-55°C
		Recommended Working	15°C ~ 35°C

4.2. Battery Module Parameters



No.	Items	Parameters
1	Model	GR-FS24280-08ISR1
2	Cell Configuration	8S1P
3	Nominal Capacity	280Ah
4	Nominal Energy	7168Wh
5	Weight (Approx.)	52kg
6	Dimensions (W*D*H)	206*725*222±2mm



4.3. Lithium Battery System Parameters

No.	Items		Parameters
1	Model		GR-FS537280-168S
2	Nominal Capacity		280Ah&150kWh
3	Chemistry		LiFePO4
4	Battery Module QTY		21
5	Voltage	Nominal(V)	537.6
		Recommend Charging(V)	596
		Max. Charging(V)	613
		Discharge Cut-off(V)	492
6	Current	Max. Charging(A)	280
		Max. Discharging(A)	280
		Peak for 10s(A)	300
7	Communication		CAN、RS485、RS232

4.4. System Parameters



4.4.1. General Specifications

No.	Items		Parameters
1	Main Control Module		GR-MC650-300M
2	Lithium Battery System		GR-FS537280-168S
3	Input	Maximum PV Array Voltage (V)	1100
		MPPT Voltage Range (V)	300~850
		Maximum Number Of Parallel PV Array Inputs	16
		Rated Branch Current(A)	12

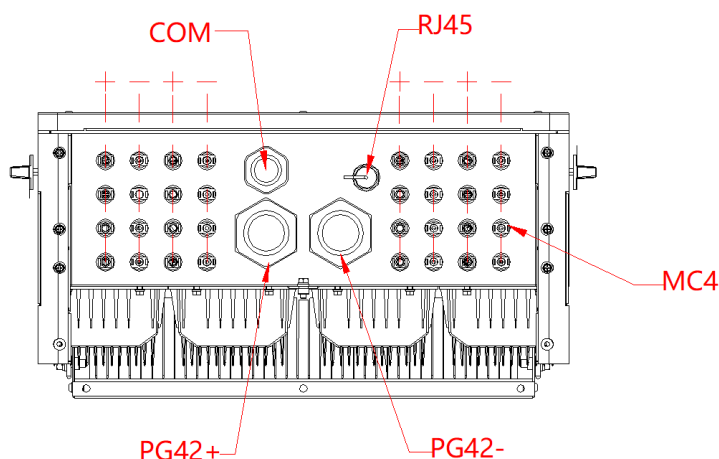


		Maximum Branch Current(A)		13
4	PCS Output	Rated Voltage	European standard	380Vac(three-phase three-wire system)
			Japanese standard	200Vac(three-phase three-wire system)
			USA standard	480Vac(three-phase three-wire system)
		Rated Grid Frequency(Hz)		50/60
		Rated Power (kW)		80
		Current Range (A)		0-101.6
		Rated Current (A)		92.4A
		Power Factor		0.8
		Total Harmonic Distortion (%)		<3
5	Weight (Approx.)			1500kg
6	Dimensions (L*H*W))			1115 x 2070 x 1276 mm
7	Communication			RS485, CAN
8	Cycle Life			4000 times@80%DOD
9	Designed Calendar Life			≥10 years
10	Safety Function			Over-charge, Over-discharge, Over-current, Low/High-temperature, Low-voltage, Short-circuit Protections
11	Parallel Capability			Maximum 10 units (Recommended 6 units)
12	Level Of Protection			IP65
13	Cable Outlet			Bottom

4.4.2. Environment Specifications

No.	Items	Parameters
1	Charging Temperature Range	0°C~45°C
2	Discharging Temperature Range	-10°C~55°C
3	Best Operating Temperature Range	15°C~35°C
4	Storage Temperature Range	-20°C~60°C
5	Humidity	5%RH~95%RH
6	Altitude	0~4000m

4.4.3. Input port definition

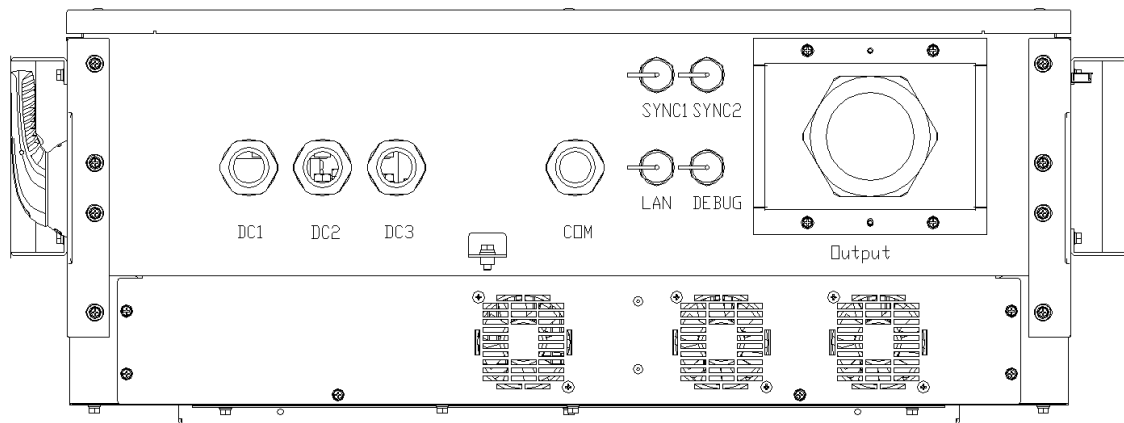


No.	Items	Instructions
1	COM	Communication Port



2	RJ45	Communication Port
3	PG42+	Lithium battery system "Positive pole"
4	PG42-	Lithium battery system "Negative pole"
5	MC4	Connected photovoltaic arrays(16 way)

4.4.4. Output port definition



No.	Items	Instructions
1	DC1-DC3	Lithium battery system Power Port
2	COM	Lithium battery system Communication Port
3	LAN	Communication Port
4	DEBUG	Debug port
5	SYNC	Communication Port
6	Output	AC Output

5. Electrical Schematic

