

MV500-1000L-05G
500kW-1044kWh



A+ Grade Lithium
Iron Phosphate Cells



20-year Design Lifespan

Version:V1.2

Liquid-Cooled Battery All-in-One C&I BESS



● Features and Advantages

Safety Technology

- A+ grade lithium iron phosphate
- The system is configured with a multi-level fuse protection
- Built-in aerosol fire extinguishing systems at the package and rack levels

More Reliable

- The system is rigorously designed and tested to operate stably under various conditions
- Equipped with protections against overcharge over-discharge, and over-temperature to prevent accidents

Easy to Install and Use

- Highly integrated for ease of transportation, installation and deployment
- Modular design with flexible system capacity configuration

Energy Management System

- Peak shaving
- Demand mitigation
- Self-consumption
- Price arbitrage

System Technical Parameters

Model	MV500-1000L-05G
Battery Data	
Nominal Energy	1044.9 kWh
Nominal Voltage	665.6V
Battery Model	SC52T04-314
Battery Chemistry	Lithium Iron Phosphate (LiFePO4)
Cycle Life	≥8000 cycles @25°C, 0.5P/0.5P
Cell Specification	3.2V 314Ah
Battery Pack Energy	52.2 kWh
Rack Configuration	1P208S
Number of Racks	5
Operating Voltage	582.4V - 759.2V
Rated Charging Power	0.5P
Rated Discharging Power	0.5P
Safety	
Fire Suppression System	Aerosol fire extinguishing
PCS Data	
Rated Power	500 kW
General	
Dimensions (W x D x H)	6058 x 2438 x 2591 mm
Weight	Approximately 14000 kg
IP Rating	IP54
Cooling Method	Liquid cooling (Battery)
Operating Temperature	-20°C to +50°C
Storage Temperature	-20°C to +45°C
Relative Humidity	15% - 90% (Non-condensing)
Operating Altitude	≤3000m
Communication Interfaces	LAN/CAN/RS485
Compliance	IEC62619, IEC/EN61000, UN3536, UN38.3

* The actual product may have slight differences from some promotional videos or pictures. Please refer to the actual product. Unless otherwise specified, the data on this page are all from our company's laboratory. The data may have errors due to changes in the objective environment.

* The specifications are subject to change without prior notice.

Power Conversion System



● PCS Features

1. Flexible Configuration

- 62.5kW to 500kW by 1 to 8 power modules.
- 3P3W AC output for 400/480/208/690Vac interconnection with external transformer

2. High Efficiency & Stability

- Maximum efficiency up to 98.2%
- Multi-string technology for better battery safety and performance.

3. Extensive Use

- Multiple battery strings working in parallel or independently to allow easy power and energy expansion.

4. Compliance & Compatibility

- Compatible with various types of battery system.
- Global grid certified & listed

PCS Technical Parameters Part1

Model		PWS1-500KTL-EX-8M1
Utility-interactive Mode		
Nominal Power	500kVA	
AC Max Power	550kVA	
AC Frequency	50/60(-2.5~2.5) Hz	
AC Voltage	400(-15%~15%) Vac	
Battery Voltage Range	600~900Vdc	
Quantity of Battery Strings	1	
DC Max Current In Each Branch	864A	
THDi	≤3%	
AC PF	Listed: 0.8~1 leading or lagging (Controllable) Actual: 0.1~1 leading or lagging (Controllable)	
Stand-alone Mode		
Nominal AC Output Power	500kVA	
AC Max Power	550kVA	
AC Frequency	50/60(-2.5~2.5) Hz	
AC Output Voltage	380/400(±10% configurable) Vac	
Battery Voltage Range	600~900Vdc	
Quantity of Battery Strings	1	
DC Max Current In Each Branch	864A	
Output THDu	≤ 2%(Linear load)	
AC PF	Listed: 0.8~1 leading or lagging (Load-depend) Actual: 0.1~1 leading or lagging (Load-depend)	
Overload Capability	110%~115% 10min 115%~125% 1min 125%~150% 200ms	
Physical		
Cooling	Forced air cooling	
Noise	<75dB	
Enclosure	NEMA1 IP20 and optional IP54 with outdoor cabinet	
Max Elevation	3000m/10000feet (> 3000m/10000feet derating)	
Operating Ambient Temperature	-20°C to 50°C (De-rating over 45°C)	
Humidity	0~95% (No condensing)	

PCS Technical Parameters Part2

Model	PWS1-500KTL-EX-8M1
Size (W×H×D)	1100×2160×800mm
Weight	Cabinet 380kg + Module 40kg*n (n=1,2,...,8)
Installation	Floor standing
Other	
Protection	OTP, AC OVP/UVP, OFP/UFP, EPO, AC Phase Reverse, Fan/Relay Failure, OLP, GFDI, Anti-islanding
Configurable Protection Limits	Upper/Lower AC Voltage /Frequency limit, Battery EOD voltage.
AC connection	3-Phase 3-Wire
Display	Touch Screen
Communication	RS485, CAN, Ethernet
Isolation	Non-isolation
Certification	CE LVD IEC 62477, CE EMC IEC 61000 EN 50549-1:2019 EN50549-2 G99, AS4777.2:2020, VDE 4110 CE10-16 Synergrid listing
Short circuit	
Fault Current	1600A
Fault Duration	80ms



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