

HIGH VOLTAGE COMMERCIAL & INDUSTRIAL ESS

ESS-MHV PRO(M193-209-241KWH)



Introduction

The ESS-MHV PRO is a compact, scalable, and outdoor-ready commercial and industrial (C&I) energy storage system. It offers flexible capacity options—193kWh, 209kWh, or 241kWh per unit—and supports expansion with up to 8 units in parallel. Thanks to its high energy density and modular design, it is ideal for commercial and industrial applications requiring reliable, high-performance energy storage.

Features

Flexible Configuration & Expansion :

- 193kWh / 209kWh / 241kWh unit options.
- Expandable up to 8 units in parallel.
- Compact, modular, and lightweight design.
- Small footprint, quick installation, low maintenance.

Advanced Safety & Protection :

- IP55-rated for outdoor use.
- Three-level BMS with multi-layer protection.
- Full protections: over/under voltage, current, temp, short circuit.

Smart Control & Communication :

- Integrated LCD screen for real-time monitoring.
- Local & remote monitoring (Wi-Fi/4G/LAN optional)
- CAN / RS485 / Ethernet communication
- Modular system-level architecture

High Efficiency & Performance:

- Inverter efficiency up to 97.8%.
- Charge/discharge efficiency up to 97.5%.
- 8000 cycles @70%EOL (LiFePO4 cells).
- Built-in fans for thermal balance.



Commercial Premises



Industrial Park



Mine



PV ESS EV Charging Station



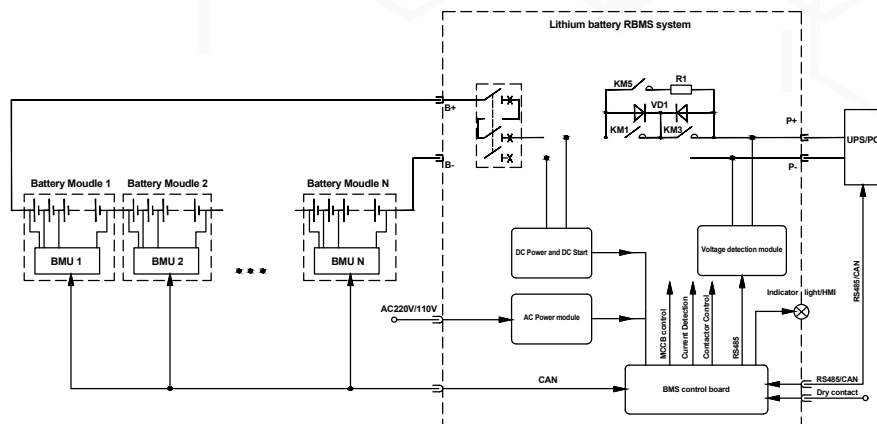
Airport



Gas Station



Data Center



*The product diagram is for reference only !

Technical Parameters

MODEL	ESS-M92-193	ESS-M100-209	ESS-M120-241
System Specification			
Nominal Output Power/UPS Power (kW)	125		
AC Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac		
Grid Type	Three phase		
Energy Configuration (kWh)	192.9	208.9	241.1
Dimension (W x D x H,mm)	1250*1166*2250(no contain inverter)		
Weight Appr. (kg) (no contain inverter)	1885	2000	2250
Battery Operating Voltage (V)	537.6~691.2	582.4~748.8	672~864
Max Charge & Discharge Current (A)	157		
Battery Chemistry	LiFePO4		
IP Rating of Enclosure	IP55		
System Certification	UN38.3		
Installation Style	Floor-Mounted		
Warranty	10 years		
Inverter Technical Specification			
Max. usable PV input power(kW)	240		
Max. PV Input Current (A)	10x42		
Rated PV Input Voltage (Vdc)	1000		
Start Up DC Voltage (Vdc)	600		
MPPT Voltage Range (Vdc)	150-950		
Max. PV Short-circuit Current (A)	10x60		
MPPT number/Max. input strings number	10/20		
Peak Power (off grid)	1.2 times of rated power, 100 s 1.4 times of rated power, 10 s 1.6 times of rated power, 200 ms		
Power Factor	>0.99 (0.8 leading - 0.8 lagging)		
THDi	<3%		
DC injection current (mA)	≤ 6 mA		
Display	7.0" LCD display & Bluetooth + APP		
Operating Temperature Range (C)	-25~60(>45 C derating)		
Relative Humidity	15% ~ 85% (No Condensing)		
Dimension (W x H x D, mm)	1174x814x400		
Inverter Communication	CAN, RS485-115200, Ethernet, Optional: Wi-Fi, Cellular, LAN		
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011; IEC 61000-3-4/-5/-11/-12		
Grid connection standard	G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1&2/EN 50549-10, VDE 0126/UTE C 15/VFR:2019, NTS 631/RD 1699/ RD 244/UNE 206006/UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA,PORTARIA N° 140, DE 21 DE MARÇO DE 2022; IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011; IEC 61000-3-4/-5/-11/-12		
Max. Efficiency	97.60%		
Max. Charging/Discharging Efficiency	97.00%		
Max Parallel Connection Sets	10		
Battery Technical Specification			
Battery Module Nominal Voltage (V)	614.4	665.6	768
Battery Capacity (Ah)	314		
Battery Energy (kWh)	192.9	208.9	241.1
BMS Communication	CAN		
BMS Parallel Support Connection	8		
Max Charge & Discharge Current (A)	157		
Operating Temperature Range	Charge: 0~55°C / Discharge: -20°C~55°C		
Cycle Life	≥8000 (@25°C±2°C, 0.2C/0.2C, 70%EOL)		
Short Circuit Protection	YES		
Over Current Protection	YES		
Over Charge Protection	YES		
Over Temperature Protection	YES		
Cell Over Voltage Protection	YES		
Cell Over Under Protection	YES		
Cell Discharge Protection	YES		

The product parameters are for reference only.