

Residential Series



ENERGY STORAGE SOLUTION (E.S.S.) -STACK MOUNT



INV ESS 5.12 kWh Stack Mount

Key Features:

-  Cell-level Voltage, Current & Temperature Monitoring With Soc Reporting.
-  Up To 6 Batteries Per Stack & Up To 16 Batteries In Parallel.
-  IP54-rated Enclosure For Outdoor Protection.
-  Rs485, Can & Rs232 Communication.
-  Built-in 3.5 Inch Lcd Screen For Real-time Monitoring.
-  Active Cell Balancing - Optimized Performance & Longer Battery Life.
-  Complete Safety Protection - Over-temp, Overcharge, Over-discharge & Short-circuit Protection.
-  Bluetooth Connectivity.

General Specification	INV ESS 5.12 kWh
Product Type	Rechargeable Li-ion Battery
Model Number	INV ESS 51.2V / 100Ah
Rated Voltage	51.2V
Rated Capacity	100Ah
Rated Energy	5.12kWh
Charge–Discharge Rate	0.5C
Depth of Discharge	80%
Operating Temperature	–20 to 60 °C
Warranty	5 Years (0.5C Charge/ Discharge, @80% DoD, @25 °C)
Cell Balancing	Active Balancing
Electrical Characteristics	
Max. Charge Voltage	58.4V
Min. Discharge Voltage	40V
Max Continuous Charge Current	50A
Max. Continuous Discharge	50A
Operating Voltage Range	40V - 58.4V ± 0.5
Charge Temp	0 to 50 °C (<85 % RH)
Discharge Temp	–20 to 60 °C (<85 % RH)
Protection Feature	
Over Temp Protection	Yes
Overcharge Protection	Yes
Overdischarge Protection	Yes
Short Circuit Protection	Yes
Cell Specification	
Cell Type	LFP Prismatic
Cell Model	3.2V 100Ah
Nominal Voltage	3.2V
Rated Capacity	100Ah
Voltage at End of Charge	3.65V
Voltage at End of Discharge	2.5V
Max Charge Rate	0.5C
Max Discharge Rate	0.5C
Cell Weight	2.3kg
Pack Specification	
Pack configuration	16S1P
Pack Nominal Voltage	51.2V
Pack Capacity	100Ah
Pack Energy	5.12kWh
Features	
Battery Management System (BMS)	Cell-Level Monitoring: Manages voltage, current, and temperature for every cell/module. State of Health (SOH): Estimates and reports the degradation status. Safety Logic: Executes emergency shutdown on over-current, over-temperature or fault detection.
Enclosure & Protection	IP Rating: IP54 (for outdoor environmental protection).
Safety & Protection	Over Temperature, Overcharge, Overdischarge & Short Circuit Protection
Control & Communication	Monitoring Communication: Standard Industrial protocols (eg. RS232, RS485 , CAN)
Scalability	Supports parallel connection of up to 16 batteries for capacity expansion.