

General Specification	INV ESS 5.12 kWh
Product Type	Rechargeable Li-Ion Battery
Model Number	INV ESS 51.2 V/100 Ah
Rated Voltage (V)	51.2 V
Rated Capacity (Ah)	100 Ah
Rated Energy (kWh)	5.12 kWh
Charge-Discharge Rate (C)	0.5 C
Depth of Discharge (%)	80%
Operating Temperature (°C)	-20 to 60 °C
Warranty	5 Years (0.5C Charge/ Discharge, @80% DoD, @25 °C)
Cell Balancing	Active Balancing
<b>Electrical Characteristics</b>	
Max. Charge Voltage (V)	58.4 V
Min. Discharge Voltage (V)	40 V
Max Continuous Charge Current (A)	50 A
Max. Continuous Discharge (A)	50 A
Operating Voltage Range (V)	40 V - 58.4 V ± 0.5
Charge Temp (°C)	0 to 50 °C (<85 % RH)
Discharge Temp (°C)	-20 to 60 °C (<85 % RH)
<b>Protection Feature</b>	
Over Temp Protection	Yes
Overcharge Protection	Yes
Overdischarge Protection	Yes
Short Circuit Protection	Yes
<b>Cell Specification</b>	
Cell Type	LFP Prismatic
Cell Model	3.2 V 100 Ah
Nominal Voltage (V)	3.2 V
Rated Capacity (Ah)	100 Ah
Voltage at End of Charge (V)	3.65 V
Voltage at End of Discharge (V)	2.5 V
Max Charge Rate (C)	0.5C
Max Discharge Rate (C)	0.5C
Cell Weight (kg)	2.3 kg
<b>Pack Specification</b>	
Pack configuration	16S1P
Pack Nominal Voltage (V)	51.2V
Pack Capacity (Ah)	100 Ah
Pack Energy (kWh)	5.12 kWh
<b>Features</b>	
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: IP55 (for outdoor environmental protection).
Safety & Protection	Over Temperature, Overcharge, Overdischarge & Short Circuit Protection
Control & Communication	Monitoring Communication: Standard Industrial protocols (eg. RS485, CAN)
Scalability	Supports parallel connection of up to 16 batteries for capacity expansion.