

Battery Energy Storage Solution (BESS)

INV BESS 200 kW/400 kWh



Battery Management System (BMS):

- Active Balancing
- Cell-level voltage, current & temperature monitoring.
- State of Health (SOH) estimation & reporting.
- Safety logic for over-current, over-temp & fault shutdown.

Enclosure & Protection:

- Liquid Cooled System
- Integrated HVAC for optimal thermal management.
- IP55 rated for outdoor protection.

Control & Communication:

- SCADA-based monitoring & control.
- Supports Modbus TCP/IP, CAN communication protocols

Power Conversion System (PCS):

- Bi-directional DC/AC & AC/DC operation.
- Grid-tied support for frequency, voltage & ramp-rate control.

Safety & Protection:

- Over-temp, overcharge, overdischarge, short-circuit & thermal protection.
- Includes fire detection & suppression system.

General Specification	INV BESS 200 kW/ 400 kWh
Product Type	Rechargeable Li-ion Battery
Model Number	INV BESS 691.2 V/628 Ah
Rated Voltage (V)	691.2 V
Rated Capacity (Ah)	628 Ah
Rated Energy (Wh)	434 kWh
Rated Power (kW)	200 kW
Charge-Discharge Rate	0.5C
Depth of Discharge (DoD)	90 %
Operating Temperature	-20 – 60 °C
Warranty	5 Years (0.5C charge/ discharge, @90% DoD, @25 °C)
Cooling method	Liquid Cooling
Electrical Characteristics	
Rated Power (kW)	200 kW
Max. Charge Voltage (V)	788.4 V
Min. Discharge Voltage (V)	540 V
Max Continuous Charge Current (A)	314 A
Max. Continuous Discharge (A)	314 A
Operating Voltage Range (V)	540 V – 788.4 V ± 0.5
Charge Temp (°C)	0 – 50 °C (<85 % RH)
Discharge Temp (°C)	-20 – 60 °C (<85 % RH)
Protection Feature	
Over Temp Protection (°C)	Yes
Overcharge Protection (V)	Yes
Overdischarge Protection (V)	Yes
Short Circuit Protection	Yes
Thermal Protection	Yes
Cell Specification	
Cell Type	LFP Prismatic
Cell Model	3.2 V 314 Ah
Nominal Voltage	3.2 V
Rated Capacity	314 Ah
Voltage at End of Charge	3.65 V
Voltage at End of Discharge	2.5 V
Max Charge current	0.5C
Max Discharge Current	0.5C
Cell Weight	5.6 kg
Pack Specification	
Pack configuration	36S1P
Pack Nominal Voltage	115.2V
Pack Capacity	314 Ah
Pack Energy	36.17 kWh
Rack Specification	
Total Packs	6 Packs
Rack Nominal Voltage	691.2 V
Rack Capacity	314 Ah
Rack Energy	217 kWh
Cabinet Specification	
No of Racks	2
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-temp, or fault detection.
Power Conversion System (PCS)	Bi-Directional Operation: Converts DC power to AC for the grid (discharge) and AC to DC for the batteries (charge). Grid-Tied Operation: Supports frequency regulation, voltage support, and ramp rate control (fast response).
Enclosure & Protection	Integrated HVAC/Thermal Management: Ensures cells operate within the optimal temperature. IP Rating: IP55 (for outdoor environmental protection).
Safety and Protection	Over Temp, Overcharge, Overdischarge, Short Circuit, and Thermal Protection (System includes fire detection and fire suppression system).
Control & Communication	SCADA for central control and monitoringCommunication: Standard industrial protocols (e.g., Modbus TCP/IP, CAN).