

Utility Series



Battery Energy Storage Solution (B.E.S.S.)-UTILITY

(Customizable Solution)



INV BESS 5MWh

Key Features:

-  Advanced BMS with real-time monitoring (voltage, current, temperature)
-  Intelligent thermal control with liquid & air cooling
-  SCADA-based smart control with Modbus connectivity
-  High-strength Containerized Solution
-  Superior thermal & mechanical resilience
-  Reliable performance in demanding conditions
-  Three-Layered BMS Architecture
-  Fire Suppression System (FSS) with aerosol technology
-  UPS backup for uninterrupted safety & control
-  IP54 rated for outdoor durability

Model	INV BESS 5MWh
Battery Cell & Module Specifications	
Cell Chemistry	Lithium Iron Phosphate (LFP)
Cell Type	Prismatic
Cell Specification	3.2V, 314Ah
Battery Module Configuration	1P52S
Module Nominal Voltage	166.4 V
Module Capacity	314 Ah
Module Energy	52.25 kWh
Module Protection Level	IP67
Battery Rack & System Configuration	
Modules per Rack	8
Rack Configuration	1P416S
Rack Nominal Voltage	1331.2 V
Rack Capacity	314 Ah
Rack Energy	417.9 kWh
Number of Racks	12
Overall System Configuration	1P416S12P
Total Number of Cells	4,992
Rated Energy Capacity	5015 kWh
Rated Capacity	3768 Ah
Rated Voltage	1331.2 V
Operating Voltage Range	1164.8 V – 1497.6 V
Typical Charge / Discharge Duration	2–4 Hours
Typical Max C-Rate	0.25C – 0.5C
Typical DoD	90%
Usable Energy at 90% DoD	4514 kWh
RTE	85%
Thermal Management & Auxiliary	
Cooling Method	Liquid Cooling
Coolant Type	50% Ethylene Glycol + 50% Water
Thermal Management	Active Liquid Cooling
Auxiliary Power Consumption (Max)	50 kVA / 45KW
Protection, Safety & Communication	
Battery Management System	Pack BMU + Rack RBMS + Master BMS
Protection Features	OV / UV / OC / OT Protection
Fire Detection	Heat and Smoke Sensors
Gas Detection	Yes
Fire Suppression	Automatic Aerosol-based System
Optional Fire Suppression	Water-based System
Communication Protocols	Modbus TCP/IP
Container & Environmental Specifications	
Container Type	Standard 20ft High Cube
Container Dimensions (L × W × H)	6058 × 2438 × 2896 mm
Total System Weight	45 ± 1.5 Tons
Container Protection Level	IP54 (Excl. TMS)
Enclosure Material	Fire-resistant Container
Surface Coating	C4-H (C5-H Optional)
Operating Ambient Temperature	-10°C to +55°C
Maximum Altitude	≤ 3000 m with derating above 2000 m