

Hykon BESS 5.016 MWh System

SAFE | RELIABLE | EFFICIENT | INTELLIGENT

Hykon ESS 5.016MWh is a high-performance liquid-cooled Battery Energy Storage System (BESS) designed for utility-scale applications. It delivers superior safety, long life, and high efficiency with advanced thermal management, intelligent control and multi-level protection.



ENHANCED SAFETY:

Multi-level protection
& fire suppression



EFFICIENT COOLING:

Liquid cooling for optimal
thermal performance



LONG CYCLE LIFE:

≥ 6000 cycles @ 90% DOD,
High reliability & durability



INTELLIGENT MONITORING:

Real-time monitoring &
remote management



SAFETY & RELIABILITY

Liquid Cooling: High thermal stability
Fire Protection: Multi-stage container-to-module system
Smart Sensing: Comprehensive cell monitoring & protection
Cell Type: Safe prismatic LFP cells



EFFICIENCY & SERVICE

Modular Design: Flexible rack allows easy maintenance & installation
Climate Ready: Operates from -30°C to +55°C
Low Noise: Under 60 dB at 1 meter distance



HIGH INTEGRATION

High Density: 20 ft HC container holds up to 5.016 MWh
Plug & Play: Factory-tested integrated packs, TMS and BPS minimize site work

WHY HYKON BESS?

- High energy density & compact design
- Advanced BMS with multi-level protection
- Modular design for easy installation & maintenance
- Fire detection & suppression system
- Remote monitoring & diagnostics
- Compliance with international safety standards



Our advanced battery energy storage enabling reliable, utility scale use

5 MWh 20 ft Liquid Cooled Lithium Ion Phosphate Battery Energy Storage System

ELECTRICAL PARAMETERS	
Cell Type	LiFePO ₄
Pack Configuration	314Ah1P104S/Pack
String Configuration	314Ah1P416S/Cluster
System Configuration	314Ah1P416S/Cluster x 12 Clusters
Battery Voltage Range	1164.8 V – 1497.6 V
Nominal Power	5.016 MWh
Nominal Voltage Range Container	1331.2 V
Nominal SOC at Delivery	<30%
Nominal Charge Discharge Rate	0.5 P @25°C ±2
Round Trip Efficiency	≤93.5%
Auxiliary Power Supply	3P+N 400 V AC/50 kVA

Powered by in-house R&D and upcoming cell manufacturing for end-to-end control

GENERAL PARAMETERS	
Dimensions (L × W × H)	6058 × 2438 × 2896 mm
Weight	<43 T
IP Rating	IP55
Operating Temperature Range	-30°C to +55°C
Storing Temperature Range	-35°C to +55°C
Operating Humidity	5–95% non-condensing
Max Working Altitude	≤4000 m; degradation applicable above 2000 m
Cooling Concept	Liquid Cooling
Noise	<80 dB; 1 m away from equipment
Fire Suppression System	Aerosol
Communication Interfaces	CAN/RS485
Communication Protocols	PCS: CAN/RS485 EMS: IEC61850

COMPLIANCES & CERTIFICATIONS	
Safety	IEC 62619, IEC 61000, IEC 62477
Transportation	UN 38.3