

# BYD Energy Storage System Data Sheet

## Standard Containerized BESS



Build Your Dreams

From decades of expertise accumulation and project experience in batteries and energy storage stations, BYD is a pioneer and leader in the field of new energy and energy storage system. BYD's Standard Containerized BESS (Battery Energy Storage System) provides our clients with the solution to solve quality, stability and availability issues.

With over 15 years of technical research in energy storage system, BYD develops a series of standard containerized BESS according to different discharging span in 1, 2, 3 and 4 hours. All standard components, including battery, PCS, and other auxiliary devices, are integrated in one 40ft HQ (High Cube) container for easy manufacture, operating and maintenance. BYD Standard Containerized BESS has been used in many countries and project sites, like USA PJM market, UK FFR market, China renewable power plant, etc.

### Models

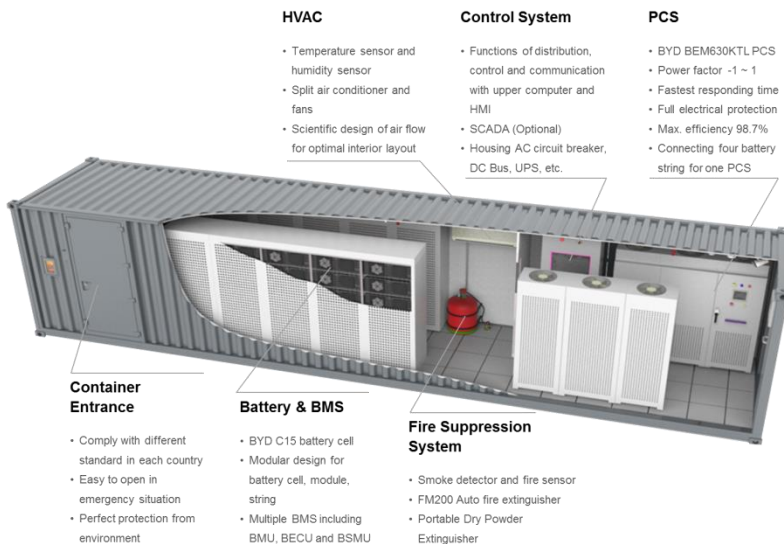
	1 Hour	2 Hours	3 Hours	4 Hours
Power (kW)	1260	630	533	400
Capacity @AC	1577 kWh		1980 kWh	
V / f	400V / 50Hz			
Battery Cell	330Ah (C15 Battery Series)			
PF	-1 (Lagging) ~ 1 (Leading)			
Size	40ft HQ (High Cube) Container			

### Features

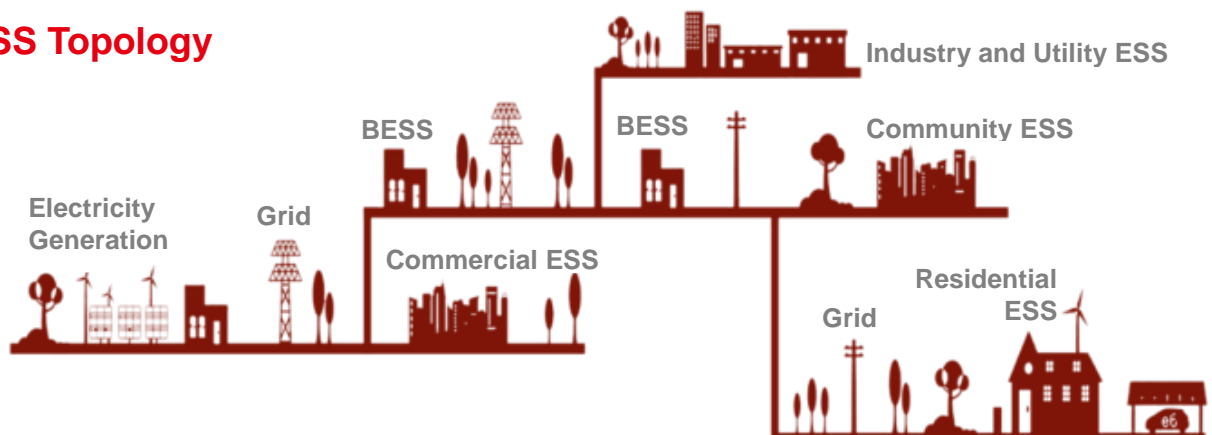
- Standard and Modular 40ft Container for easy shipping and installation
- Flexible project design and convenient power expansion to hundreds of MW-level
- Multiple models for free combination
- High safety and comprehensive protection
- Better system integration with BYD PCS
- High availability with redundancy guarantee
- Same performance in any climate

### Functions

- Frequency Regulation
- Ancillary Service
- Renewable Integration
- Energy Arbitrage
- Demand Management
- Load Leveling
- Peak Shaving
- Micro Grid System
- Grid Stability
- Commercial Application



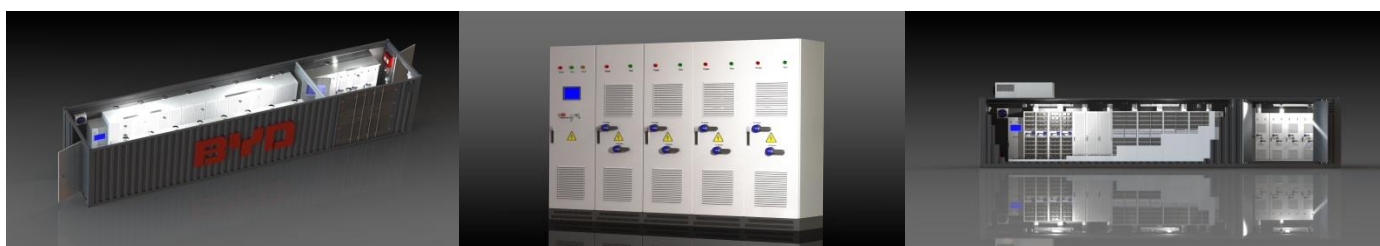
### ESS Topology



# Technical Specifications



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Standard Containerized BESS	1 Hour System	2 Hours System	3 Hours System	4 Hours System
<b>System Parameter</b>				
System Power (kW)	1260	630	533	400
System Capacity (kWh)	1577		1980	
Charging Power (kW)	315 <sup>①</sup>	630	533	400
Discharging Power (kW)	1260	630	533	400
Battery Capacity @DC (kWh)	1900		2376	
Battery Capacity @AC (kWh)	1577		1930	
Nominal Voltage @AC (V)	400			
Voltage Range @AC (V)	360 ~ 440			
Frequency (Hz)	50			
Frequency Range (Hz)	47 ~52 <sup>②</sup>			
Max. Output Current @AC (A)	910A × 2	910A × 1	770A × 1	577A × 1
Power Factor	-1 (Lagging) ~ 1 (Leading)			
THD @ Nominal Power	< 5%			
Power Interface (pcs)	2	1		
<b>Working Condition</b>				
Ambient Temperature (°C)	-15 ~ +45			
Ambient Humidity	5% ~ 95%			
Altitude (m)	< 2000			
<b>Other Parameter</b>				
Enclosure Protection Grade	IP 54 @Battery Room IP 34 @PCS Room	IP 54		
Noise @1m (dBA)	< 78			
Cooling	HVAC and Forced air			
Round Trip Efficiency @BOL	≥ 88%	≥ 88.2%	≥ 88.4%	≥ 88.4%
Round Trip Efficiency Over 10 Years	≥ 86.5%	≥ 86.7%	≥ 86.9%	≥ 87%
Container	40ft HQ <sup>③</sup>			
Weight (ton)	30	28.6	33.5	33
Auxiliary Supply Power (kW)	35	27	25	19
Auxiliary Phase and Wire	3P4W			
Communication Interface <sup>④</sup> (pcs)	3			
Grounding Interface (pcs)	2			

① - System be charged at 0.25C charging rate  
② - Frequency complies with G59/3

③ - 40ft HQ Dimension: 12192×2438×2896mm  
④ - Communication Method: Ethernet