TEKSAN

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REPT BATTERO

TESS5016

5,016 MWh Energy Storage System

5,016MWH
High Energy

HIGH SAFETY
Multi-factor safety matrix analysis and measures

SEISMIC RESISTANCE
Suitablefor high-intensity seismic zones inaccordance withIEEE693 standard

3°C
Intelligent Temperature Control

TEKSAN ENERGY STORAGE SYSTEM

TESS 5016

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Datasheet		
Product Model	Y104R04C12	
Configuration	416S12P	
Communication protocol	CAN, RS485, TCP/IP	
Thermal management methods	Liquid cooling / heating	
Operating ambient temperature	-20°C~55°C	
Altitude	De-rated over 3,000 meters	
Electrical Parameters		
Withstand voltage	4500Vd.c., leakage current ≤5mA,	
Short circuit current	130.56kA@12 strings	13.6kA @1 string
Rated energy	5015.9kWh	100% DOD, 0.5P
Rated voltage	1331.2V	
Operating voltage range	1040V~1500V	
Rated charge power	2500kW(0.5P)	According to power map
Rated discharge power	2500kW(0.5P)	According to power map
Short peak charging power	5000kW@60s	According to power map
Short peak discharging power	5000kW@60s	According to power map
Auxiliary power supply	400Vac, 50Hz,3L/N/PE(EU) 480Vac,60Hz,3L/N/PE(US)	
DC side output form	1/2/12 outputs(optional)	
Mechanical Parameters		
Mass	~44.5t	
IP level	IP55	
Dimensions	6058mm×2438mm×2896mm	L×W×H, 20HQ
Certification		
Standard	UL9540A-2019,UN38.3,RoHS,GBT36276-2023	For module
	UL9540A-2019, UL1973-2022, IEC62477-1-2012 IEC62619-2022,IEC63056-2020,IEC60730-1-2022,GBT36276-2023	For string
	UL9540-2023,NFPA68-2023,NFPA69-2024,NFPA855,UN3536 IEC62477-1-2012, IEC62933-5-2-2022, IEC61000-6-2-2016,RoHS IEC61000-6-4-2018,IEEE Std 693-2018,ISO3744-2010, REACH	For container
Product Features		

High Safety

- UL9540A thermal forced spread test evaluation results are excellent, combustible gas monitoring, pressure relief and explosion protection meet NFPA68, NFPA69 specifications;
- "2+2" fire prevention and control measures: The design adopts the modular built-in fire suppression & container firefighting system multiple configuration;
- Insulation strength of the system is sufficient, and no breakdown or flashover in 5kVd.c. withstand test. The DC circuit is equipped with multi-level disconnections, whitch are multiple configuration;
- Large scale fire impact assessment test results were good, no propagation to adjacent container.

Extremely Long Life

- Thermal management design adopts centralized cooling, multistage shunt, parallel flow channel, throttling control. The temperature difference of cells in the module is 2°C, and that is 3°C for container level;
- Protection is in place and reliable and durable. The protection grade of the enclosure is IP55, the anti-corrosion grade is C4/C5, and the high voltage module is IP67;

Solid and Reliable

- Adaptive design, module structure retention and internal force release optimization in the whole life cycle;
- Excellent steel structure stability, 2 times lifting load, 10 times ballast performance recognized by classification society;
- The overall structural stability meets IEEE693 high level earthquake tolerance;
- Electrical components are tested for high temperature durability at 60°C; The liquid cooling pipeline is checked at 1000 hours of high temperature cycle;

Relevant Certifications

MSDS CSA GROUP RoHS CE IEC UL UN38.3 GB

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AC Output Data (On-grid)	
AC output power	2750kVA@30°C, 2500kVA@45°C
Nominal AC voltage	690V,3W+PE
AC voltage range	607~759V (Adjustable)
Max. AC output current	2302A@30°C, 2092A@45°C
Nominal grid frequency	50/60Hz
Harmonic (THDi)	<3% (100% load)
Power Factor	-1~+1
AC Output Data (Off-grid)	
Nominal AC voltage	690V,3W+PE
AC voltage range	607~759V (Adjustable)
AC voltage distortion	<1.5% (100% linear load)
DC voltage component	<0.5% Un (Linear balance load)
Unbalanced load capacity	100%
Nominal grid frequency	50/60Hz
Efficiency	
PCS Efficiency	98,50%
Protection	
Battery Reverse Polarity Protection	Integrated
DC Surge Protection	Integrated
Anti-islanding Protection	Integrated
AC Overcurrent Protection	Integrated
AC Short Circuit Protection	Integrated
AC Surge Protection	Integrated

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