

DC 1600V Liquid-Cooled PCS

The core equipment of the energy storage system on the power source and grid side has the functions of grid following and grid forming to realize the charging and discharging functions of the battery. The PCS module can be flexibly combined to match high power density cells.

Efficient and reliable

Liquid-cooled heat dissipation, longer device life.
 IGBT module with 98.80% conversion efficiency and
 98.5% CEC efficiency.

High power density

Power density up to 2.38kW/L.
 Dual DSP+CPLD core control.
 Modular AC and DC parallel connection up to 8
 synchronous controls.

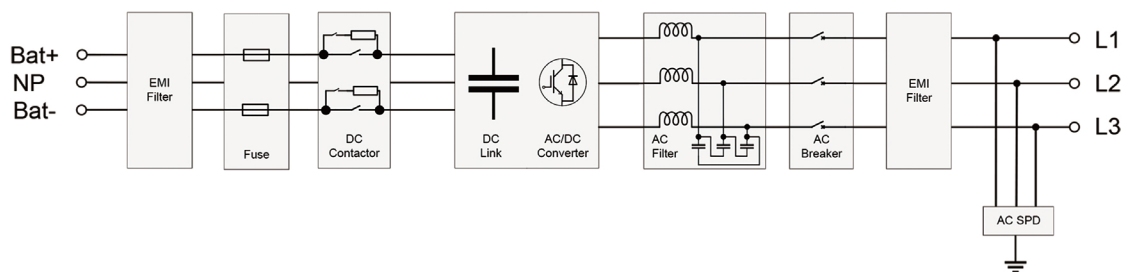
Quality and standards

High-standard quality control system.
 UL,CE,multi-country grid-connected
 performance certification.

Flexible Adaptation

Copper bar plug-in structure design.
 Flexible combination of modules up to
 3.6MW/7.2MWh.
 HVRT / LVRT, PQ / VF / VSG, black start, etc.

Circuit Diagram



JTES-450K-W Utility-Scale Liquid-Cooled Energy Storage PCS



PARAMETER LIST

Model

JTES-450K-W

DC PARAMETERS

Maximum DC Voltage	1600V	
Maximum DC Current	410A	
Battery Pack Voltage Range	1100-1500V	1100-1600V

AC PARAMETERS (On-Grid)

Rated power	450kW
Maximum AC Power	450kW
Rated Grid Voltage	740V (-12% ~ +10%)
Grid Connection Type	3P+PE
Rated AC Current	352A
Rated Grid Frequency	50Hz/60Hz (±3Hz)
THDi At Rated Power	< 3.0%
DC Component	< 0.5%
Power Factor Range	>0.99 (Rated power) / -1 ~ +1

AC PARAMETERS (Off-Grid)

Rated power	450kW
Rated Grid Voltage	740V
Rated Grid Frequency	50Hz / 60Hz
THDu At Rated Power	< 3.0%(linear load)

SYSTEM CHARACTERISTICS

Maximum Efficiency	98.80%
Cooling	Liquid (50% Ethylene glycol+50% water)
Communication	CAN / Ethernet/ RS-485/Fiber
Operating Temperature range	-30°C ~ +60°C
Relative humidity	0% ~ 95% (No condensation)
Maximum Inlet Temperature	50°C
Maximum Altitude	≤ 2000m
Noises	< 70dB (1m away from the horizontal position of the device)
Installation	Rackmount
Standard	UL1741, IEEE1547, IEC/EN62477, G99

MECHANICAL PARAMETERS

Dimension	H336mm x W450mm x D1249mm
Terminal Form	Copper bar push-in type
Weight	236kg
Enclosure	IP54

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