

1500V Energy storage converter

TPCS-1250

TPCS-1375

TPCS-1575

TPCS-1725

TPCS-2500



Product Overview

The 1500V energy storage converter is a wide DC voltage range AC/DC bi-directional converter with high power density and small footprint, which is suitable for high-power grid-connected and off-grid applications.

Efficient conversion

- Three-level topology, maximum efficiency of 99%.
- Intelligent air-cooling, no derating at 50°C.
- Wide DC operating voltage range, 1500V for full load operation.

Safe And Reliable

- High protection class (IP54, C3).
- DC side 250kA short circuit current breaking capacity.
- Linkage with BMS and EMS to support multiple system protection.

Application Flexibility

- Four-quadrant operation, with battery charge/discharge management function.
- VSG, VF, PQ and other operating modes.
- Support black start.

Grid Support

- With a frequency, source network and load fast scheduling function.
- With inertia, frequency, voltage, and other dynamic support functions.

Model	TPCS-1250	TPCS-1375	TPCS-1575	TPCS-1725	TPCS-2500
DC					
Max. Voltage	1500V				
Voltage Range	800~1500V	800~1500V	915~1500V	1000~1500V	1000~1500V
Max. Current	1935A	1935A	1935A	1935A	3000A
Grid					
Rated Power	1250kW	1375kW	1575kW	1725kW	2500kW
Max. Capacity	1375kVA	1513kVA	1733kVA	1898kVA	3000kVA
Max. Current	1443A @ 45°C / 1587A @ 30°C			2092A @ 45°C / 2510A @ 30°C	
Access Method	3P3L				
Isolation Method	Unisolated				
Reactive Power Range	-100%~100%				
Rated Voltage	550V	550V	630V	690V	690V
Voltage Range	484~605V	484~605V	554~693V	607~759V	607~759V
Frequency	50Hz/60Hz				
Frequency Range	±5Hz				
Total Harmonic Distortion Rate Of Current	≤3% (Rated power)				
Power Factor	>0.99 (Rated power)				
Charge/discharge Conversion Time	<100ms				
Off-grid					
Rated Voltage	550V	550V	630V	690V	690V
Voltage Deviation	<1%UN (Linear balanced load)				
Voltage Unbalance	<0.5%UN (Linear balanced load)				
Voltage Total Harmonic Distortion Rate	<3% (Linear load)				
Frequency	50Hz/60Hz				
Unbalanced Load Carrying Capacity	100%				
Protection					
DC Input Protection	Disconnect switches + Fuses				
AC Output Protection	Interruption				
Surge Protection	DC Type II / AC Type II				
Insulation Monitor	Yes				
Overheating Protection	Yes				
System					
Inlet Method	Bottom feed				
Max. Efficiency	>99%				
Overload Capacity	110% for long-time; 120% for 1min				
Operating Temperature	-35°C~ 60°C (>45°C derating operation, < -20°C heating start)				
Relative Humidity	0% ~ 100%RH, without condensation				
Max. Altitude	5000m, (>2000m derating)				
Noises	<80dB				
Dimension (W×D×H)	1080×1480×2405mm			1080×2380×2444mm	
IP Level	>IP54				
Cooling	Forced air				
Communication Interface	RS485, Ethernet				
Communication Protocol	MODBUS-RTU, MODBUS-TCP, IEC61850 (GOOSE & MMS) , IEC104				
Certifications					
Certification Standards	GB/T 34120, GB/T 34133				

