

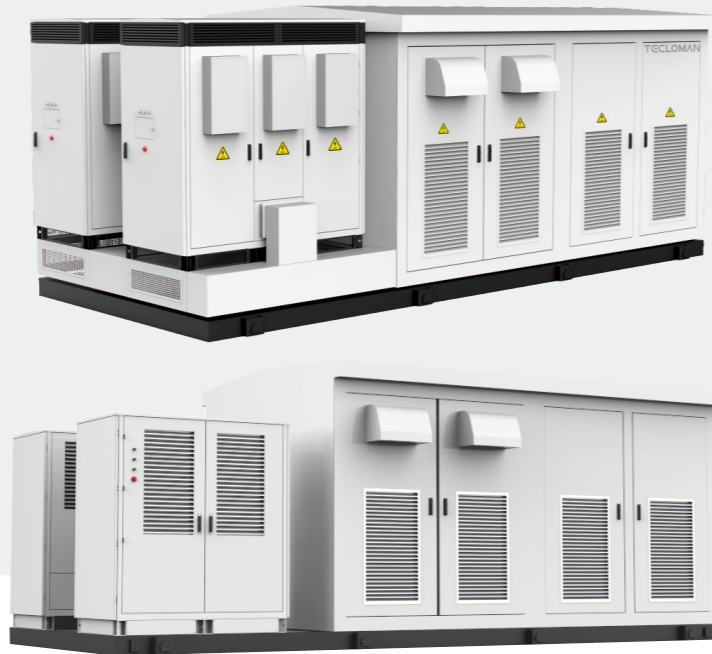
1500V Integrated PCS-MV Skid

TBVS-5000K-TH

TBVS-5000M-TH

TBVS-6250M-TH

TBVS-6250K-TH



Product Overview

The Energy Storage Converter and Step-up Integrated Unit is a standardized AC substation system integrating energy storage conversion and voltage step-up functions, designed for large-scale and ultra-large-scale energy storage power plants.

The system integrates energy storage converters (PCS), high- and low-voltage power distribution equipment, step-up transformers, and auxiliary power supply systems. With a prefabricated design, it enables rapid on-site installation and commissioning.

It supports grid connection at voltage levels ranging from 6 kV to 35 kV and is suitable for a wide range of applications, including co-located energy storage plants, standalone energy storage plants, commercial and industrial (C&I) energy storage systems, and off-grid energy storage systems.

The system is designed to operate reliably under extreme environmental conditions, including high-altitude, low-temperature, high-temperature, and high salt spray environments.

Highly integrated system with combined conversion and step-up functions

High conversion efficiency with ANPC three-level energy storage converter

Efficient space utilization with optimized layout

Multiple functional modes supported, including PQ, VF, and grid-forming operation

High safety performance with multi-level AC/DC protection

User-friendly design with easy installation, commissioning, and maintenance



Model	TBVS-5000M-TH	TBVS-5000K-TH	TBVS-6250M-TH	TBVS-6250K-TH
DC Side				
Maximum DC Voltage	1500V			
DC Voltage Range	1000 ~1500V			
Maximum DC Current	6000A		7500A	
Grid-connected	5000kW		6250kW	
Rated Power	5000kVA		6250kVA	
Maximum Capacity				
Rated Voltage	690V			
Voltage Range	-15% to +10% (adjustable range)			
Rated Frequency	50Hz/60Hz			
Maximum Output Current	5020A		6276A	
Power Factor	-1 (leading) to 1 (lagging)			
THDi	<3% (linear load)			
Off-grid				
Rated Voltage	690V			
Maximum Output Current	5020A		6276A	
THDu (Total Harmonic Distortion of Voltage)	<3% (linear load)			
Rated Frequency	50Hz/60Hz			
Transformer				
Rated Capacity	5000kVA		6250kVA	
Voltage Ratio	0.69/(6~35)kV			
Transformer Type	Dry-type / Oil-immersed transformer			
General Specifications				
IP Rating	IP54			
Operating Ambient Temperature	-35°C to 60°C (>50°C derating)			
Relative Humidity	≤95% RH, non-condensing			
Cooling Method	Smart air cooling			
Maximum Operating Altitude	4000 m (>2000 m derating)			
Communication Interface	RS485/Ethernet			
Communication Protocol	Modbus-RTU/Modbus-TCP /IEC61850/IEC104			