

eMatrix Series Power Conversion System(PCS)

The eMatrix Series Power Conversion System (PCS) is tailored for industrial and commercial energy storage applications. With a modular design, each module operates independently, enabling centralized management and control, offering cost-effective operation. It also supports multi-unit parallel operation, which makes it capable of easily integrating into diverse scenarios.

The module features a bidirectional AC/DC conversion design, with a capacity of 50KW. This design allows seamless connection to both battery and AC grids, offering high efficiency, power density, scalability, and reliability. It stands as a top-tier international power conversion module.



eMatrix Series PCS

Applications



Peak shaving, flexible expansion



Energy storage, backup power



Sequential utilization



Module

Features



Green and Efficient

- Module energy conversion efficiency: up to 98%
- 3 Level output: low harmonics, superior power quality



Seamless Switching

- Grid-tied charging/discharge and off-grid inversion
- Optional STS for grid/off-grid switch



Safe and Reliable

- Dual DSP design
- RS485, CAN for real-time BMS communication



Easy O&M

- Hot-swappable for easy replacement
- Plug-and-play functionality



Bidirectional Energy Flow

- Single module for AC/DC bidirectional conversion
- Smooth transition on flow direction change

Specification

Model	EMP50K-S	EMP100K-S	EMP150K-S	EMP200K-S	EMP250K-S
DC					
MAX. Power	55kW	110kW	165kW	220kW	275kW
MAX. Current	79A	158A	237A	316A	395A
Voltage Range	650VDC ~ 900VDC				
Voltage Accuracy	< ±1%				
Current Regulation Accuracy	< ±1% (Output load within the rated range of 50% to 100%)				
AC					
Rated Power	50kVA	100kVA	150kVA	200kVA	250kVA
Overload	55kVA	110kVA	165kVA	220kVA	275kVA
Grid Voltage	380/400 (-15% ~ 15%)VAC				
Wiring	3W+PE/3W+N+PE				
Grid Frequency	50Hz/60Hz				
THDi	≤3%				
Output Power Factor	-1 ~ +1 (configurable)				
Off Grid	Voltage Accuracy	≤1%			
	Voltage Distortion	≤3%			
	Power Factor	0.7 ~ 1.0			
	Voltage Dynamic Response/ Recovery Time	2%/60ms			
System					
Conversion Efficiency	98%				
Communication	RS232, RS485, CAN				
Protection Class	IP20				
Protection	AC/DC over/under voltage, overcurrent, short-circuit, and over-temperature protection				
Operating Temperature	-20°C ~ +60°C, derating above +45°C				
Storage Temperature	-40°C ~ 75°C				
Humidity	0 ~ 95% (Non-condensing)				
Cooling Method	Intelligent air cooling				
Altitude	4000m, derating above 2000m altitude				
Safety Standards	CE				
W×D×H(mm)	Module	440×665×120			
	System	800×800×1800			
Weight(kg)	Module	30			
	System	190	220	250	280

* Specifications subject to change without notice.