

Energy Storage Solution

Power Conditioning System / PCS3450 MV Skid

- Pre-equipped with a 34.5kV medium voltage transformer and switchgear
- Combine the advantages of both central inverter and string architectures
- Allowing independent management of two out of four battery systems



Utility Grid



Solar-Plus-Storage



Factory



Simplify Integration and Boost Efficiency for Energy Storage

The PCS3450 MV Skid is designed for utility-scale energy storage applications. It bridges the gap between efficiency and flexibility by combining the advantages of both central inverter and string architectures. The PCS3450 MV Skid incorporates the modularity of a string architecture, allowing independent management of two out of four battery systems for optimized storage capacity.

Delivering a nominal power output of up to 3.45 MW, the PCS3450 MV Skid features exceptional compatibility with mainstream battery technologies. To further streamline on-site project delivery, it comes pre-equipped with an integrated 34.5kV medium voltage transformer and switchgear, which significantly boosts installation and maintenance efficiency.

Feature Highlights



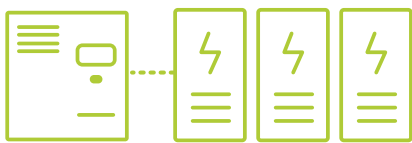
Plug & Play for Diverse Applications

- Up to two 1.725 MW power conditioning systems
- Pre-equipped with 34.5kV medium voltage transformer and switchgear



Rapid On-Site Deployment

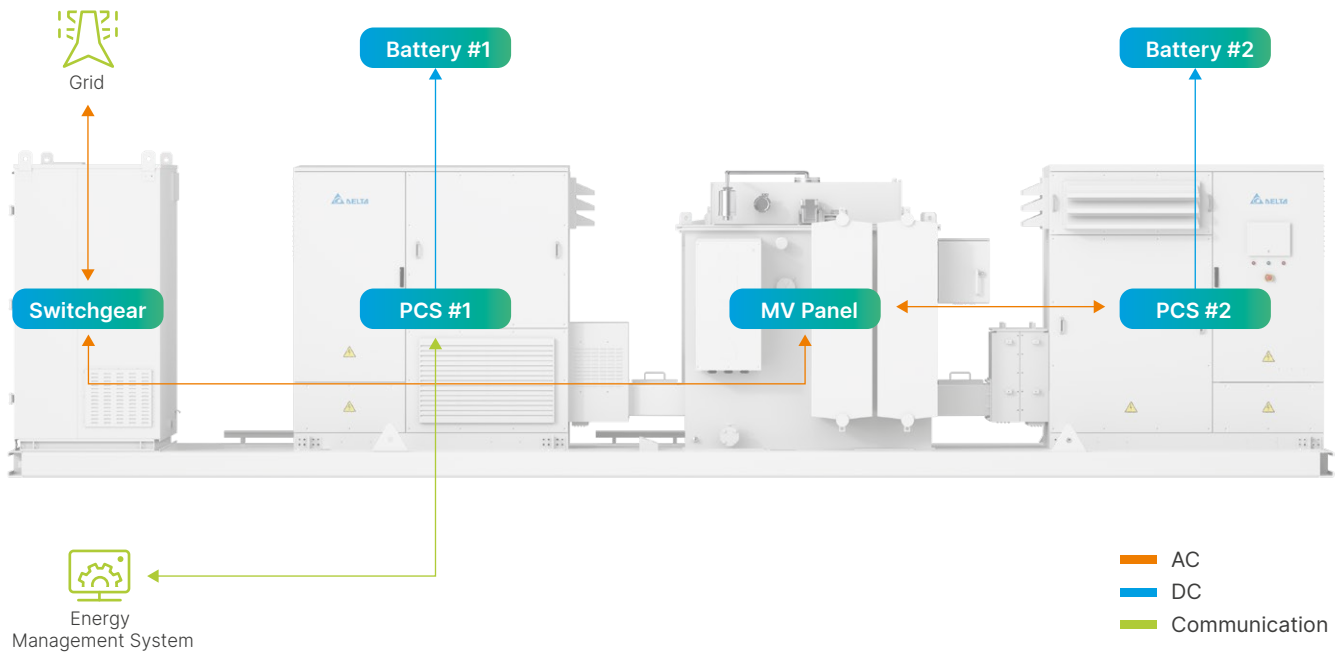
- Easy to transport and commission via skid-based design
- Built for outdoor installation, eliminating the need for housing
- Simplifies maintenance and troubleshooting for increased efficiency



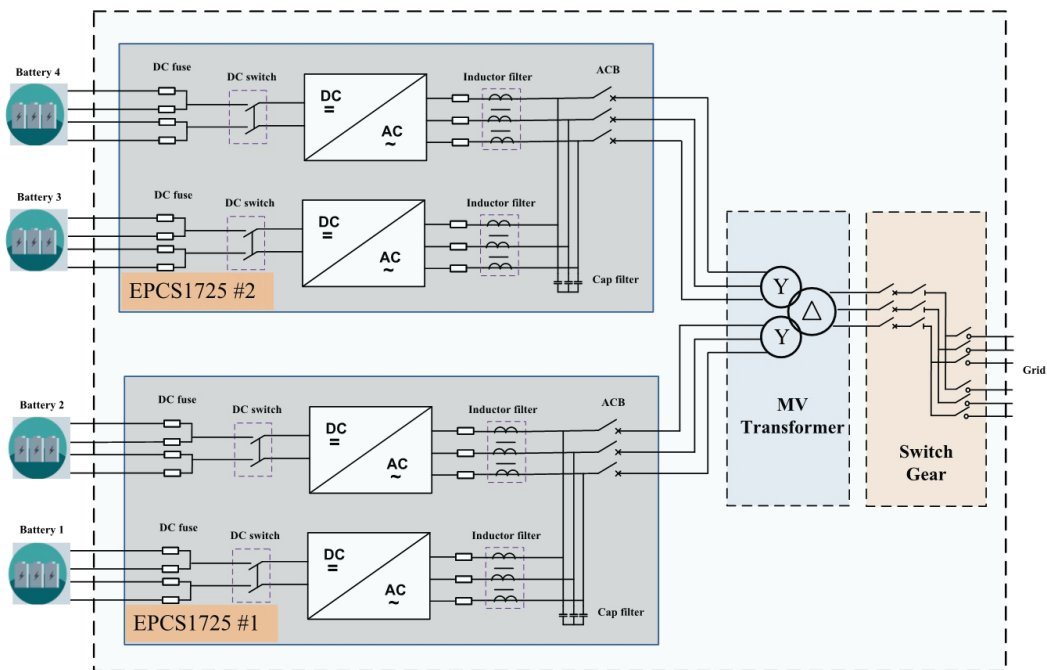
Flexibility and Compatibility

- Customizable for diverse applications
- Manage two or four battery systems independently
- Compatible with mainstream battery technologies and manufacturers

System Architecture



System Diagram



Specifications

Model Name	EPCT-3450IEC-MV
DC Connection	
Full Power DC Voltage Range ⁽¹⁾	1052 - 1500 V
Max. DC Charge Current @ 50 °C	1617 A x 2 or 808 A x 4
Max. DC Discharge Current @ 50 °C	1666 A x 2 or 833 A x 4
Number of DC Input	max. 4
AC Connection (Grid)	
AC Output Power @ 50°C	3450 kVA
Max. PCS Output Continuous Current @ 50°C	2896 A
Nominal Grid Voltage Vrms	34.5 kV
Nominal Grid Frequency / Range	50 Hz / 45~55 Hz
Current Harmonic Distortion (THDi)	< 3% (at nominal power)
DC Current Injection	< 0.5% In
AC Connection (Off-Grid)	
PCS Port Nominal AC Voltage	690 V
Nominal Grid Frequency / Range	50 Hz / 45~55 Hz
AC Voltage THD (THDv)	< 3% (Linear load)
DC Voltage Component	< 0.5% Un (Linear 3 phase balance load)
Unbalance Load Capacity	100%
Transformer	
Transformer Rated Power	3450 kVA
Vector Group	Dy11y11
Cooling type	ONAN (Oil Natural Air Natural)
Oil Type	Mineral oil (PCB free) or FR3
Protection	
DC Side	Load switch + fuse
PCS Side	Circuit breaker
AC Output Protection	Load switch + fuse
Overvoltage Protection	DC class II / AC class II
General	
Dimensions (W x H x D) ⁽²⁾	10550 × 2510 × 2200 mm
Weight	< 22 t
Operating Temperature	-25°C ~ +60°C, de-rating > 45°C
Ingress Protection	IP55 (PCS) / IP54 (switch gear) / IP65 (transformer)
Communication	Modbus TCP
Certificate	
Grid Connection	IEC 62477-1 / IEC 61000-6-2 / IEC 61000-6-4 / VDE-AR-N 4110:2018 / G99 EN50549-2 / EN 50588 / EN60076 / NTS2.1

* Specifications are subject to change without prior notice.

* Subject to change based on customer's requirements.

(1) The minimum DC voltage for normal grid AC voltage and power factor = 1 depends on the AC voltage and power factor.

(2) Packing for delivery: All components will be packed in a 20ft container. For installation, one PCS needs to be installed outside of the container to ensure ventilation.



More Information

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2024 / 05