Energy Storage Solution

Power Conditioning System / PCS2000

- 2100-2800 kVA power capacity with 480 Vac
- Scalable system configuration and battery technology independence
- Designed for utility-grade energy storage applications

Utility Grid

Factory

Solar Power Plant

Optimizing the Value & Efficiency of Energy Storage System

Delta Power Conditioning System (PCS) is a bi-directional energy storage inverter for grid applications including power backup, peak shaving, PV self-consumption, PV smoothing, etc. Delta Megawatt PCS provides power capacity from 2100 to 2800 kVA with 97.7% efficiency.

Featuring high availability and adaptability, it is battery technology independent and can control energy storage system exactly when it is required.

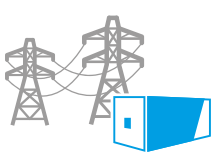
Applications

Renewable Power Plant Integration

- Ramp rate control
- Energy shifting
- Smoothing
- Capacity firming

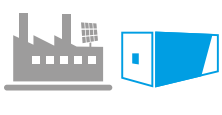
Hybridized Thermal Power Plant

- Black start



Grid Ancillary Control

- Frequency regulation
- Peak shaving



Distributed Network and Microgrid

- Peak shaving

Features

Efficient and Precise Power Control

- Power capacity: 2100-2800 kVA
- AC voltage: 480 Vac
- Peak efficiency: 97.7%

Flexible System Configuration

- Modular design realizes scalability and availability
- Battery independence provide high adaptability for energy storage

Designed for Energy Storage Applications

- Advanced P/Q and Frequency/Voltage
- Utility-grade protection designed for harsh environment
- AC coupled storage application
- Automatic voltage and frequency regulation
- Active and reactive power compensation
- Anti-Islanding detection, islanding control operation

Operating Modes

1. Power Dispatch
Respond to external power demand and meet the system load at the short-term determination.

2. Peak Shaving
Schedule for shaving the peak and avoiding high demand charge once detected consumption overload.

3. Frequency-Watt / Voltage-Watt / Voltage-Var
Monitor grid frequency or voltage continuously and adjust its output power based on the user-configured parameters dynamically.

4. Standalone
With an external UPS supplying emergency power, PCS can black start and continuously provide power from battery to critical loads.

Product at a Glance

Specifications

Part Number	DWE2100-US	DWE2800-US
DC Connection		
Input Voltage $V_{DC, full load}$	760-1200 V	
Input Voltage $V_{DC, max}$	1200 V	
Max. Input Current $I_{DC, max (at 50°C)}$	2528 A	3370 A
Number of DC Inputs	1	
AC Connection		
AC Power (25°C / 50°C)	2100kVA / 1875kVA	2800kVA / 2500kVA
Max. AC Current $I_{AC, max}$ (at 50°C)	2526 A	3368 A
Max. Total Harmonic Distortion[1]	< 3% at full load	
Nominal AC Voltage	480 V	
AC Power Frequency	60 Hz	
Power Factor	0 to 1 leading or lagging	
Performance		
Max. Efficiency[2]	> 97.7%	
CEC Efficiency	97%	
Standby Loss[3]	< 350 W	
Protection		
Input-side DC	DC switch + fuses	
Output-side AC	AC circuit breaker	
DC Overvoltage	Surge arrester, class II	
AC Overvoltage	Surge arrester, class II	
Ingress Protection	IP 65 , Type 3R	
General		
Dimensions (W x H x D)	4230 × 2290 × 1800 mm / 166.5 × 90 × 70.8 inches	
Weight	5350 kg / 11794.7 lbs	5850 kg / 12897 lbs
Power Module	3	4
Environment		
Operating Temperature	-30°C to +60°C, de-rating > 50°C	
Storage Temperature	-40°C to +70°C	
Relative Humidity	5 to 100% RH	
Altitude	< 3000 m, de-rating > 2000 m	
Acoustic Noise[4]	< 85 dB(A)	
Cooling	Liquid cooling (integration)	
Compliance		
Safety	UL 1741	
EMC	FCC class A	
Grid Interconnection	IEEE 1547 / UL 1741 SA / CSA C22.2 107.1-1	

* Specifications are subject to change without prior notice
1) iTHD measured under grid short current ratio ≥ 5.
2) Efficiency measured without internal auxiliary power loss.
3) Standby loss measured under external power supply.
4) Noise measured at a distance of 3 m.

More information

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