



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



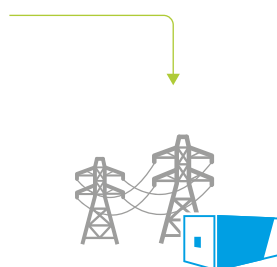
Renewable Power Plant Integration

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



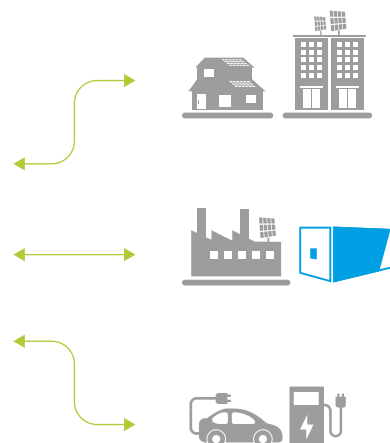
Hybridized Thermal Power Plant

- Black start



Grid Ancillary Control

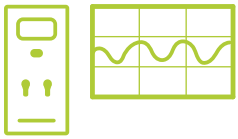
- Frequency regulation
- Peak shaving



Distributed Network and Microgrid

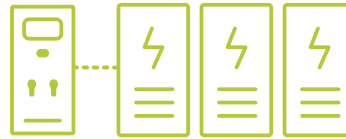
- Peak shaving

Features



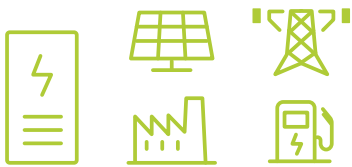
Efficient and Precise Power Control

- 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.



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