

Preliminary



Energy Storage Solutions

Power Conversion System PCSC2782 / PCSC3556

- Power conversion capacity: 2782 to 3556 kW, extendable to 10 MW via paralleling
- Scalable system configuration, compatible with various battery types and models
- Designed for utility-scale energy storage applications



Utility Grid



PV Plants



Optimizing the Value & Efficiency of Energy Storage Systems

Delta Power Conversion System (PCS) is a bi-directional energy storage inverter for grid applications including power backup, peak shaving, PV self-consumption, PV smoothing, etc. Delta PCSC2782 / PCSC3556 provides power conversion capacity from 2782 to 3556 kVA with 98.9% / 99.02%

Featuring high availability and adaptability, the PCS is battery technology independent and can precisely connect AC and DC power of an energy storage system.



Applications



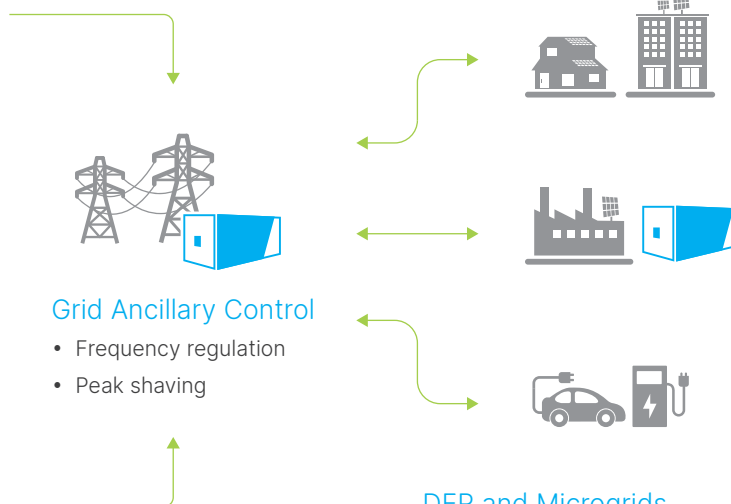
Renewable Power Plant Integration

- Ramp rate control
- Energy shifting
- Renewable energy smoothing
- Capacity firming



Hybrid Thermal Power Plant

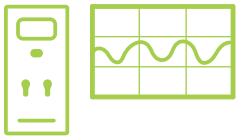
- Black start
- AGC improvement



DER and Microgrids

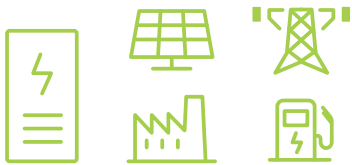
- Peak shaving
- Autonomous operation

Features



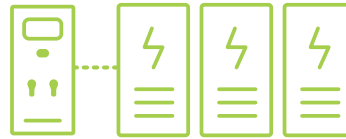
Efficient and Precise Power Control

- Power capacity: 2782 to 3556 kVA
- DC voltage up to 1500 V
- AC voltage: 690 Vac
- Peak efficiency: 98.9% / 99.02%



Designed for Energy Storage Applications

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



Flexible System Configuration

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

Supported Applications

1. Power Dispatch

Respond to external power commands and meet the system load with short reaction time.

2. Peak Shaving

Scheduled operation for shaving load peaks to avoid costly demand surcharges.

3. Dynamic Grid Support

Monitor grid frequency or voltage continuously and adjust its output power based on the user-configured parameters dynamically.

4. Off-grid

By using an internal UPS supplying emergency power, PCS can black start and provide power from battery to local loads.

And more...

Product at a Glance

Air Inlet

AC Busbar

Air Outlet



DC Cable

Specifications

Part Number	PCSC2782	PCSC3556
DC Connection		
Full Power DC Voltage Range ⁽¹⁾	1040 to 1500 V	1040 to 1500 V
Max. DC Charge Continuous Current	2631	3363
Max. DC Discharge Continuous Current	2720	3477
AC Connection		
AC Output Power	2782 kW / kVA	3556 kW / kVA
Max. AC Output Continuous Current	2328 A	2975 A
Nominal AC Voltage Vrms	690 V	690 V
Nominal AC Frequency	50 / 60 Hz	
Current Harmonic Distortion (THDi) ⁽²⁾	< 3%	
Power Factor	Four quadrants	
Efficiency		
Max. Efficiency	98.90%	99.02%
Euro Efficiency	98.35%	98.68%
CEC Efficiency	98.40%	98.53%
Protection		
DC Side	DC load break switch with DC fuses	
AC Side	AC circuit breaker	
DC Overvoltage	Surge arrester, class II as standard	
AC Overvoltage	Surge arrester, class II as standard	
Ingress Protection	IP55	
General		
Dimensions (W x H x D)	1500 × 2453 × 1650 mm (without protection shed) 1500 × 2453 × 2255 mm (with protection shed)	
Approximate Weight	2300 kg	
Environment		
Operating Temperature ⁽³⁾	-30 °C to +55 °C	
Storage Temperature	-20 °C to +45 °C	
Relative Humidity	0% to 95% RH, non-condensing	
Altitude ⁽⁴⁾	< 4000 m	
Acoustic Noise (1 m)	< 80 dB(A) @ 25 °C, full power	< 82 dB(A) @ 25 °C, full power
Cooling	Forced air cooling	
Compliance		
Safety	EN 62477-1	
EMC	IEC 61000-6-2, IEC 61000-6-4	
Grid Connection	Please contact Delta for more information	

* Specifications are subject to change without prior notice

1. Minimum DC voltage at nominal AC voltage and unit PF=1. The minimum DC voltage depends on AC voltage and power factor.
2. THDi at nominal power
3. Power de-rating above 45 °C
4. Power de-rating above 2000 m
5. An isolation transformer is required between the PCS and grid.

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2025/09