



Energy Storage Solution

Power Conditioning System / PCS100

- 100 kW power capacity with 400 V_{AC}
- Scalable system configuration and integration with mainstream battery systems
- Black start capability for power backup and microgrid applications



Commercial
Building



Charging
Station



Campus



Factory



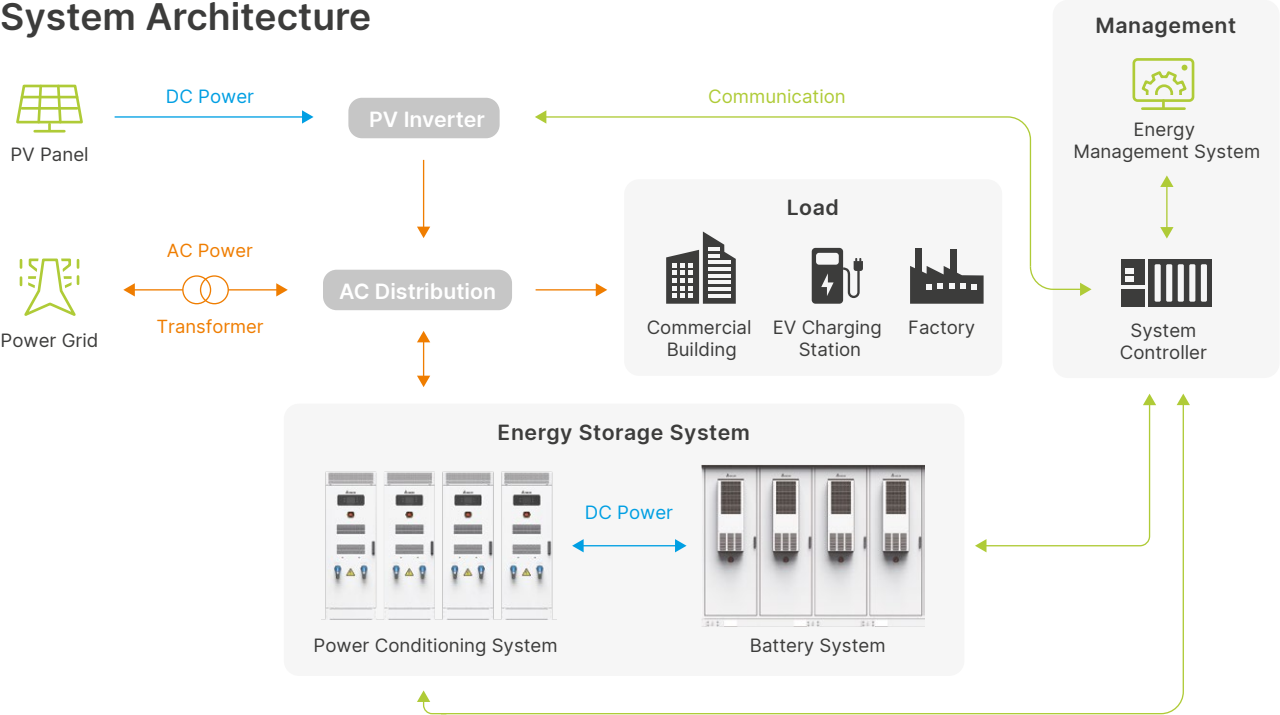
The Leading Power for Energy Storage

Delta Power Conditioning System (PCS) is a bi-directional energy storage inverter for grid-tied and off-grid applications including power backup, peak shaving, load shifting, PV self-consumption, PV smoothing and etc. It demonstrates industry leading power performance with

high power efficiency and low stand-by power loss. It is compact for space saving and offers scalability for various system configurations and integration with mainstream branded battery systems.



System Architecture

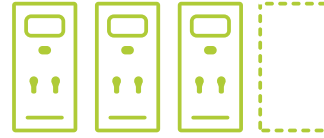


Features



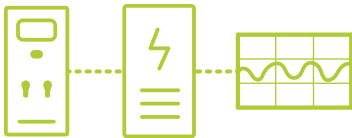
Efficient and Precise Power Control

- Power capacity: 100 kW
- AC voltage: 400 Vac
- Peak efficiency: 97.9%
- High power density: 118W/l, 323 W/kg
- Quick power response time : <40 ms



Flexible System Configuration

- Scalable with multiple units in a configuration
- Integrable with mainstream battery systems



Designed for Energy Storage Applications

- Real / reactive power compensation to improve power quality
- Peak shaving / demand charge management
- Load shifting for time-of-use savings
- Black start capability for power backup and microgrid applications
- Standalone operation for power backup



Product at a Glance



Specifications

Model Name	PCS100	
AC Connection		
Rated Grid Voltage	400 Vac, 3P3W	
Grid Voltage Range	320 ~ 440 Vac (VDE-AR-N4105) ¹⁾ 312 ~ 459 Vac (AS/NZS 4777.2) ²⁾ 320 ~ 456 Vac (G99) ¹⁾	
Rated Grid Frequency	50 (60 Hz optional)	
Frequency Range	47.5 ~ 51.5 Hz (VDE-AR-N4105) 47 ~ 52 Hz (AS/NZS 4777.2, AS_A, AS_B) 47.5 ~ 52 Hz (G99) 45 ~ 55 Hz (AS/NZS 4777.2, AS_C, NZS)	
Rated AC Power / Current	100 kVA / 144.3 A	
Max. Continuous AC Current	160.4 Arms	
Current THD	< 3%	
Power Factor	-1 to 1, continuously adjustable	
DC Connection		
DC Voltage Range	600 ~ 1,000 Vdc	
Rated DC Voltage	900 Vdc	
Start Up DC Voltage	600 V	
Rated Discharge / Charge Power	103 kW / 97 kW	
Max. Discharge / Charge Current	171.7A / 161.7A	
Standalone Operation		
Rated Output Voltage	400 Vac, 3P3W	
Rated Output Power	100 kVA / 100 kW with linear load ; 100 kVA with RCD load (CF \leq 2) ³⁾	
Rated Output Current	144.3 A	
Power Factor	0.8 ~ 1	
Output Voltage THD	< 3% @ linear load ; < 5% @ RCD load (CF \leq 2)	
Performance		
Peak Efficiency	97.9%	
Standby Loss	< 25W @ sleep mode	
Environment		
Max. Altitude	3,000 m, de-rating above 2,000 m	
Operating Temperature	-25 °C to +60 °C, de-rating @ > 50°C	
Humidity	0 to 95% RH, non-condensing	
Acoustic Noise	< 72 dBA @ 1 m @ rated condition	
Cooling	Forced air with speed control	
Enclosure Rating	IP55	
General		
User Interface	4.9" LCD screen	
Emergency Stop	EPO button & remote control	
Communication	Ethernet/Modbus TCP , RS-485/Modbus RTU(optional)	
Dimension (W x H x D)	600 × 1766 × 800 mm	
Net Weight	310 kg	
Certificate	Safety: IEC/EN 62477-1 Grid Code: VDE-AR-N4105, G99, AS/NZS 4777.2, VDE-AR-N4110 EMC: IEC/EN 61000-6-2, IEC/EN 61000-6-4 (Class A)	
Product Conformity	CE, RCM	
Applicable Battery Chemistry	Lithium-ion, flow battery	
Country/Region of Manufacturer	Taiwan	

1) @DC Voltage Range: 700 ~ 1000 V 2) @DC Voltage Range: 750 ~ 1000 V

3) Transformer or motor load, which has a large inrush current (CF>2), is not included.

* If a transformer is required to be added between PCS and load, D type of transformer must be on PCS side.

* Specifications are subject to change without prior notice

Delta Electronics Europe

Zandsteen 15, 2132 MZ Hoofddorp, The Netherlands
TEL : +31 20 655-0900 / FAX : +31 20 655-0999
PCS@deltaww.com

www.deltaww.com

Delta Electronics Australia

20-21/45 Normanby Road Notting Hill, VIC 3168, Australia
TEL : +61-3-9543-3720 / FAX : +61-3-9544-0606
PCS@deltaww.com



2022/07