

Energy Storage Solution

Power Conditioning System / PCS100HV

- 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

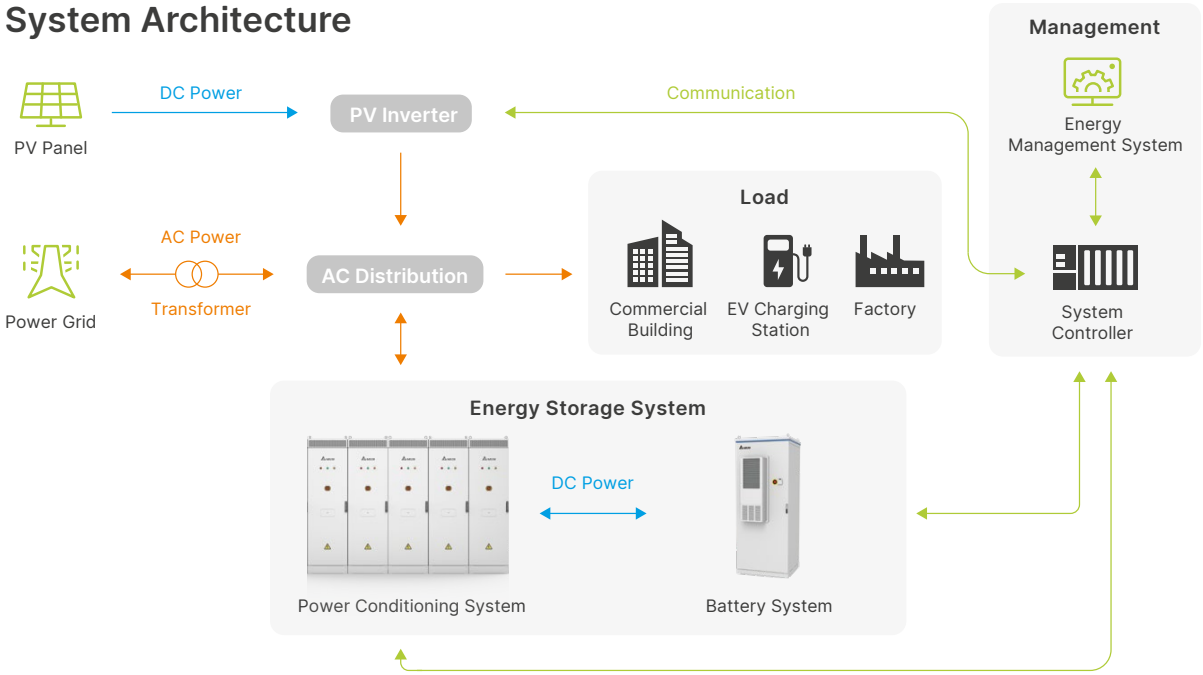
Commercial Building · Hospital · Charging Station · Campus · Factory

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: 98%
- High power density: 167 W/l, 435 W/kg
- Quick power response time : <20 ms

Flexible System Configuration

- Scalable with multiple units in a configuration
- Support 3 phase 4 wire load without transformer

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
- Both grid-tied mode and power backup mode operation



Product at a Glance



Specifications

Model Name	PCS100HV
AC Connection	
Rated Grid Voltage	400 Vac (3P,N,PE) or (3P,PE)
Grid Voltage Range	352 ~ 440 Vac
Rated Grid Frequency	50 Hz
Frequency Range	45~55 Hz
Rated AC Power	100 kVA / kW
Rated AC Current	145 A
Max. Continuous AC Current	167 A
Maximum AC Power	110 kVA / kW
Current THD	< 3%
DC current injection	<0.5% rated current
Power Factor	-1 to 1, continuously adjustable
DC Connection	
DC Voltage Range	650 ~ 1,350 Vdc for 3P3W 1) / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode 1), 2)
Start Up DC Voltage	650V
Rated Discharge / Charge Power	102 kW / 98 kW
Max. Discharge / Charge Current	157A / 151A
Standalone Operation	
Rated Output Voltage	400Vac (3P,N,PE)
Rated Output Power	100 kVA / kW with linear load ; 80 kVA with RCD load (Ipk≦240A) 3)
Rated Output Current	145 A
Output Voltage THD	< 3% @ rated linear load
Performance	
Peak Efficiency	98%
Standby Loss	<25W @ cold mode
Environment	
Max. Altitude	4,000 m, de-rating >2000m
Operating Temperature	-30 ºC to +60 ºC, de-rating >45ºC
Humidity	0 to 95% RH, non-condensing
Acoustic Noise	< 70 dB @ 1 m @25ºC @ rated condition, max. 75 dB
Cooling	Forced air with speed control
Enclosure Rating	IP55
General	
User Interface	LED, EPO, Ethernet
Communication	Ethernet/Modbus TCP
Dimension (W x H x D)	600 × 2000 × 500 mm
Net Weight	230 kg
Certificate	Safety: IEC 62477-1, EN62477-1 Grid Code: AS/NZS 4777.2:2020 EMC: IEC/EN 61000-6-2, IEC/EN 61000-6-4 Vibration: IEC 60068-2-6:2007
Protection	DC reverse protection/OVP/UVP/OCP/ DC insulation detection
Product Conformity	CE, RCM
Applicable Battery Chemistry	Lithium-ion, lead-acid, flow battery

1) Output power will be de-rating, if DC voltage is higher than 1250V
2) The minimum DC voltage should be larger than 750V, if the load is 100% unbalanced load
3) Transformer or motor load or rectifier load, which has large inrush current (Ipk>240A) is not included

* Specifications are subject to change without prior notice

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