



# ENERGY STORAGE SOLUTION

## Power Conditioning System / PCS100HV

### Features

- Power capacity: 100 kW; AC voltage: 400 Vac
- High voltage input: up to 1350Vdc
- High efficiency: Peak 98%
- High power density: 167 W/l, 435 W/kg
- Quick power transfer time (<20 ms)
- IP55 design for outdoor application
- Scalable with multiple units in configuration
- Black start capability for power backup
- Support 3 phase 4 wire load without transformer
- Support both grid-tied mode and power backup mode operation



Commercial Building



Hospital



Charging Station



Campus



Factory



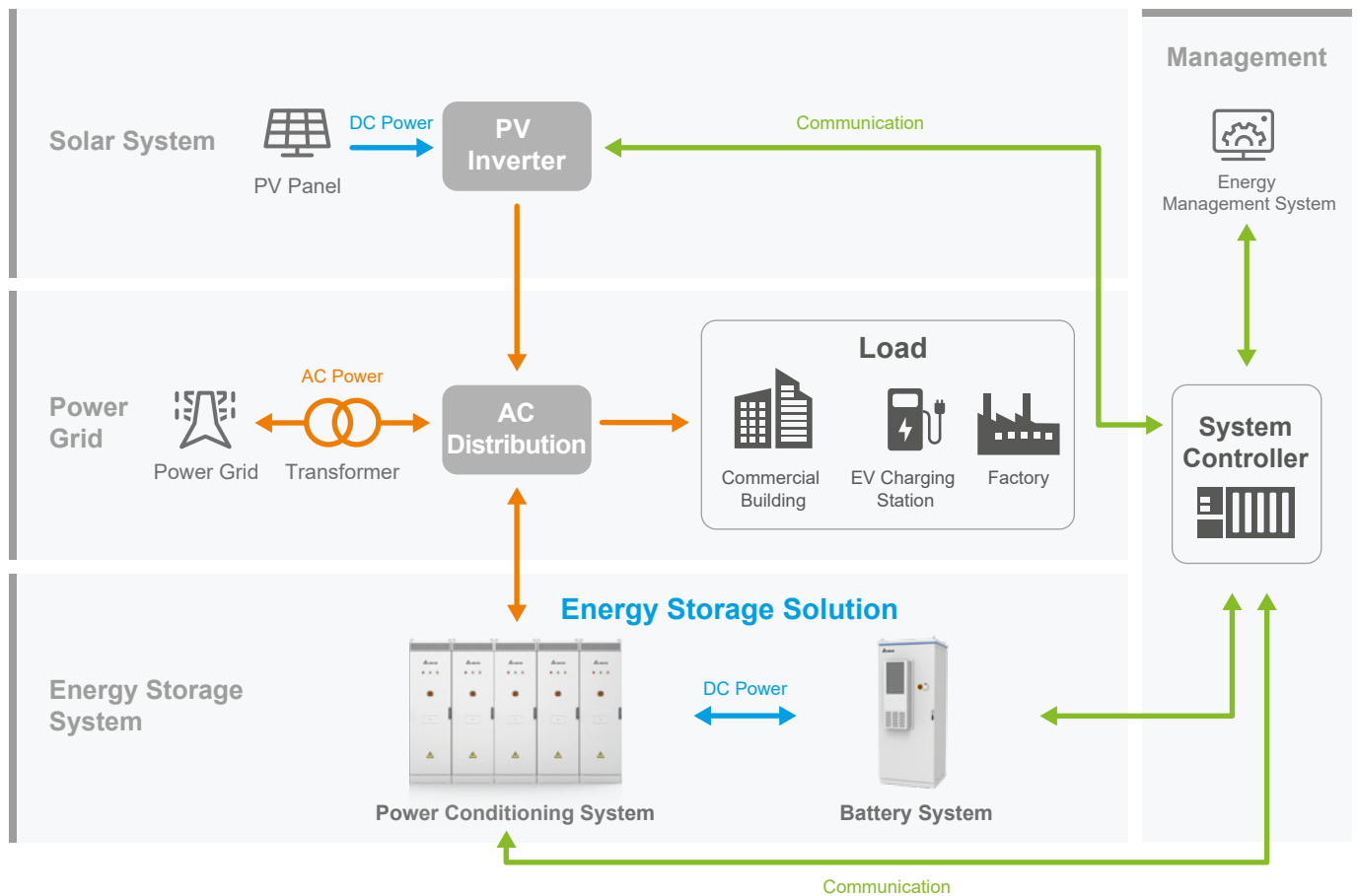
# DELTA

# 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, 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



## Applications

- Real and reactive power compensation
- Power backup for local load
- Demand charge management / peak shaving
- Load shifting for time-of-use savings

\* Micro-grid operation without utility grid, with other distributed energy resource, such as Diesel Generator, Solar and etc. is not supported in the current design.

# Specifications

Model Name	PCS100HV
<b>AC Connection</b>	
Rated Grid Voltage	400 Vac (3P,N,PE) or (3P,PE)
Grid Voltage Range	310 ~ 450 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
<b>DC Connection</b>	
DC Voltage Range	650 ~ 1,350 Vdc for 3P3W <sup>1)</sup> / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode <sup>1), 2)</sup>
Start Up DC Voltage	650V
Rated Discharge / Charge Power	102 kW / 98 kW
Max. Discharge / Charge Current	157A / 151A
<b>Standalone Operation</b>	
Rated Output Voltage	400Vac (3P,N,PE)
Rated Output Power	100 kVA / kW with linear load ; 80 kVA with RCD load (I <sub>pk</sub> ≤ 240A) <sup>3)</sup>
Rated Output Current	145 A
Output Voltage THD	< 3% @ rated linear load
<b>Performance</b>	
Peak Efficiency	98%
Standby Loss	<25W @ sleep mode
<b>Environment</b>	
Max. Altitude	4,000 m, de-rating >3000m
Operating Temperature	-30 °C to +60 °C, de-rating >45°C
Humidity	0 to 95% RH, non-condensing
Acoustic Noise	< 70 dB @ 1 m @25°C @ rated condition, max. 75 dB
Cooling	Forced air with speed control
Enclosure Rating	IP55
<b>General</b>	
User Interface	LED, EPO, Ethernet
Communication	Ethernet/Modbus TCP, RS-485 / Modbus RTU (optional)
Dimension (W x H x D)	600 x 2000 x 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
Country/Region of Manufacturer	Taiwan

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 (I<sub>pk</sub>>240A) is not included. Dyn transformer is more preferred to connect to PCS in standalone mode.

\* Specifications are subject to change without prior notice



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