



## Energy Storage Solution

# Power Conditioning System / PCS100HV

- 100 kW power conversion capacity with 400 Vac
- Scalable system configuration and integration with mainstream battery systems
- Support both grid-tied and power backup operation



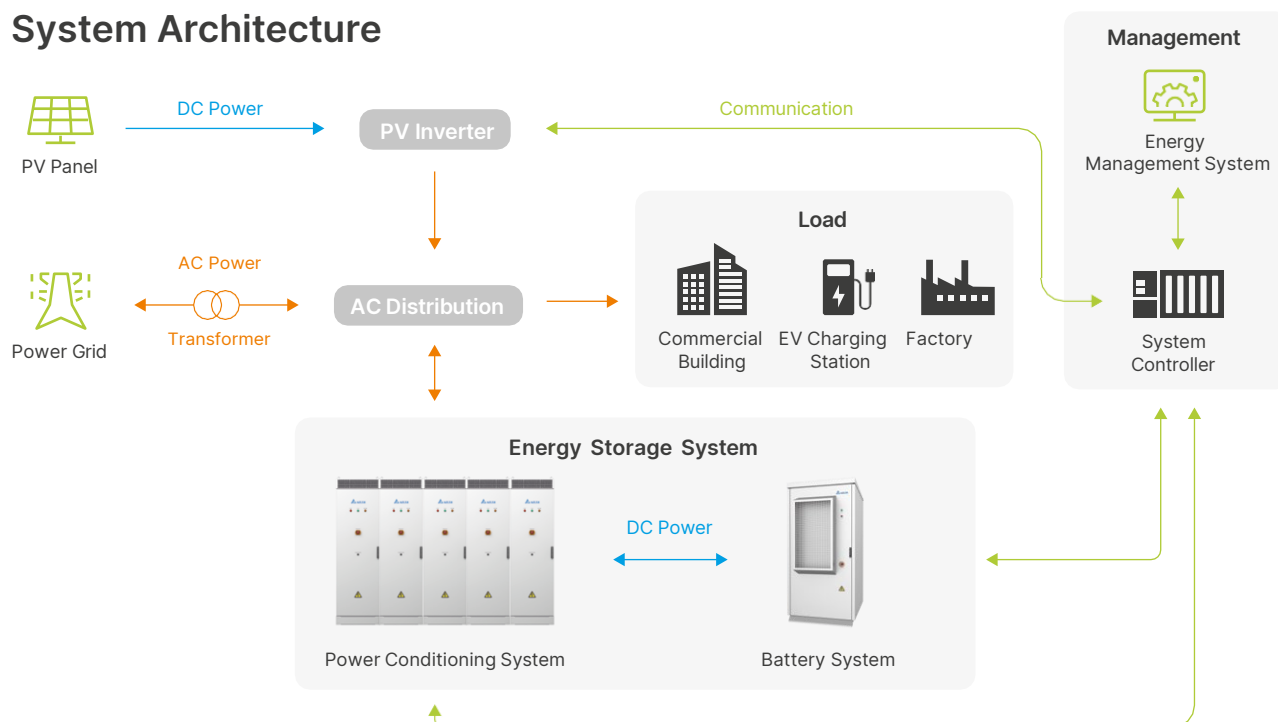
# The Leading Power for Energy Storage

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 more. It demonstrates industry leading power performance with high power efficiency

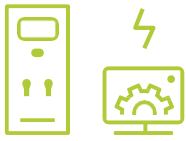
and low stand-by power loss. It is compact for space saving and offers scalability for various system configurations and integration with multiple battery types and models.



## System Architecture



## Features



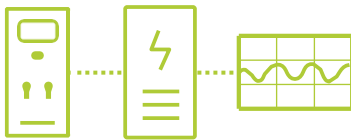
### Efficient and Precise Power Control

- 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 configuration with multiple units
- Support for 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              | 310 to 450 Vac                                                                                                                                                                                                  |
| Rated Grid Frequency            | 50 Hz                                                                                                                                                                                                           |
| Rated AC Active Power           | 100 kVA / kW                                                                                                                                                                                                    |
| Rated AC Current                | 145 A                                                                                                                                                                                                           |
| Maximum AC Apparent Power       | 110kVA / kW                                                                                                                                                                                                     |
| Current THD                     | < 3%                                                                                                                                                                                                            |
| DC Current Injection            | < 0.5% of rated current                                                                                                                                                                                         |
| Power Factor                    | -1 to 1, continuously adjustable                                                                                                                                                                                |
| DC Connection                   |                                                                                                                                                                                                                 |
| DC Voltage Range                | 600 to 1,350 Vdc for 3P3W / 700 to 1,350 Vdc for 3P4W in Off-grid mode                                                                                                                                          |
| DC Voltage Range (Full load)    | 650 to 1,250 Vdc                                                                                                                                                                                                |
| Rated Discharge / Charge Power  | 102 kW / 98 kW                                                                                                                                                                                                  |
| Max. Discharge / Charge Current | 170 A / 163 A                                                                                                                                                                                                   |
| Standalone Operation            |                                                                                                                                                                                                                 |
| Rated Output Voltage            | 400 Vac (3P-N-PE or 3P-PE)                                                                                                                                                                                      |
| Rated Output Power              | 100 kVA / kW with linear load; 80 kVA / kW with non-linear loads (I <sub>pk</sub> ≤ 240 A) <sup>1)</sup>                                                                                                        |
| Rated Output Current            | 145 A                                                                                                                                                                                                           |
| Output Voltage THD              | < 3% @ rated linear load                                                                                                                                                                                        |
| Performance                     |                                                                                                                                                                                                                 |
| Peak Efficiency                 | > 98%                                                                                                                                                                                                           |
| Standby Loss                    | < 25 W @ in cold mode                                                                                                                                                                                           |
| Inverter topology               | Non-Isolated                                                                                                                                                                                                    |
| Active anti-Islanding method    | Reactive power injection                                                                                                                                                                                        |
| Environment                     |                                                                                                                                                                                                                 |
| Maximum Altitude                | 4,000 m, de-rating > 2,000 m                                                                                                                                                                                    |
| Operating Temperature           | -30 °C to +60 °C, de-rating > 45 °C                                                                                                                                                                             |
| Humidity                        | 0 to 95% RH, non-condensing                                                                                                                                                                                     |
| Acoustic Noise                  | Maximum < 70 dBA @ 1 m                                                                                                                                                                                          |
| Cooling                         | Forced air with speed control                                                                                                                                                                                   |
| Enclosure Rating                | IP55                                                                                                                                                                                                            |
| Protective class                | I                                                                                                                                                                                                               |
| Over voltage category           | OVC III(AC main) ,OVC II(DC battery)                                                                                                                                                                            |
| Battery Type                    | Lithium-ion, lead-acid, flow battery                                                                                                                                                                            |
| General                         |                                                                                                                                                                                                                 |
| User Interface                  | LED, EPO, Ethernet                                                                                                                                                                                              |
| Communication                   | Ethernet/Modbus TCP                                                                                                                                                                                             |
| Dimensions (W x H x D)          | 600 × 2000 × 500 mm                                                                                                                                                                                             |
| Net Weight                      | 230 kg                                                                                                                                                                                                          |
| Certifications                  | Safety: IEC 62477-1, EN 62477-1<br>Grid: AS/NZS 4777.2, EN 50549-1:2019, G99, VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, NTS, NTS SENP<br>EMC: IEC/EN 61000-6-2, IEC/EN 61000-6-4<br>Vibration: IEC 60068-2-6:2007 |
| Protection                      | DC reverse protection/OVP/UVP/OCP/DC insulation detection                                                                                                                                                       |
| Product Conformity              | CE, RCM, UKCA                                                                                                                                                                                                   |

1) Transformer, motor or rectifier loads with large inrush currents (I<sub>pk</sub> > 240 A) are not supported  
2) The enclosure is classified under the C5-Medium corrosivity category according to ISO 12944-2 standards. Ensure proper installation by following the guidelines of the installation manual for optimal performance.

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