



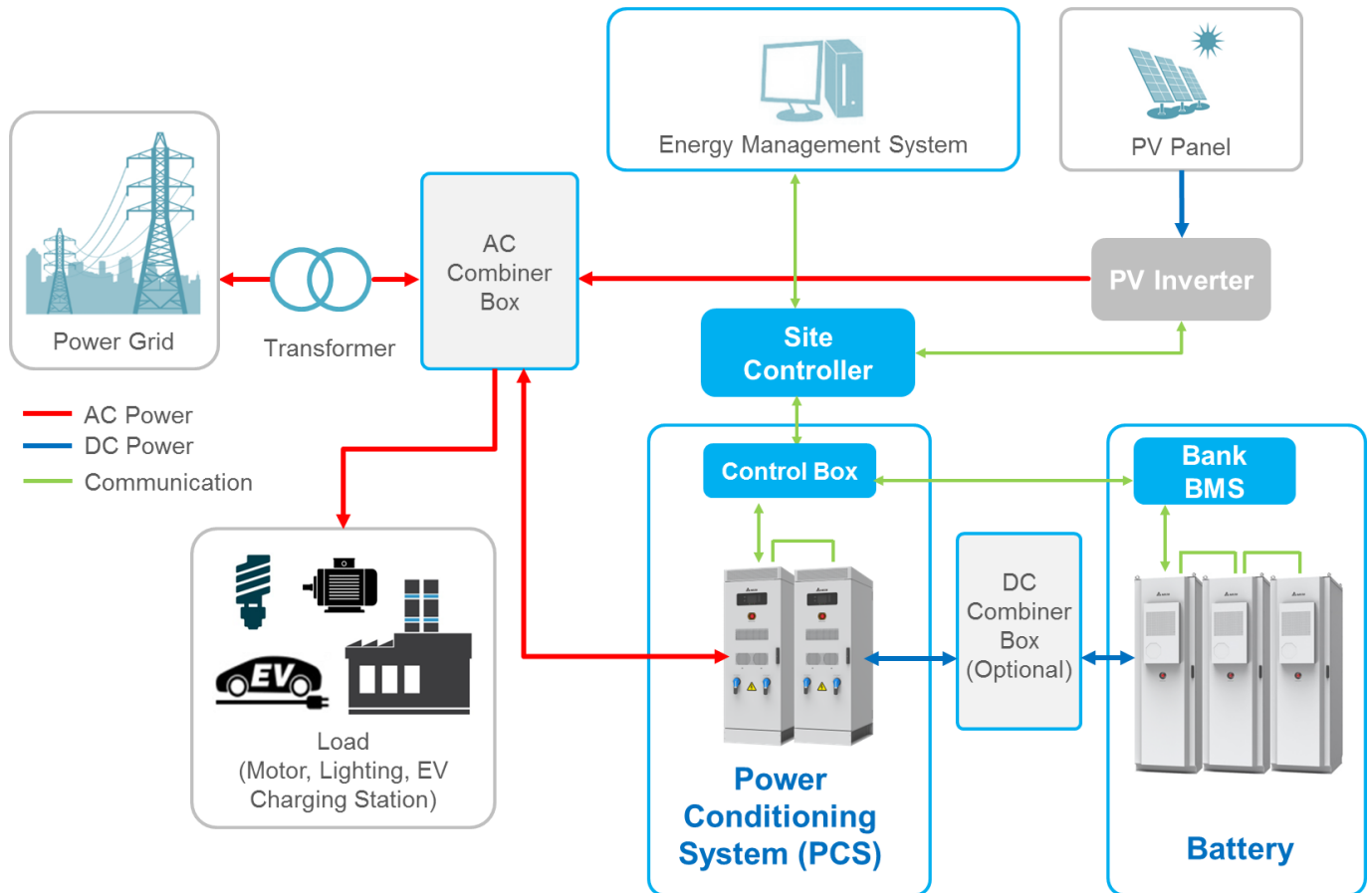
# Delta Power Conditioning System 125kW / 480Vac

## Industry Leading Power for Energy Storage Applications

Our Power Conditioning System (PCS) is a bi-directional inverter for grid-tied energy storage system (ESS). It demonstrates industry leading power performance with high power efficiency and low stand-by power loss. It is compact for space saving and offers the scalability for various system configurations and integration with mainstream branded battery systems.

Delta PCS enables your ESS to maximize the value of your storage for such applications:

- Peak shaving for demand charge management
- Load shifting for time-of-use savings
- Real and reactive power compensation to improve power quality
- Standalone operation in off-grid mode for power backup



## Key Features

- Industry leading power performance with latest technologies
  - ✓ High efficiency: peak 97.8%, CEC 97.5%
  - ✓ Low standby power loss: <20 W
- High power density in outdoor application: 150 W/l, 410 W/kg
- Quick power transfer/system response time (<34 ms)
- Integrated AC and DC switches for easy installation and maintenance
- 1 PCS supports up to 3 sets of DC battery inputs without additional components required
- Scalable up to 500 kW in parallel configuration
- Type 3R enclosure and IP54 rated for OUTDOOR application
- Flexible for AC coupled grid-tied and off-grid architectures
- Black start capability for power backup and microgrid applications

## Applications

- Peak shaving for demand charge management
- Load shifting for time-of-use savings
- Real and reactive power compensation to improve power quality
- Standalone operation in off-grid mode for power backup

## Operating Modes

Delta's PCS output interconnects with the power grid and provides flexibility for various function configurations:

- **Power Demand Mode—Respond to External Power Demand**

In Power Demand Mode, PCS responds to the external power demands and provides the required active/reactive power to the grid.

- **Peak Shaving Mode—Scheduling Peak Shaving for Demand Charge Reduction**

In Peak Shaving Mode, once detecting the load consumption exceeding the user-configured limit value, the PCS will dispatch battery power to shave the peak and avoid high demand charge.

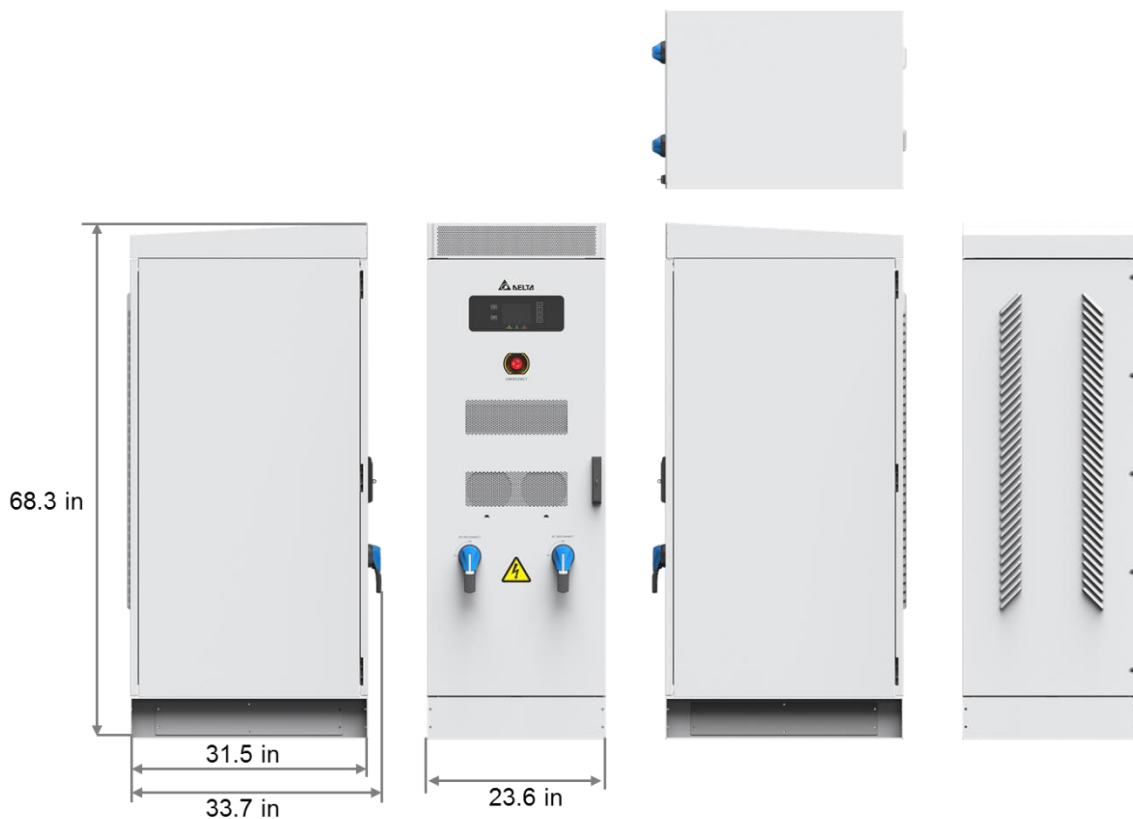
- **Grid Support Mode—Improve Grid Power Quality**

PCS can actively compensate poor grid voltage and frequency by providing active or reactive power. The compensation ratio is user configurable.

- **Standalone Mode—A Reliable Backup Power**

Once detecting grid blackouts, the PCS will disconnect from the grid and transition to standalone mode, and continuously provide quality power from battery to the critical load to reduce the loss or damage caused by such grid abnormal situation.

## Dimensions



## Technical Specifications

### AC GRID CONNECTION

Rated Grid Voltage	480 Vac, 3 phase
Grid Voltage Range	423 to 528 Vac (-12%, +10%)
Rated Grid Frequency	60 Hz
Frequency Range	59.3 to 60.5 Hz, adjustable
Rated AC Power	125 kVA
Rated AC Current	150.4 A
Max. Continuous AC Current	167 Arms
Current THD	IEEE 1547 Compliant, <5% at rated power
Power Factor	-1 to 1, continuously adjustable

### DC CONNECTION

DC Voltage Range	750 to 1,000 Vdc
Rated DC Voltage	900 Vdc
Rated Discharge Power	129 kW
Rated Charge Power	122 kW
Max. Discharge DC Current	172 A (129 kW @ 750 Vdc)
Max. Charge DC Current	163 A (122 kW @ 750 Vdc)

### STANDALONE OPERATION

Rated Output Voltage	480 Vac, 3P3W (In 3P4W case, an external Dyn Transformer is required)
Rated Output Power	125 kVA/125 kW with linear load 100 kVA with non-linear/RCD load
Rated Output Current	150.4 A with linear load 120 A with non-linear/RCD load
Rated Output Frequency	60 Hz $\pm$ 1%
Power Factor	0.8 to 1
Output Voltage Accuracy	1%
Output Voltage THD	<3% @ 12.5~100% liner load < 5% @ 12.5~100% non-liner load
Output Voltage Regulation	<10%, at dynamic; Recovering within tolerance in 100ms

## ENVIRONMENTAL

Max Altitude	3,000 m (9,843 ft)
Operating Temperature	-25~60°C (-13~140°F), derating >50°C (3%/°C), ≤2000m -25~40°C (-13~104°F), >2000m
Storage Temperature	-25 ~70°C (-13~158°F)
Humidity	0 to 95% RH, no-condensing
Cooling	Forced air w/ speed control
Acoustic Noise	<72 dBA @ 1 m (6.6 ft) at rated condition
Enclosure Type	Type 3R (IP54 Equivalent)
Ingress Rating	IP54

## INTERFACE

User Interface	4.9 in LCD screen with operation button, Fault LEDs
Emergency Stop	Local EPO button & remote control
Communication	RS-485 / Modbus RTU, CAN

## PERFORMANCE

Peak Efficiency / CEC Efficiency	97.8% / 97.5%
Standby Loss	<20 W

## MECHANICAL

Dimensions (W x D x H) (excl. Package)	600 mm x 800 mm x 1,734 mm / 23.6 in x 31.5 in x 68.3 in
Net Weight (excl. Package)	305 kg / 672 lb

## COMPLIANCE

Certificate (in progress)	UL1741, UL 1741 SA, IEEE1547, Rule 21, FCC part 15 class A
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### Delta Products Corporation

46101 Fremont Blvd, Fremont, CA 94538, U.S.A.

TEL : +1-510-668-5100

FAX : +1-510-668-0680

E-mail : [energy.storage@deltaww.com](mailto:energy.storage@deltaww.com)

[www.delta-americas.com](http://www.delta-americas.com)