



# Delta Power Conditioning System 125kW / 480Vac

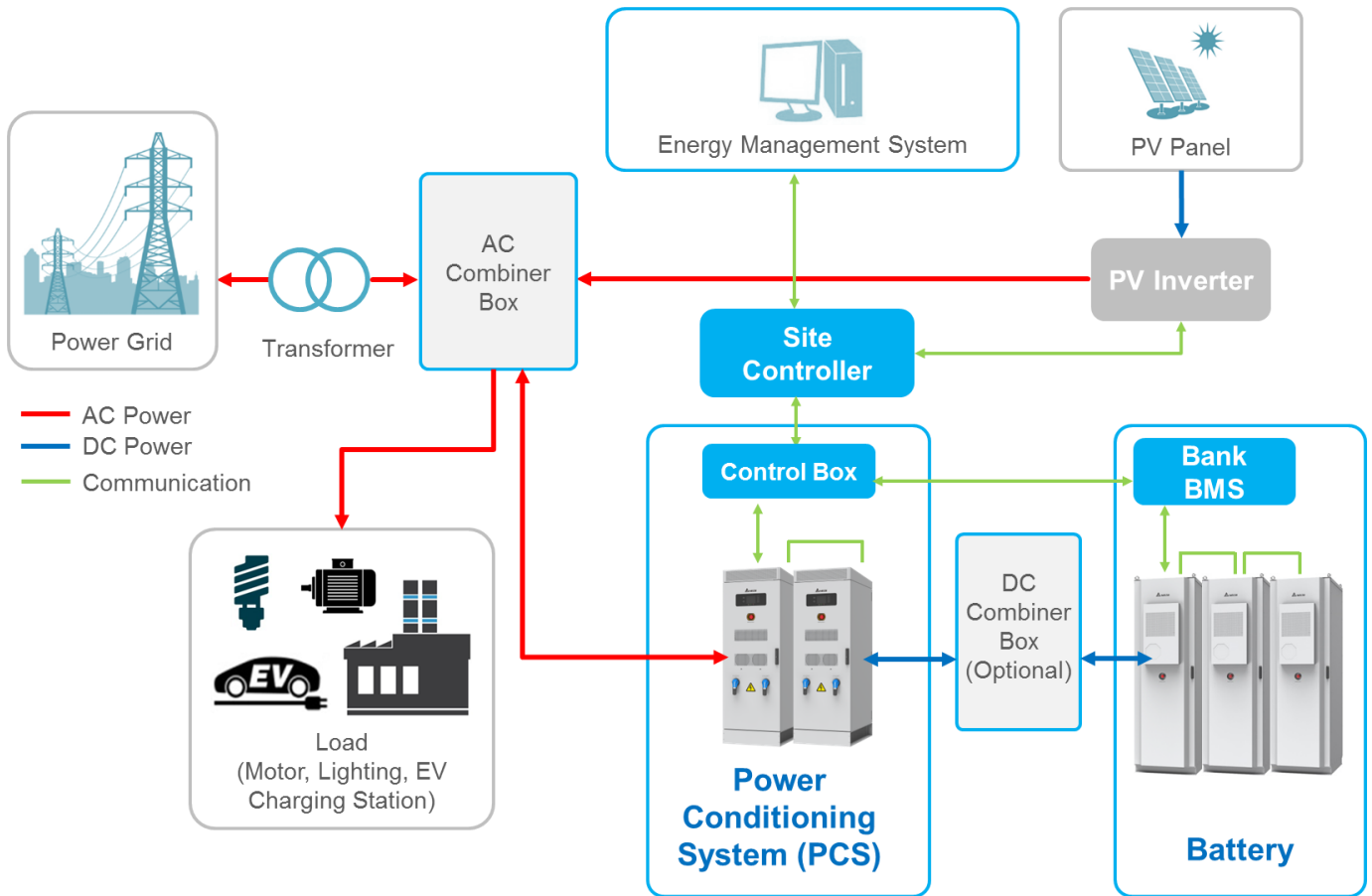
## Industry Leading Power for Energy Storage Applications

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:

- Demand charge management / peak shaving
- 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 time (0~±100% rated power <34 ms)
- Integrated AC and DC switches for easy installation and maintenance
- One PCS supports up to 3 sets of DC battery inputs with direct power connections
- Scalable up to 500 kW in parallel configuration
- Type 3R enclosure and IP55 rated for OUTDOOR application
- Flexible for AC coupled grid-tied and off-grid architectures
- Black start capability for power backup and microgrid applications

## Applications

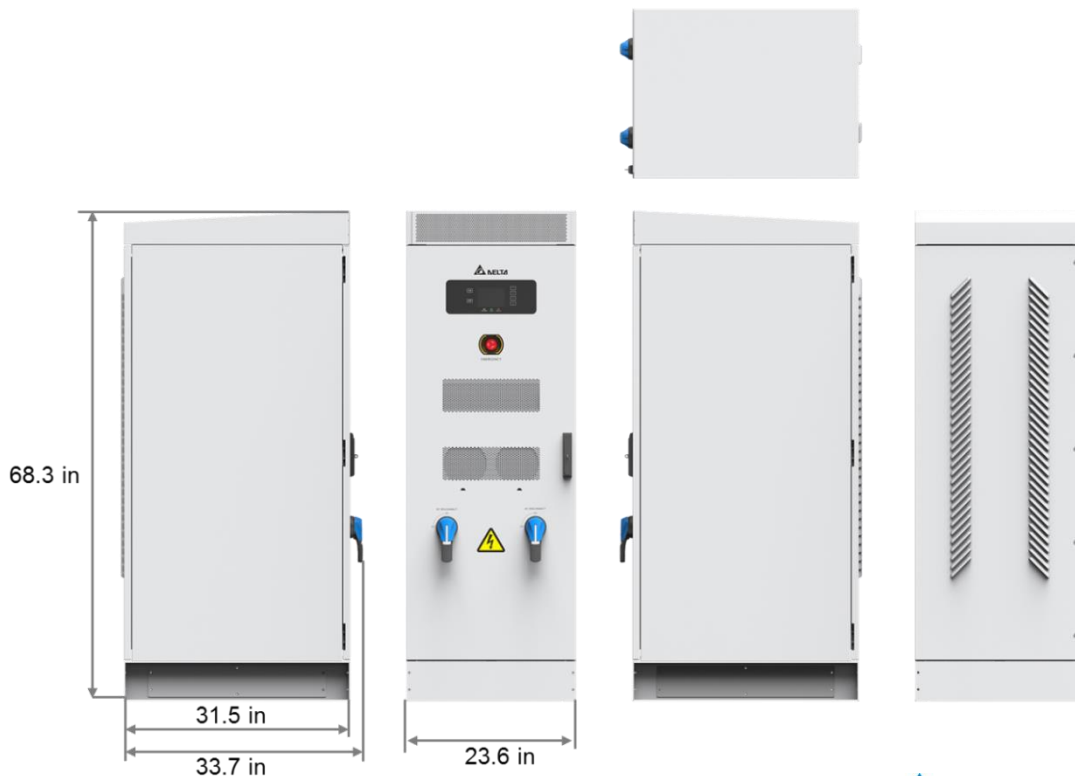
- Demand charge management / peak shaving
- Load shifting for time-of-use savings
- Real and reactive power compensation to improve power quality
- Standalone operation in off-grid mode for power backup

## 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.
- **Frequency-Watt/Voltage-Watt Mode—Dynamically Output Power Adjustment**  
In this operating mode, the PCS can continuously monitor the frequency or voltage of the grid and dynamically adjust its output power based on the user-configured frequency-watt or voltage-watt operating parameters.
- **Standalone Mode—A Reliable Backup Power**  
Once detecting grid blackouts, the PCS will disconnect itself from the grid and transition into standalone mode. In this mode with an external UPS supplying emergency power to all the system controllers, the PCS can provide black start capability and continuously provide quality power from battery to critical loads 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
Protection	Over Current (rms & peak), Over Load

### 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)
Protection	Over Charge/Discharge Current, Over Peak Current

### 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
Ingress Protection Rating	IP55

## 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	UL1741, UL 1741 SA, IEEE1547, Rule 21, FCC part 15 class A
-------------	---

## Ordering Information

Part Number	DES10JB125K01
-------------	---------------

Specifications subject to change without notice

### 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)