

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/I, 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













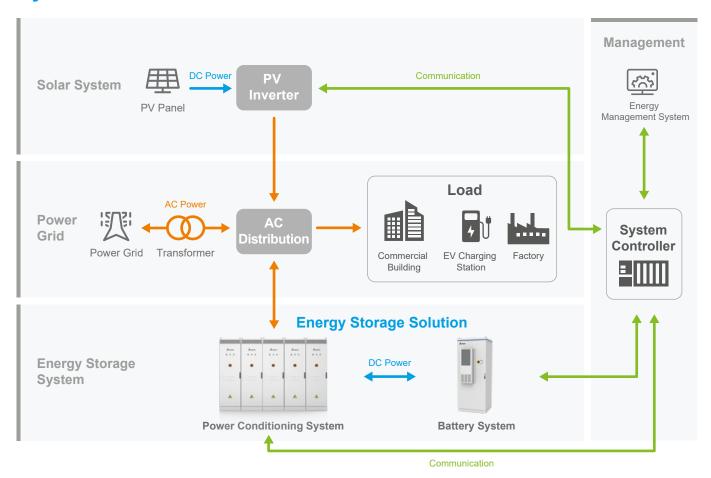


The Leading Power for Energy Storage

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

AC Connection 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 Current 145 A Max. Continuous AC Current 146 A Max. Continuous AC Current 110 kVA / kW Current Tipel < 3% DC Current injection < 0.5 % rade current Power Factor -1 to 1, continuously adjustable DC Connection 0 DC Voltage Range 650 ~ 1,350 Vdc for 3P3W ° / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode ° 1.2 Start Up DC Voltage 650 V Rated Discharge / Charge Orent 102 kW / 98 kW Max. Discharge / Charge Orent 157A / 151A Standation Operation 102 kW / 98 kW Stated Output Voltage 400 Vac (3PN, PE) Rated Output Power 100 kVA / kW with linear load ; 80 kVA with RCD load (lpk § 240A) ° 1 Rated Output Qurrent 145 A Volutut Voltage 400 Vac (3PN, PE) Rated Output Qurrent 45 A Port Ormance Peak Efficiency </th <th>Model Name</th> <th>PCS100HV</th>	Model Name	PCS100HV
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 - 10 to 1, continuously adjustable DC Ornection ***Office Test and Comment DC Oveltage 650 ~ 1,350 Vdc for 3P3W¹¹ / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode ¹¹.²⟩ Start Up DC Voltage 650 ~ 1,350 Vdc for 3P3W¹¹ / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode ¹¹.²⟩ Rated Discharge / Charge Current 157 A/ 151A Standalone Operation ***Off-part Security of Securi	AC Connection	
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Rated Grid Frequency 50 Hz Frequency Range 45-55 Hz Rated AC Owner 100 kW / kW Rated AC Current 145 A Max. Continuous AC Current 167 A Maximum AC Power 110 kW / kW Current THD < 3%		
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%		50 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%	· ·	45~55 Hz
Max Continuous AC Current 110 kVA / kW Maximum AC Power 110 kVA / kW Current THD < 3%		100 kVA / kW
Maximum AC Power 110 kVA / kW Current THD < 3%	Rated AC Current	145 A
Current THD < 3%	Max. Continuous AC Current	167 A
DC current injection <0.5% rated current	Maximum AC Power	110 kVA / kW
DC current injection <0.5% rated current	Current THD	< 3%
Power Factor -1 to 1, continuously adjustable DC Connection DC Voltage Range 650 ∨ 1,350 Vdc for 3P3W³ / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode ^{11,21} Start Up DC Voltage 650 ∨ Rated Discharge / Charge Power 102 kW / 98 kW Max. Discharge / Charge Current 157A / 151A Standalone Operation ************************************		
DC Connection DC Voltage Range 650 ~ 1,350 Vdc for 3P3W³ / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode ¹³.²¹ 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 Current 145 A Output Voltage THD < 3% @ rated linear load	· · · · · · · · · · · · · · · · · · ·	
DC Voltage Range 650 ~ 1,350 Vdc for 3P3W ¹) / 700 ~ 1,350 Vdc for 3P4W in Off-grid mode ¹¹.²¹ Start Up DC Voltage 650V Rated Discharge / Charge Power 102 kW / 98 kW Max. Discharge / Charge Current 157A / 151A Standalono Operation Rated Output Voltage 400Vac (3P.N.PE) Rated Output Power 100 kVA / kW with linear load ; 80 kVA with RCD load (lpk ≤ 240A) ³¹ Rated Output Current 145 A Output Voltage THD < 3% @ rated linear load		
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 kWA / kW with linear load ; 80 kVA with RCD load (lpk ≤ 240A) *** Rated Output Current 145 A Output Voltage THD < 3% @ rated linear load		650 ~ 1.350 Vdc for 3P3W ¹⁾ / 700 ~ 1.350 Vdc for 3P4W in Off-grid mode ^{1), 2)}
Rated Discharge / Charge Power 102 kW / 98 kW Max. Discharge / Charge Current 157A / 151A Standalone Operation ************************************		5
Max. Discharge / Charge Current 157A / 151A Standalone Operation Rated Output Voltage 400Vac (3P,N,PE) Rated Output Current 145 A Output Voltage THD < 3% @ rated linear load		
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Rated Output Current 145 A Output Voltage THD < 3% @ rated linear load		
Output Voltage THD < 3% @ rated linear load		
Performance Peak Efficiency 98% Standby Loss <25W @ sleep mode	·	< 3% @ rated linear load
Peak Efficiency 98% Standby Loss <25W @ sleep mode		
Standby Loss <25W @ sleep mode Environment Max. Altitude		98%
Environment Max. Altitude	,	<25W @ sleep mode
Max. Altitude4,000 m, de-rating >3000mOperating Temperature-30 °C to +60 °C, de-rating >45°CHumidity0 to 95% RH, non-condensingAcoustic Noise< 70 dB @ 1 m @25°C @ rated condition, max. 75 dB		
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 General 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 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 Product Conformity CE, RCM	Max. Altitude	4,000 m, de-rating >3000m
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 General 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 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	Operating Temperature	-30 °C to +60 °C, de-rating >45°C
Acoustic Noise < 70 dB @ 1 m @25°C @ rated condition, max. 75 dB Cooling Forced air with speed control Enclosure Rating IP55 General 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 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		-
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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 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 Product Conformity CE, RCM		IP55
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 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 Product Conformity CE, RCM	General	
Dimension (W x H x D) 600 x 2000 x 500 mm Net Weight 230 kg Certificate Safety: IEC 62477-1, EN62477-1		LED, EPO, Ethernet
Dimension (W x H x D) 600 x 2000 x 500 mm Net Weight 230 kg Certificate Safety: IEC 62477-1, EN62477-1	Communication	Ethernet/Modbus TCP, RS-485 / Modbus RTU (optional)
Net Weight 230 kg 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	Dimension (W x H x D)	600 x 2000 x 500 mm
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 Product Conformity CE, RCM		230 kg
Product Conformity CE, RCM		Grid Code: AS/NZS 4777.2:2020 EMC: IEC/EN 61000-6-2, IEC/EN 61000-6-4
Product Conformity CE, RCM	Protection	DC reverse protection/OVP/UVP/OCP/ DC insulation detection
. The same and the	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 (lpk>240A) is not included
- * Specifications are subject to change without prior notice





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