

Smart Power. Smart City.



Low Frequency Online UPS

3:1 10-40KVA

3:3 10-200KVA

PSMART®

COMPANY PROFILE

PSMART is a new energy enterprise dedicated to the R&D and manufacturing of solar inverter and UPS, including off grid inverter, off grid solar system, MPPT solar charge controller, storage inverters and low frequency online UPS, power guard, and smart energy monitoring management solutions as well. The power capacity of PSMART off grid inverters ranges from 0.5 kW to 300 kW, and low frequency online UPS covers a power range from 10 kW to 200 kW. PSMART inverters and UPS are widely used for applications in residential, commercial, PV poverty alleviation as well as other storage power station projects.



Founded in 2012, PSMART has focused on developing products that are most suitable for the needs of clients from worldwide. PSMART always sticks to technology innovation, and provides customers with premium products and services through its key inverter and UPS technology, strict quality control and continuous improvement of customer service. PSMART has been the supplier of Chinese government since 2016, and has finished many PAP (Poverty Alleviation Program) projects and capital construction projects. By the end of 2021, PSMART has shipped over 1 million inverters and UPS to over 50 countries and regions across the globe.

PSMART will always insist on leading technology and put quality in the first place with its people-oriented and client-oriented spirit. In addition, PSMART will continue to integrate global resources, promote technology innovation and strive to lead in providing the best energy solutions across the world.

CP Series 3Phase IGBT Low Frequency Online UPS

Product Introduction

CP series IGBT design Industrial 3P UPS is a dual conversion True Online design with digital technology topology. The UPS offers exceptional reliability, high fault tolerances, and high surge overload capability. This product series can be paralleled for hot standby backup (N+1) and also can be used as a standalone solution for applications such as banking, securities as well as other institutions like data centers, communications, electrical utility and industrial automation to mention but a few. A UPS fully compatible with every load or environment. Capacities from 10kVA to 200kVA offer a wide power proposition to any application.

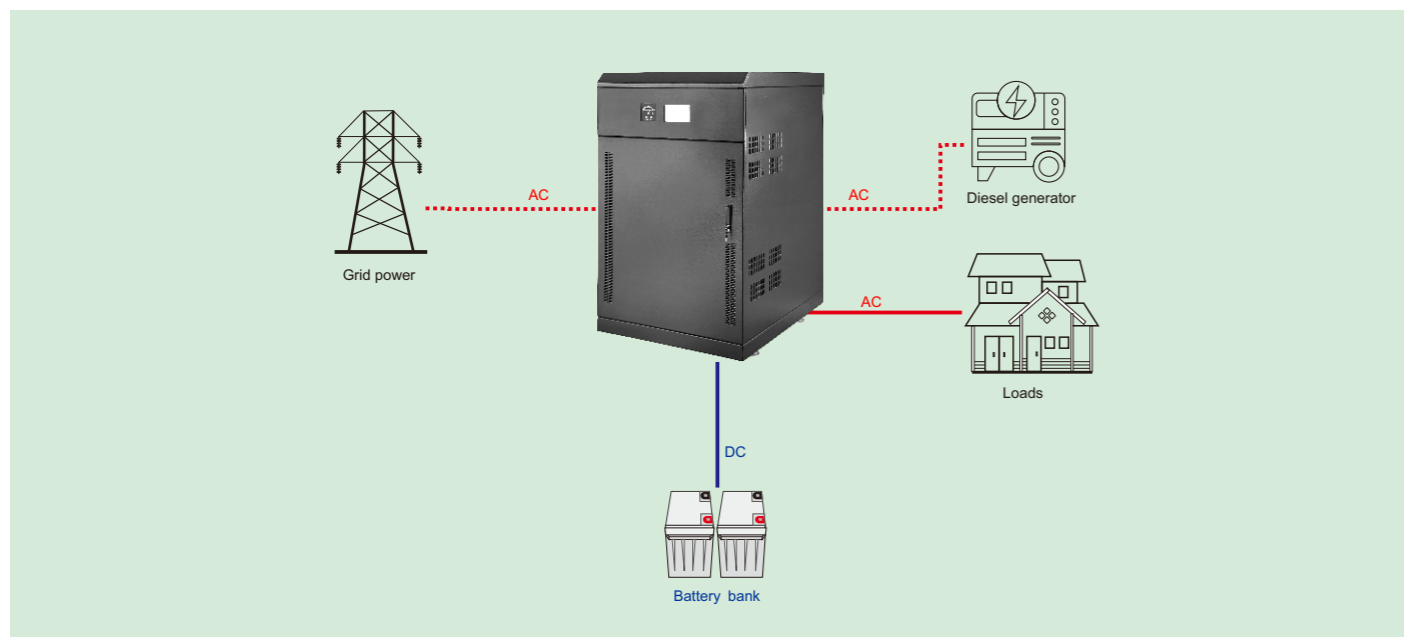
Product Performance

The Multi-UPS parallel functionality allows users to parallel up to 8 UPS's at once for scalability and (N+1) via DSP control Full digital control technology makes the whole system more precise, fast reacting, reliable and stable. Precise intelligent monitor functions can provide RS232, dry contact and parallel interface. Using intelligent battery charging and discharging mode as well as management mode, one can effectively improve the battery life. The UPS system is put through strict tests of short circuit and 2KV high voltage isolation tests. An optional twelve pulse solution or plus active power filter is available to effectively correct the input power factor.

Main Features

- Auto diagnosis for boot up
- Powerful overload capability
- Low voltage battery protection
- Double conversion online UPS
- AC input low and over voltage protection
- Output overload and short circuit protection
- Over temperature protection inside the UPS
- UPS running time can be set, easier to control
- Power on password can be set before delivery
- ECO energy saving mode for up to 98% high efficiency
- UPS provides low distortion noise and pure sine wave output
- Obtains high-quality output voltage with optimal benefit under various loads
- Communication interface Rs232, Rs485, dry contact and SNMP card are optional
- Advanced IGBT & PWM technology used to decrease system noise & energy losses
- Enhanced load capability of the machine to various capacitive and inductive type loads
- Output isolation transformer to ensure load and utility electricity are isolated completely
- 7-inch Touch LCD interface makes management and interfacing the UPS more convenient
- Intelligent speed regulating fans are deployed, using noise control and energy saving methodology
- The Inverter adopts DSP MCU & DDC digital vector control technology to command each UPS function
- No DC to the load due to UPS isolation characteristics mitigating DC ripple and thus elevating load reliability
- Automatic frequency synchronous function avoids skipping the frequency which can influence devices negatively
- Protections: input overvoltage and undervoltage, output overload, output short circuit, inverter over temperature, battery over voltage and undervoltage
- Using the large sized power IGBT's creates an inverter with the strong ability to handle overloads and resistive load impacts, and enhances the adaptation to the electrical environment

Application diagram



Technical parameters for 3ph in 1ph out models

Model	CPX10KVA	CPX15KVA	CPX20KVA	CPX30KVA	CPX40KVA
Input					
Rated voltage(V)	380/400/415V Three-phase+N+G				
AC input range	380VAC±20%				
Input frequency	45Hz~55Hz or 55Hz~65Hz				
Bypass					
Rated voltage(V)	220/230/240V Single-phase+N+G				
Frequency	45Hz~55Hz or 55Hz~65Hz				
Output					
Nominal power(kVA)	10KVA	15KVA	20KVA	30KVA	40KVA
Active power(kW)	8/9	12/13.5	16/18	24/27	32/36
Number of phases	1				
Rated voltage(V)	220/230/240V single-phase + N				
Static stability	±1%				
Dynamic stability	<±5% in 10msec				
Voltage distortion	<3% with linear load/ <5% with non-linear load				
Crest factor	3:1				
Frequency stability	0.05% (on battery)				
Frequency	50Hz/60Hz±0.1% (battery mode)				
Overload	110% for 60 min; 125% for 10 min; 150% for 1min.				
Balanced load Vol.	<±1%; <±5% for unbalanced load				
Waveform	Pure sine wave				
Inverter efficiency	93%				

Batteries

Max. discharge current	28	43	56	85	113
Number of battery	12V 32PCS or 2V 192PCS (each string)				
Nominal battery voltage	384VDC				
Float charge voltage	432VDC				
Charge current	6-30A adjustable				

Overall Specifications

Weight without battery	190	220	245	280	330
Dimensions(W*H*D)	730*455*1177 mm				720*565*1140 mm
Communications	Rs232, Rs485, Dry contact, EPO and SNMP slot options				
Ambient temperature	0-40°C for UPS, and recommended temperature for battery +20°C~+25°C				
Relative humidity	0-95 non-condensing				
Color	Dark grey				
Noise level at 1m	60dB				
IP rating	IP20				
ECO mode efficiency	Up to 98%				
Display	7-inch touch screen				
Operation altitude	<1000m; higher than 1000m, every 100m will result in 1% power lose, Max. 4000m				
Standards	EMC directive: 2014/30/EU, LVD directive: 2014/35/EU EN IEC 62040-1: 2008 EN IEC 62040-2: 2018 EN61000-3-2				

*The specifications, dimensions and materials are subject to change without further notice.

Technical parameters for 3ph in 3ph out models

Model	CPX10KVA	CPX15KVA	CPX20KVA	CPX30KVA	CPX40KVA
Input					
Rated voltage(V)	380/400/415V Three-phase+N+G				
AC input range	380VAC±20%				
Input frequency	45Hz~55Hz or 55Hz~65Hz				
Bypass					
Rated voltage(V)	380/400/415V Three-phase+N+G				
Frequency	45Hz~55Hz or 55Hz~65Hz				
Output					
Nominal power(kVA)	10KVA	15KVA	20KVA	30KVA	40KVA
Active power(kW)	8/9	12/13.5	16/18	24/27	32/36
Number of phases	3				
Rated voltage(V)	380/400/415V Three-phase+N+G				
Static stability	±1%				
Dynamic stability	<±5% in 10msec				
Voltage distortion	<3% with linear load/ <5% with non-linear load				
Crest factor	3:1				
Frequency stability	0.05% (on battery)				
Frequency	50Hz/60Hz±0.1% (battery mode)				
Overload	110% for 60 min; 125% for 10 min; 150% for 1min.				
Balanced load Vol.	<±1%; <±5% for unbalanced load				
Waveform	Pure sine wave				
Inverter efficiency	93%				

Batteries

Max. discharge current	28	43	56	85	113
Number of battery	12V 32PCS or 2V 192PCS (each string)				
Nominal battery voltage	384VDC				
Float charge voltage	432VDC				
Charge current	6-30A adjustable				

Overall Specifications

Weight without battery	200	220	245	290	360
Dimensions(W*H*D)	730*455*1177 mm				720*565*1140 mm
Communications	Rs232, Rs485, Dry contact, EPO and SNMP slot options				
Ambient temperature	0-40°C for UPS, and recommended temperature for battery +20°C~+25°C				
Relative humidity	0-95 non-condensing				
Color	Dark grey				
Noise level at 1m	60dB				
IP rating	IP20				
ECO mode efficiency	Up to 98%				
Display	7-inch touch screen				
Operation altitude	<1000m; higher than 1000m, every 100m will result in 1% power lose, Max. 4000m				
Standards	EMC directive: 2014/30/EU, LVD directive: 2014/35/EU EN IEC 62040-1: 2008 EN IEC 62040-2: 2018 EN61000-3-2				

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Technical parameters for 3ph in 3ph out models

Model	CPX50KVA	CPX60KVA	CPX70KVA	CPX80KVA	CPX100KVA	CPX120KVA	CPX160KVA	CPX200KVA
Input								
Rated voltage(V)	380/400/415V Three-phase+N+G							
AC input range	380VAC±20%							
Input frequency	45Hz~55Hz or 55Hz~65Hz							
Bypass								
Rated voltage(V)	380/400/415V Three-phase+N+G							
Frequency	45Hz~55Hz or 55Hz~65Hz							
Output								
Nominal power(kVA)	50KVA	60KVA	70KVA	80KVA	100KVA	120KVA	160KVA	200KVA
Active power(kW)	40/45	48/54	56/63	64/72	80/90	96/108	128/144	160/180
Number of phases	3							
Rated voltage(V)	380/400/415V Three-phase+N+G							
Static stability	±1%							
Dynamic stability	<±5% in 10msec							
Voltage distortion	<3% with linear load/ <5% with non-linear load							
Crest factor	3:1							
Frequency stability	0.05% (on battery)							
Frequency	50Hz/60Hz±0.1% (battery mode)							
Overload	110% for 60 min; 125% for 10 min; 150% for 1min.							
Balanced load Vol.	<±1%; <±5% for unbalanced load							
Waveform	Pure sine wave							
Inverter efficiency	93%							

Batteries

Max. discharge current	145	173	202	225	272	326	435	544
Number of battery	12V 32PCS or 2V 192PCS (each string)				12V 33PCS or 2V 198PCS (each string)			
Nominal battery voltage	384VDC				396VDC			
Float charge voltage	432VDC				446VDC			
Charge current	6-30A adjustable							

Overall Specifications

Weight without battery	450	560	645	780	850	930	1050	1400
Dimensions(W*H*D)	790*660*1550 mm			1100*900*1500 mm			1210*875*1680 mm	
Communications	Rs232, Rs485, Dry contact, EPO and SNMP slot options							
Ambient temperature	0-40°C for UPS, and recommended temperature for battery +20°C~+25°C							
Relative humidity	0-95 non-condensing							
Color	Dark grey							
Noise level at 1m	60dB							
IP rating	IP20							
ECO mode efficiency	Up to 98%							
Display	7-inch touch screen							
Operation altitude	<1000m; higher than 1000m, every 100m will result in 1% power lose, Max. 4000m							
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