The British Power Conversion Company

PowerTower 300 Series

Three Phase Online Double Conversion UPS

Advanced Modular Redundant Power Protection

The power rating covers from 10kVA to 600kVA which delivers the best of combination of reliability, functionality, hot-swappable and flexibility at a competitive price. It is designed specifically for data centres, computer systems or critical equipments. As the result of state of the art design, this innovative and reliable power system absolutely commits to meet the market requirements.

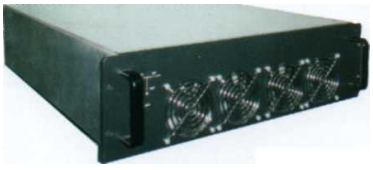
PowerTower modular UPS combines the latest IGBT three-level technology together with DSP control arithmetic. Along with high input power factor, low THDi and high system efficiency, this product achieves very high load adaptability for all kinds of load. The modular design ensures reliable and trouble free operation for the critical loads. Power expansion is very easy to achieve by adding power modules to the system and reach 600kVA power in a single frame. It is possible to connect frames in parallel in order to reach higher power ratings.

10x module Cabinet

6x module Cabinet

3x module cabinet with internal battery trays

20x module Cabinet



10kVA, 20kVA, 25kVA & 30kVA modules

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Modular Construction Design

Each power module is designed to be hot swappable which makes the power expansion and system maintenance easy. Each module is controlled independently, thus avoiding single point failure risk.

Easy Operation and Installation

PowerTower offers flexibility to install that reduces installation time. Consequently, it is very easy to maintain and control that provides the highest reliability and best protection for supplying power.

Intelligent Battery Management

Each UPS module builds in with super charger and the power reaches 3200kW. With 10 installed UPS modules, the total charging power rating is up to 32kW. The charger is controlled by DSP with intelligent digital arithmetic thus to prolong the life time of the battery.

Intelligent Protection System

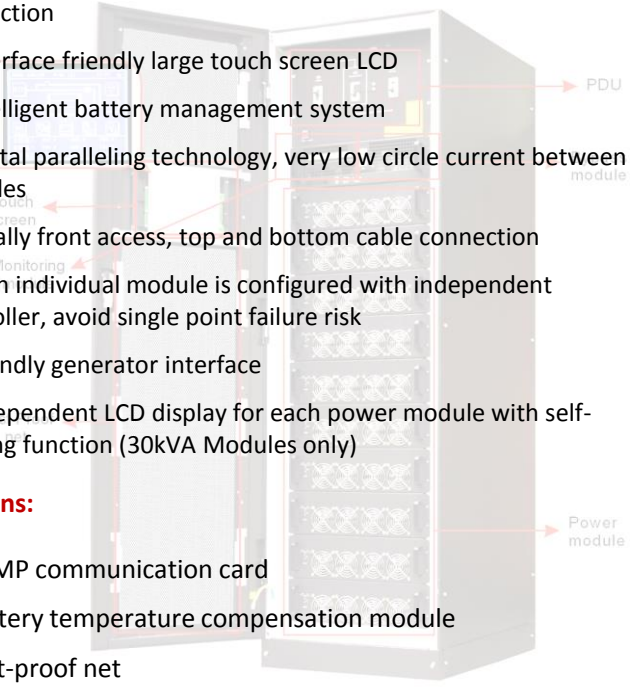
All power modules are protected simultaneously by the hardware and software.

High Reliability Design

Low loss integrated three level IGBT modules help to increase system efficiency but the reliability is significantly increased.

Features:

- Green and Energy saving AC/AC efficiency. High input power factor (>0.99), low input THDi (<3%)
- Strong load adaptability for linear and nonlinear load
- Intelligent module and system protection design
- Incredible low noise system design
- Double DSP controller for individual power module
- Digital control for the whole parts including rectifier, inverter, charger and discharger
- IGBT modules rather than discrete components are applied in the power module
- Battery cold start module
- Smart sleeping mode for energy saving and prolong the lifetime of the battery
- All PCB with conformal coating
- Built-in switch for cabinet input, output and maintenance connection
- Interface friendly large touch screen LCD
- Intelligent battery management system
- Digital paralleling technology, very low circle current between modules
- Totally front access, top and bottom cable connection
- Each individual module is configured with independent controller, avoid single point failure risk
- Friendly generator interface
- Independent LCD display for each power module with self-starting function (30kVA Modules only)



Options:

- SNMP communication card
- Battery temperature compensation module
- Dust-proof net
- Parallel kit

Technical Specification

The British Power Conversion Company

MODEL	PT360HSB	PT360K	PT3100K	PT3120K	PT3200K
Power Rating kVA *	60kVA	60kVA	100kVA	120kVA	200kVA
INPUT					
Input Voltage	380V/400V/415V (line to line), 220V/230V/240V (line to neutral)				
Input Frequency	50/60Hz				
Power Factor	>0.99				
Input Current THD (Total Harmonic Distortion)	<3%				
Input Voltage Window	-40% ~ +25%				
Frequency Window	40-70HZ				
OUTPUT					
Output Voltage	380V/400V/415V (line to line), 220V/230V/240V (line to neutral)				
Voltage Precision	±0.5% (balance load), ±1% (unbalance load)				
Voltage THD (Total Harmonic Distortion)	THD<1.5% (linear load), THD<3% (nonlinear load)				
Power Factor	0.8				
Phase Tolerance	120° ±0.5% (balance and unbalance load)				
Crest Factor	3:1				
Overload Capability	105%, long time operation / 110%, transfer to bypass after 1 hour / 125%, transfer to bypass after 10 minutes / 150%, transfer to bypass after 1 minute / >150%, transfer to bypass after 200ms				
BATTERIES					
Battery Voltage	± 240VDC With internal batteries	± 240VDC			
Charger Power	20% Power				
Charger Voltage Precision	±1%				
BYPASS					
Bypass Voltage	380V/400V/415V (line to line), 220V/230V/240V (line to neutral)				
Bypass Voltage Window	-20% ~ + 15%, full load				
Bypass Overload Capability	125%, long time operation / 120%<load<130%, last for more than 1 hour / 130%<load<150%, last for more than 6 minutes / >1000%, last for more than 100 ms				
GENERAL					
System / Battery Mode Efficiency	Normal mode: 95% ECO mode: 99% / Battery mode 95%				
Display	LCD + LED, touch screen and keyboard				
IP Rating	IP20				
Interface (Communication Ports)	RS232, RS485, Dry contacts, SNMP card, EPO, Generator interface				
Installation / Connection	Top or bottom cable connection				
Operation/Storage Temperature	0-40 °C / -25°C ~ 70°C				
Relative Humidity	0-95% (non-condensing)				
Acoustic Noise at 1m Distance	<55dB				
Dimensions (mm) W x D x H / Weight (kgs)	3 module cabinet 600x900x1600 / 150kgs	6 module cabinet 600x900x1600 / 150kgs	10 module cabinet 600x900x2000/ 180kgs	6 module cabinet 600x900x1600 / 150kgs	10 module cabinet 600x900x2000/ 180kgs
	20kVA modules 440 x 600 x134 / 22kgs	10kVA modules 440 x 600 x 134 / 20kgs each		20kVA modules 440 x 600 x134 / 22kgs	

MODEL	PT180K	PT3250K	PT3300K	PT3500K	PT3600K
Power Rating kVA *	180kVA	250kVA	300kVA	500kVA	600kVA
INPUT					
Input Voltage	380V/400V/415V (line to line), 220V/230V/240V (line to neutral)				
Input Frequency	50/60Hz				
Power Factor	>0.99				
Input Current THD (Total Harmonic Distortion)	<3%				
Input Voltage Window	-40% ~ +25%				
Frequency Window	40-70HZ				
OUTPUT					
Output Voltage	380V/400V/415V (line to line), 220V/230V/240V (line to neutral)				
Voltage Precision	±0.5% (balance load), ±1% (unbalance load)				
Voltage THD (Total Harmonic Distortion)	THD<1.5% (linear load), THD<3% (nonlinear load)				
Power Factor	0.9				
Phase Tolerance	120° ±0.5% (balance and unbalance load)				
Crest Factor	3:1				
Overload Capability	105%, long time operation / 110%, transfer to bypass after 1 hour / 125%, transfer to bypass after 10 minutes / 150%, transfer to bypass after 1 minute / >150%, transfer to bypass after 200ms				
BATTERIES					
Battery Voltage	± 240VDC With internal batteries	± 240VDC			
Charger Power	20% Power				
Charger Voltage Precision	±1%				
BYPASS					
Bypass Voltage	380V/400V/415V (line to line), 220V/230V/240V (line to neutral)				
Bypass Voltage Window	-20% ~ + 15%, full load				
Bypass Overload Capability	125%, long time operation / 120%<load<130%, last for more than 1 hour / 130%<load<150%, last for more than 6 minutes / >1000%, last for more than 100 ms				
GENERAL					
System / Battery Mode Efficiency	Normal mode: 95% ECO mode: 99% / Battery mode 95%				
Display	LCD + LED, touch screen and keyboard				
IP Rating	IP20				
Interface (Communication Ports)	RS232, RS485, Dry contacts, SNMP card, EPO, Generator interface, USB				
Installation / Connection	Top or bottom cable connection				
Operation/Storage Temperature	0-40 °C / -25°C ~ 70°C				
Relative Humidity	0-95% (non-condensing)				
Acoustic Noise at 1m Distance	<72dB @ full load, <68dB @ 45% load				
Dimensions (mm) W x D x H / Weight (kgs)	6 module cabinet 600 x 1050 x 2000 660kgs	10 module cabinet 600 x 1050 x 2000 / 660kgs	10 module cabinet 600 x 1050 x 2000 / 660kgs	20 module cabinet 2000 x 1050 x 2000 / 660kgs	20 module cabinet 2000 x 1050 x 2000 / 660kgs
	30kVA modules 640 x 790 x 134 / 34kgs	25kVA modules 640 x 790 x 134 / 32kgs	30kVA modules 640 x 790 x 134 / 34kgs	25kVA modules 640 x 790 x 134 / 32kgs	30kVA modules 640 x 790 x 134 / 34kgs