

MicroMate®

Uninterruptible Power Supply Systems



ZBL CRT Series

Convertible Rackmount / Tower (CRT)

High Frequency Online UPS



Personal
Computers



Telecom



Industry



Traffic



Medical

1KVA to 10KVA
(1 Ph in / 1 Ph out)

and

10KVA to 20KVA Configurable
(1 Ph in / 1 Ph out)
(3 Ph in / 1 Ph out)
(3 Ph in / 3 Ph out)

Product snapshot:

Model: 1-10KVA and 10-20KVA

Nominal Voltage (3-ph): 380/400/415VAC

Nominal Voltage (1-ph): 220/230/240VAC

Nominal Frequency: 50/60Hz

Output Power Factor: 1.0

Stable and Reliable, Comprehensive Protection

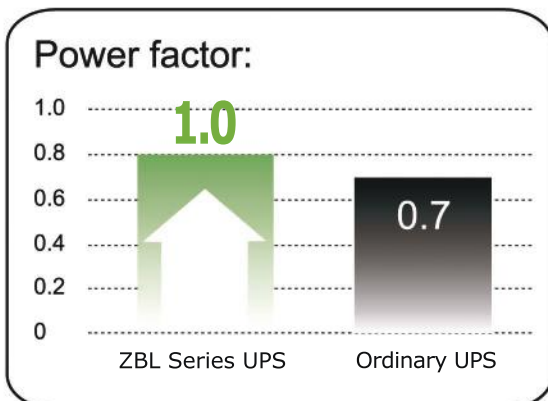
Convertible Rackmount / Tower (CRT) online intelligent UPS, employs DSP all-digital control technology, with more excellent output index and multiterm innovation design, is able to provide full protection for high-performance computer servers, internet equipments, telecommunication systems, industrial process, Internet Data Center (IDC) and other electronic equipments. The rackmount and tower conversion function design greatly improve the UPS adaptability.

Key Features

- Large LCD display interface in English, user-friendly;
- **Rack-Tower convertible**;
- With ECO operation mode, it can be highly efficient, energy-saving and cost-reducing;
- Double-conversion online design with inherently built-in voltage regulator, noise filter and pure sine wave output;
- Its cut-edge digital technology of DSP (Digital Signal Professor) can greatly improve the products performance and system reliability, and deliver a compact integration with higher power density;
- 19 inch standard cabinet & battery cabinet;
- 50Hz / 60Hz frequency converter mode
- Emergency power off function (EPO)
- Wide range of input voltage.
- Configurable 10KVA to 20KVA.

Tailored for Grid Environment

- Output power factor up to 1.0 - applicable to the tendency of future load evolution, and deliver higher payload capacity;
- Total efficiency of more than 95% can minimize the power loss of UPS and utilization cost;
- Active power factor correction (PFC) technology allows the input power factor approaching to 1, dramatically reducing the immunity on utility grid;
- Wider range of input voltage tailored for all severe environments;
- Excellent input frequency range makes UPS suitable for different power supply devices such as generator set.
- Support lithium battery and BMS



Comprehensive and Reliable Protection

- Self-diagnostic function during power boot-up;
- Static internal bypass function;
- DC cold start function;
- Under-voltage protection, output overload and short circuit protection, inverter over-temperature protection, battery voltage warning protection and battery overcharge protection greatly ensure the system stability and reliability;

Rack-Tower convertible

- **Rack-Tower convertible**;
- Unique rotational angle LCD screen patented design allows for the perfect match tower / rack conversion installation mode. The user can select the orientation of LCD Screen text display for tower model / rackmount model via the function buttons on the panel.

Compact Design, Lower Noise

- With leading control technology and craftsmanship, the UPS greatly increase power density and reduce footprint, therefore it is designed to save more valuable space. In addition, its lower noise during operation ensure a more comfortable working environment.

Advanced Operating Mode

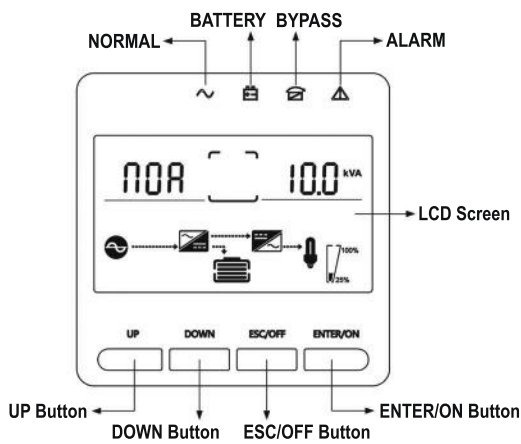
- Double-conversion online design with phase-locked regulator to provide more comprehensive and perfect protection;
- Zero transfer time to meet the high requirement for power standards;
- Input power factor correction (PFC) technology with input power factor higher than 0.98 completely eliminates the harmonic pollution on utility grid.

User-friendly interface

- LCD display shows accurately UPS working information and status. The output voltage, output frequency as well as ECO mode can be set on the front panel, convenient for the user to operate the UPS.



1-3KVA and 10-20KVA LCD display information



6-10KVA LCD display information

Various Choices and Intelligent Management

- Large LCD display showing loading level and battery level, input and output data for the ease to operate and maintain;
- The RS232 interface is standard, free local monitoring software is provided;
- USB communication port card is optional. In addition to the fixed USB interface, there is a choice for Goldfinger snap-gauge structure port interface;
- SNMP card is optional. SNMP can realize the Ethernet TCP/IP communication for remote monitoring. SNMP is also Goldfinger snap-gauge structure ready;
- Dry contact function card is optional. Dry contact card can alert the user about abnormal UPS status. These signals may be used to control other equipment.

DSP Full-digital Control

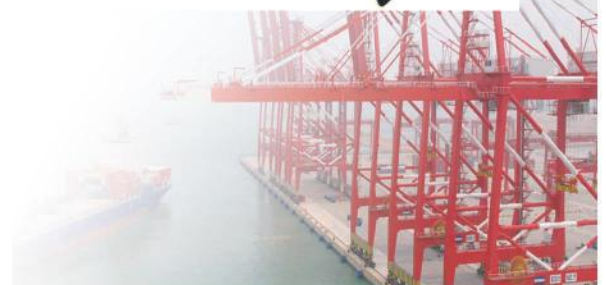
- Fully digital control to avoid the analog device failure risks and increase the system stability.

Flexible Configuration on Demand

- Extensive expansion capabilities to meet customer's requirements;
- Online maintenance function while continuously providing the power to the loads;
- Support EPO. In the event of an emergency, users can shut off UPS rapidly;
- Optional Parallel Kit: realize the parallel extension and redundancy function and offer more flexibility and safety for future power requirement planning;
- Optional Isolation Transformer: provide isolation protection.

Intelligent Power monitoring and Management Software

- Support Microsoft Windows 95 / Me / NT / 2000 / XP / 7 / 8 / Linux operating system;
- Support TCP/IP network monitoring: provide a hierarchical directory structure management network; unusual event to user through broadcast, email, messenger notifications call or mobile messenger;
- Support timing boot-up / shut-off UPS function;
- Support timing UPS self-test function;
- Support graphically displayed UPS status function in real time;
- Support network to deactivate the function of multiple servers and workstations;
- Support Smart Event function;
- Support proper shut-off for most application software and saving related document;
- Support for English and multi-language platform;
- Support the online help function with data records (including AC mains, UPS, load, battery) and event function for the ease of system administrators to conduct the routine maintenance.



ZBL CRT Series Convertible Rackmount / Tower Online UPS

1KVA to 10KVA: (1 Ph in / 1 Ph out)

Technical Specifications

Model	ZBL1KCRT-11	ZBL1KCRTS-11	ZBL2KCRT-11	ZBL2KCRTS-11	ZBL3KCRT-11	ZBL3KCRTS-11	ZBL6KCRT-11	ZBL6KCRTS-11	ZBL10KCRT-11	ZBL10KCRTS-11
Capacity	1KVA / 1000W		2KVA / 2000W		3KVA / 3000W		6KVA / 6000W		10KVA / 10000W	
Nominal Voltage	220 / 230 / 240VAC Single phase 2 wire + E									
Nominal Frequency	50Hz / 60Hz									
Input										
Voltage Range	110~300VAC @ 60% load, 160~300VAC @ 100% load						120~276VAC			
Frequency Range	40 ~ 70Hz						50Hz: (45 ~ 55Hz) ; 60Hz: (54Hz ~ 66Hz)			
Power Factor	≥ 0.99									
Output										
Voltage Precision	220 / 230 / 240 ±1%VAC									
Frequency Precision	50 / 60Hz ±0.1Hz									
Power Factor	1.0									
Harmonic Distortion	Linear load ≤ 2% , Non-linear load ≤ 4%						Linear load ≤ 2% , Non-linear load ≤ 5%			
Overload Capacity	load > 110% for 60s ; load > 130% for 30s ; load > 150% for 1s .						load > 125% for 90s ; load > 150% for 10s .			
Current Crest Ratio	3 : 1									
Transfer Time	0ms (AC mode to DC mode) ; < 1ms (AC mode to Bypass mode)									
Efficiency	≥ 93%									
Outlets	8 x IEC 60320 C13				8 x IEC 60320 C13 and 1 x IEC 60320 C19		Terminal blocks			
Battery										
DC Voltage	24/36VDC (Factory presetable)		72VDC		96VDC		96/108/120VDC (Factory presetable)			
Recharge Time	4 hours to 90% full charge after a completely discharge (for models with built-in batteries only)						6~8 hours to 90% full charge after a completely discharge (for models with built-in batteries only)			
Charging Current	1A or 2A	12A _{max}	1A or 2A	12A _{max}	1A or 2A	12A _{max}	1A	10A _{max}	1A	10A _{max}
Panel Display										
LCD	UPS status, input / output voltage and frequency, battery voltage, capacity, adjust voltage, ECO mode									
Communication										
Communication Port	USB port, RS232, Parallel Kit (Optional), SNMP card (optional), Dry Contact (Optional), ECO Kit (Optional)									
Working Environment										
Temperature	0°C ~ 40°C									
Relative Humidity	0 ~ 95% (Non-condensing)									
Storage Temperature	-25°C ~ 55°C									
Elevation	< 1500m									
Noise Level	< 50dB @ 1m						< 55dB @ 1m			

Physical Specifications

Model	Capacity	Dimension (W*D*H) mm ³	N.W (KGS)
ZBL1KCRT-11	1KVA / 1000W	440 x 325 x 86.5	11.3
ZBL2KCRT-11	2KVA / 2000W	440 x 600 x 86.5	26.1
ZBL3KCRT-11	3KVA / 3000W	440 x 750 x 86.5	33.3
ZBL6KCRT-11	6KVA / 6000W	440 x 625 x 86.5	13.0
ZBL10KCRT-11	10KVA / 10000W		15.0
ZBL1KCRTS-11	1KVA / 1000W	440 x 325 x 86.5	5.6
ZBL2KCRTS-11	2KVA / 2000W	440 x 460 x 86.5	8.3
ZBL3KCRTS-11	3KVA / 3000W	440 x 600 x 86.5	8.6
ZBL6KCRTS-11	6KVA / 6000W	440 x 625 x 86.5	14.1
ZBL10KCRTS-11	10KVA / 10000W		15.5
External Battery Module (EBM)			
BB24RT	24VDC 9AH 2 x 2	440 x 430 x 86.5	17.4
BB36RT	36VDC 9AH 3 x 2	440 x 430 x 86.5	22.5
BB48RT	48VDC 9AH 4 x 2	440 x 552 x 86.5	28.5
BB72RT	72VDC 9AH 6 x 2	440 x 720 x 86.5	41.1
BB96RT	96VDC 9AH 8 x 1	440 x 552 x 86.5	28.5
BB192RT	192VDC 9AH 16 x 1	440 x 720 x 131	60.5
BB240RT	240VDC 9AH 20 x 1	440 x 600 x 131	70.0

STANDARD: Conform to GB / IEC regulation: EMC: GB7260.0 / IEC62040-2 GB / 17626.2~5 / IEC61000-4-2~5 SAFETY: GB4943

NOTE: Product specifications are subject to change without further notice

ZBL CRT Series Convertible Rackmount / Tower Online UPS
10KVA to 20KVA Configurable
 (1 Ph in / 1 Ph out)
 (3 Ph in / 1 Ph out)
 (3 Ph in / 3 Ph out)

Technical Specifications

Model		ZBL10KCRTS-CF	ZBL15KCRTS-CF	ZBL20KCRTS-CF
Configurable Models	1-Ph / 1-Ph	ZBL10KCRTS-11	ZBL15KCRTS-11	ZBL20KCRTS-11
	3-Ph / 1-Ph	ZBL10KCRTS-31	ZBL15KCRTS-31	ZBL20KCRTS-31
	3-Ph / 3-Ph	ZBL10KCRTS-33	ZBL15KCRTS-33	ZBL20KCRTS-33
Capacity		10KVA / 10KW	15KVA / 15KW	20KVA / 20KW
Nominal Voltage	1-Ph	220 / 230 / 240VAC (1 Ph+E)		
	3-Ph	380 / 400 / 415VAC (3 Ph+N+PE)		
Nominal Frequency		50 / 60Hz		
Input				
Voltage Range		208 ~ 478VAC		
Frequency Range		40 ~ 70Hz		
Power Factor		≥ 0.99		
Output				
Voltage Precision	1-Ph	220 / 230 / 240 ±1%VAC (1 Ph+E)		
	3-Ph	380 / 400 / 415 ±1%VAC (3 Ph+N+PE)		
Frequency Precision		50 / 60Hz ±0.1Hz		
Power Factor		1.0		
Harmonic Distortion		Linear load ≤ 2% , Non-linear load ≤ 5%		
Overload		load > 110% for 60s ; load > 130% for 30s ; load > 150% for 1s .		
Current Crest Ratio		3 : 1		
Transfer Time		0ms (AC mode to DC mode) ; < 1ms (AC mode to Bypass mode)		
Efficiency		≥ 95%		
Outlets		Terminal blocks		
Battery				
DC Voltage		±192 / 240VDC (Factory presetable)		
Charge Current		18A _{max}	20A _{max}	
Panel Display				
LCD		UPS status, input / output voltage and frequency, battery voltage, capacity, adjust voltage, ECO mode		
Communication				
Communication Port		USB port, RS232, Built-in Parallel Kit, SNMP card (Optional), Dry Contact (Optional), ECO Kit (Optional)		
Working Environment				
Temperature		0°C ~ 45°C		
Relative Humidity		0 ~ 95% (Non-condensing)		
Storage Temperature		-25°C ~ 55°C		
Elevation		< 1500m		
Noise Level		<55dB		<58dB

Physical Specifications

Model	Capacity	Dimension (W*D*H) mm ³	N.W (KGS)
ZBL10KCRTS-CF	10KVA / 10KW	443 x 580 x 131	29
ZBL15KCRTS-CF	15KVA / 15KW		31
ZBL20KCRTS-CF	20KVA / 20KW		32
External Battery Module (EBM)			
BB384RT	±192VDC 9AH 16 x 2	443 x 861.5 x 175	103
BB480RT	±240VDC 9AH 20 x 2		123

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