MicroMate®

Uninterruptible Power Supply Systems

we created...

...the light in the dark

Applications

Local Area Networks (LAN) / PCs
Servers
Data Centers
Internet Centers (ISP / ASP / POP)
Industrial PLCs
Emergency Devices (Lights / Alarms)
Electro-Medical Devices
Telecommunications Devices
Industrial Applications

Industrial Grade

ZC Series

Tower and Rackmount
On-line UPS with Large LCD Display

1~6KVA single / single-phase
10~20KVA single / single and three / single-phase

MicroMate®

We are proud to introduce the upgraded superior **MicroMate ZC Series UPS with LCD display** that can deliver clean, safe and regulated power supply to protect your critical mission equipment, so as to safeguard your valuable equipment and critical data from any abnormal power disturbances, such as surges, blackouts and lightning strikes.

Power capacity for **MicroMate ZC Series UPS with LCD display** is available from 1KVA to 3KVA, and 6KVA to 20KVA.

Rear View: Tower 1KVA

1KVA to 3KVA ZC Series UPS with LCD display

Design Features

- Large blue back light LCD for detailed real-time UPS status display
- Microprocessor control guarantees high reliability
- Communication Ports Selectable: Smart RS-232, Intelligent slot and SNMP Card
- Free power monitoring software for Monitoring UPS Status
- Comprehensive self-protection design
- Audible alarm mute
- Cold start function
- Auto self-testing system while turning on the UPS
- Wide input voltage range
- Standard compliance:
  GB4943 / EN 62040-1-1 (Safety)
  GB7260.2 / EN 62040-2 Class B (Conducted Emission)
  GB7260.2 / EN 62040-2 Class B (Radiated Emission)
  EN 61000-3-2 (Harmonic Current)
  EN 61000-3-3 (Voltage Fluctuations and Flicker)
  EN 61000-4-2 Level 4 (ESD)
  EN 61000-4-3 Level 3 (RS)
  EN 61000-4-4 Level 4 (EFT)
  EN 61000-4-5 Level 4 (Surge)
  EN 61000-2-2 (Immunity to Low Frequency Signals)

Rear View: Tower 2KVA and 3KVA

Tower 2KVA and 3KVA

Rear View: Rackmount 1~3KVA

Rackmount 1~3KVA

Tower 1KVA

MicroMate®

6KVA to 20KVA ZC Series UPS with LCD display

Rear View: Tower 6~20KVA

N + 1 Design Features

MicroMate ZC Series UPS with LCD display for 6KVA to 20KVA adopted a DSP micro-processor and further provide "parallel redundancy" feature.

The main advantage of parallel redundancy is capability integration and extra protection againts power failure. The topology is two or three equel UPS connected in parallel to expand UPS capability.

- Large blue back light LCD for detailed real-time UPS status display
- Microprocessor control guarantees high reliability
- PWM Technology with IGBTs
- Communication Ports Selectable: Smart RS-232, Intelligent slot and SNMP Card
- Free power monitoring software for Monitoring UPS Status
- Comprehensive self-protection design
- Audible alarm mute
- Cold start function
- Remote EPO control
- Auto self-testing system while turning on the UPS
- Wide input voltage range
- Maintenance bypass switch for 6K ~ 20K
- N + X Parallel redundancy and capacity expansion for 6K ~ 20K
- Standard compliance:
  IEC / EN 62040-1-1 (Safety)
  IEC / EN 62040-2 Category C3 (Conducted Emission)
  IEC / EN 62040-2 Category C3 (Radiated Emission)
  IEC / EN 61000-4-2 Level 4 (ESD)
  IEC / EN 61000-4-3 Level 3 (RS)
  IEC / EN 61000-4-4 Level 4 (EFT)
  IEC / EN 61000-4-5 Level 4 (Surge)
  IEC / EN 61000-2-2 (Low Frequency Signals)

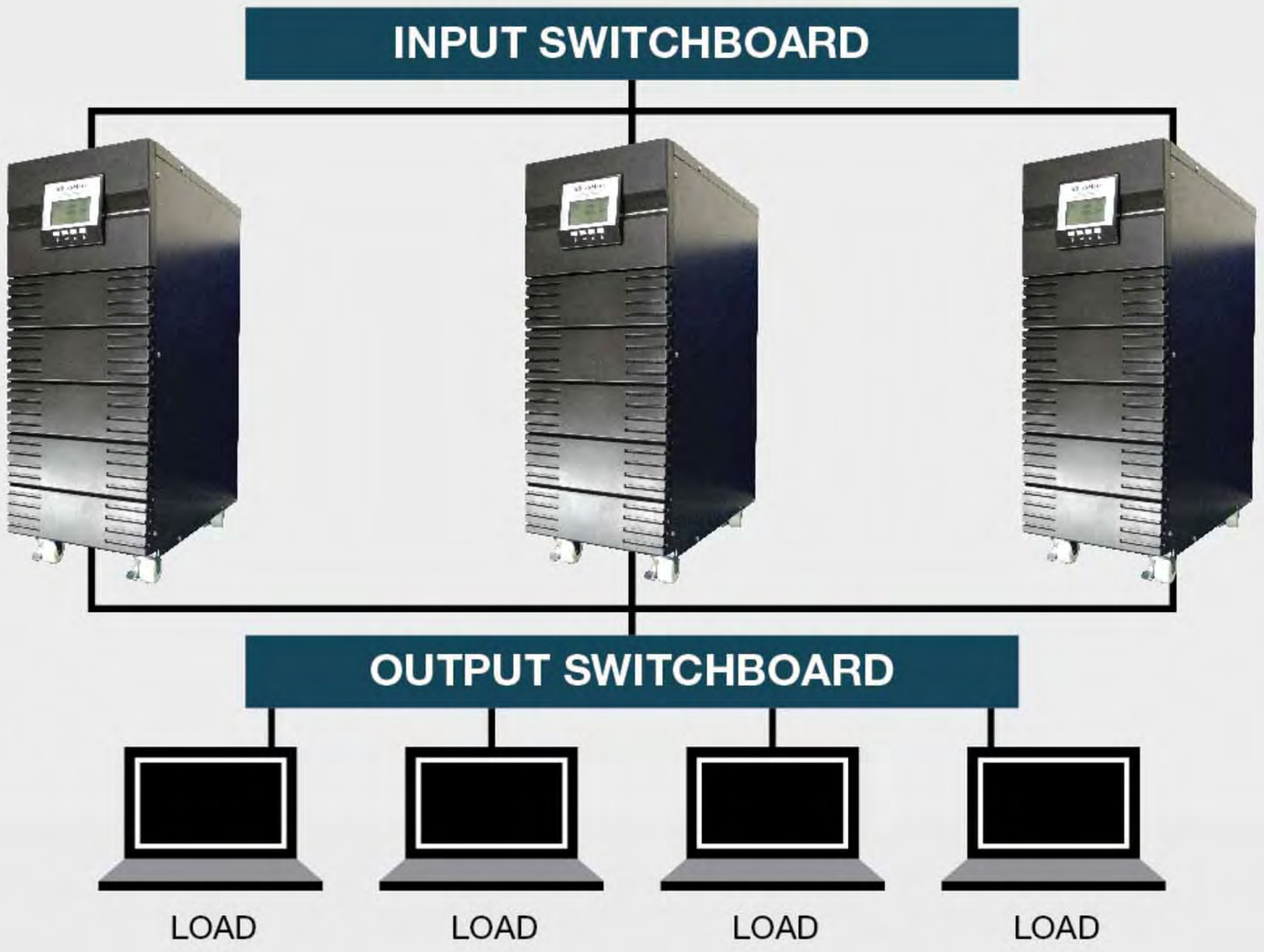
Rear View: Rackmount 6~10KVA

Tower 6~20KVA

Rackmount 6~10KVA

MicroMate®

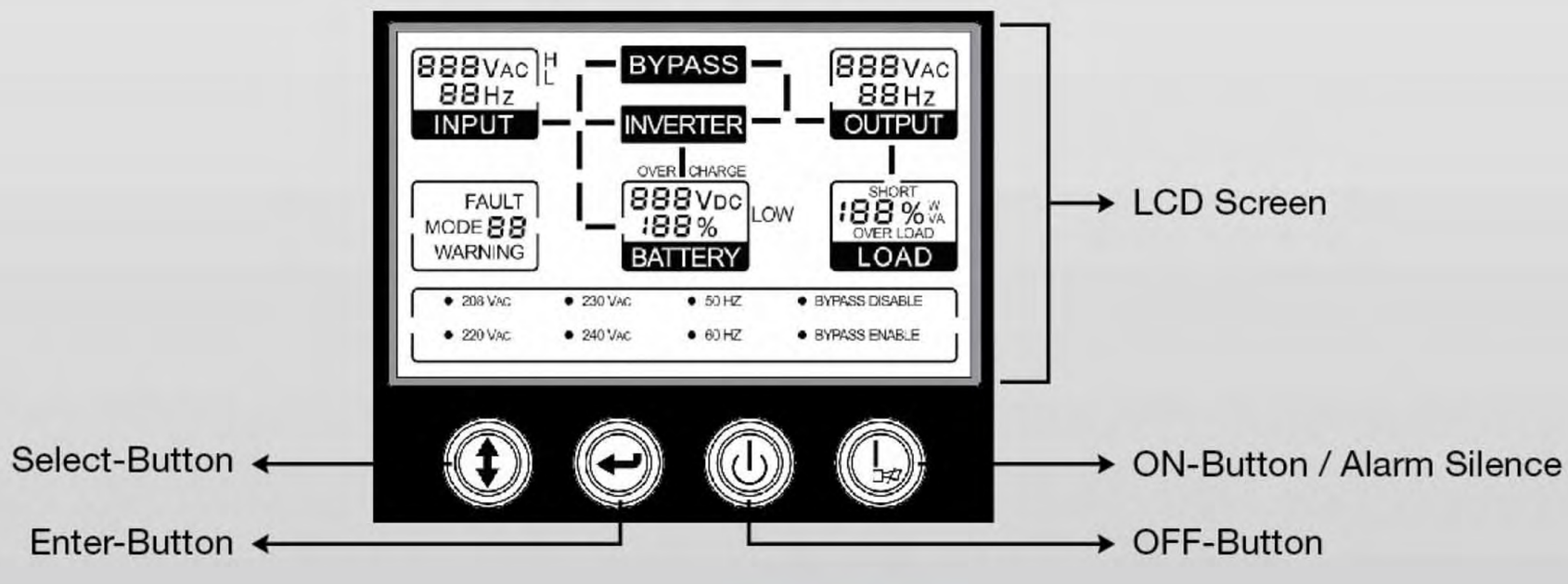
Parallel Redundancy



ZC Series UPS with LCD display for 6KVA to 20KVA in parallel configuration to meet most demanding power requirement. Increase power availability and flexibility.

Parallel Redundancy feature provides economic power solution for system integration. Furthermore, parallel redundancy feature share the load to maximize UPS performance, and more secure UPS continuous operation.

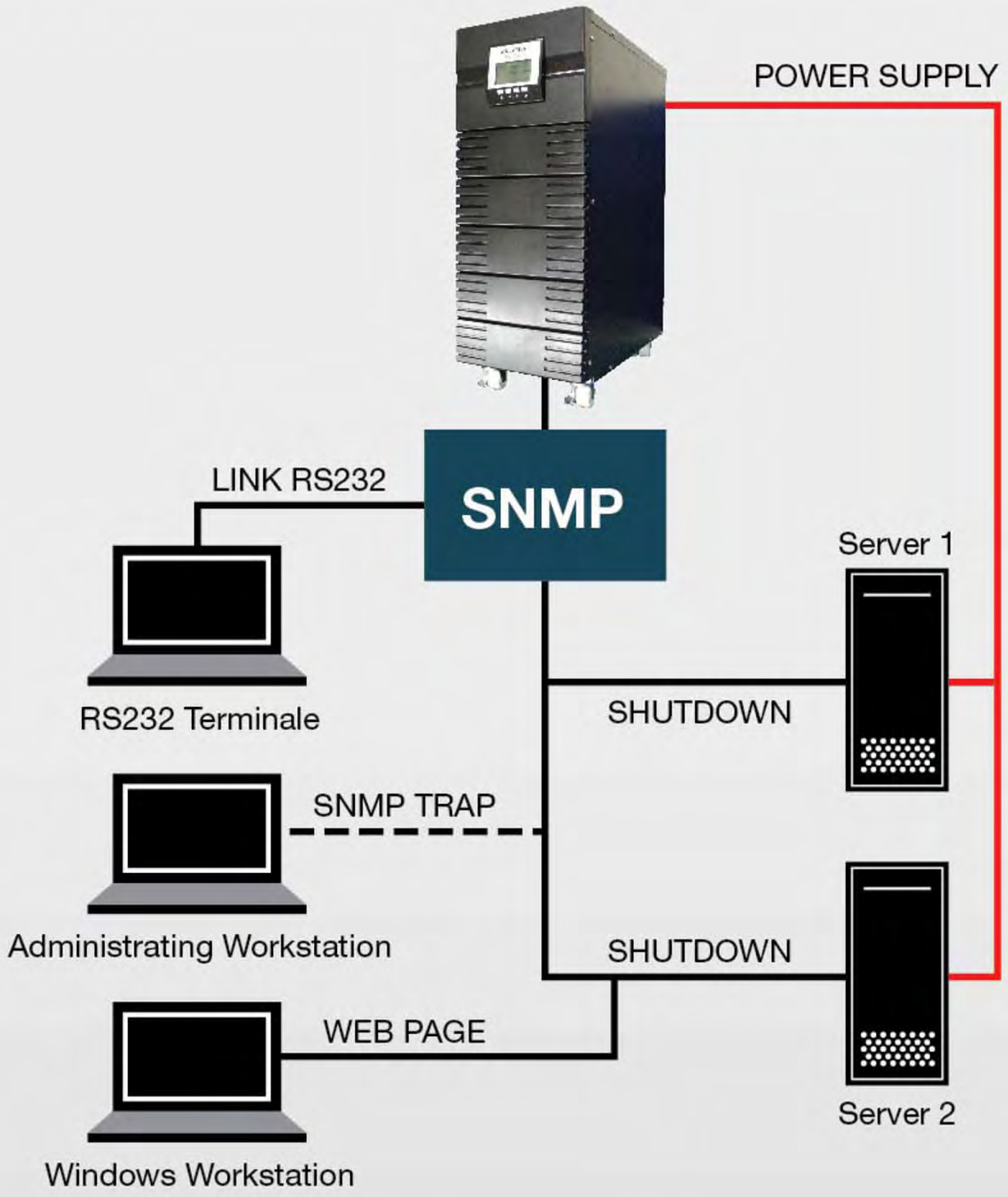
Display Panel



Button	Function
ON Button	Turn on UPS system: By pressing the ON button “I” the UPS system is turned on. Deactivate acoustic alarm: By pressing this button an acoustic alarm can be deactivated.
OFF Button	When mains power is normal, the UPS system switches to Bypass mode by pressing OFF button “⏻”, and the inverter is off. At this moment, if Bypass is enabled, then the output terminals are supplied with voltage via the Bypass if the mains power is available.
Select Button	If the UPS system is in No Output mode or Bypass mode, the output voltage range, frequency range and Bypass disable/enable could be selected by pressing Select button, and confirmed by pressing Enter button.
Enter Button	If the UPS system is in No Output mode or Bypass mode, the output voltage range, frequency range and Bypass disable/enable could be selected by pressing Select button, and confirmed by pressing Enter button.

MicroMate®

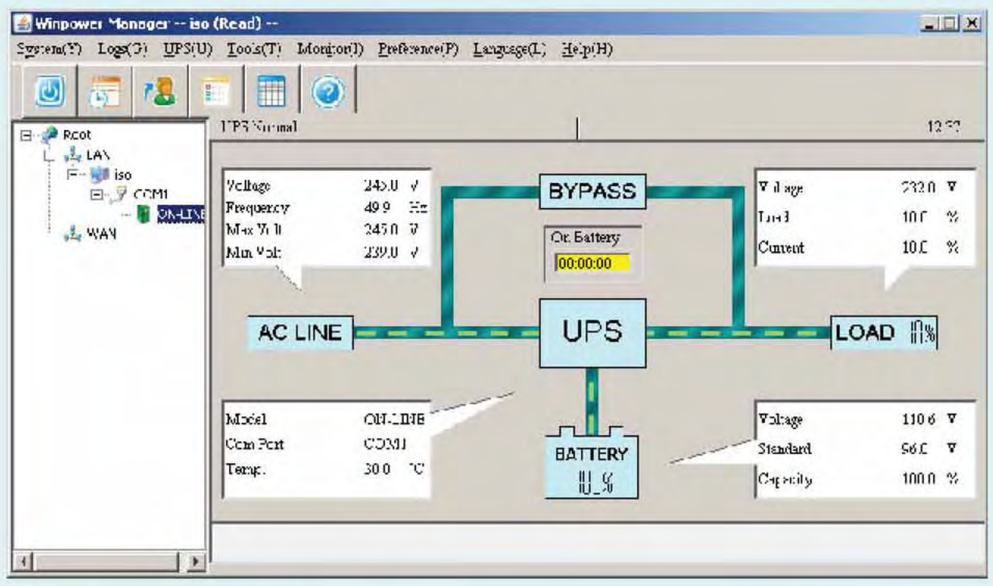
Direct Connection with Ethernet Network



Communication and Power Management Solutions

WinPower CD is packed with UPS, and can also be downloaded from the Internet. It has the function of remote monitor and control UPS through LAN, warning notifications through broadcast and mobile phone, multi-shutdown PCs, and schedule UPS self-test. This unique software provides complete power protection for computer system during power failure. The software supports lots of O/S including Windows Family, Linux, Sun Solaris 7/8/9, Compaq True64, FreeBSD, IBM Aix 4.3x, 5.1x, and HP-UX 11.x. More than that, to offer increased benefits for our customers, we have also released USB version MAC version on the Internet.

- Power flow display for monitoring UPS status
- Scheduled system shutdown / restart
- Scheduled UPS test
- Warning notification via E-mail / Pager
- Warning notification via Broadcast
- Password security protection
- Remote Monitor / Control via LAN
- Multi-language versions: English, Germanic, French, Italian, Spanish, Portuguese and Chinese
- Selectable User Interface (Background)
- UPS Parameter setting
- Record logs for analysis
- Multi-OS supported: Windows Family, Linux, Sun Solaris 7/8/9, IBM Aix 4.3x, 5.1x, Compaq True64, FreeBSD,HP-UX 11.x and MAC



SNMP Network Card allows management of UPS across LAN using any of the main network communication protocols - TCP / IP and network interface via SNMP

MicroMate®

Technical Specification

ZC Series On-line UPS: 1KVA to 3KVA

Model (Tower)	ZC1K-11	ZC2K-11	ZC3K-11
Model (Rackmount)	ZC1KR-11	ZC2KR-11	ZC3KR-11
Capacity	1000VA	2000VA	3000VA
INPUT			
Nominal Voltage	220 / 230 / 240V		
Voltage Range	180 ~ 300Vac		
Frequency	50Hz: 46 ~ 54Hz; 60Hz: 56 ~ 64Hz		
Power Factor	≥ 0.95		
OUTPUT			
Voltage	220 / 230 / 240V		
Voltage Regulation	± 2%		
Power Factor	0.7 / 0.8 / 0.9		
Output Power	700 / 800 / 900W	1400 / 1600 / 1800W	2100 / 2400 / 2700W
Frequency	Synchronization range (line mode); 50 or 60 x (1 ± 0.2%)Hz (Battery mode)		
Current Crest Ratio	3 : 1		
Voltage Distortion	≤ 3% THD (Linear Load) ≤ 4% THD (Non-Linear Load)	≤ 3% THD (Linear Load) ≤ 5% THD (Non-Linear Load)	
Output Waveform	Pure Sinewave		
BATTERY / CHARGER			
Battery Type	12V / 7.2Ah or 12V / 9Ah		
Number of Batteries	3	8	8
Backup Time (Full / Typical Load)	11 ~ 22 mins	15 ~ 30 mins	10 ~ 20 mins
Recharge Time	5 hrs to 90%		
Charging Current (Max.)	1.0A		
* ***Optional*** Enhanced Charger Current (S Model, without battery fitted)	8A		
Charging Voltage	41.1Vdc ± 0.6V	110Vdc ± 0.4V	
TRANSFER TIME			
AC to DC	Zero		
Inverter to Bypass	2.5ms (Typical)		
DISPLAY / INTERFACE			
Status & Indication	Load Level / Battery Level / Battery Mode / AC Mode / Bypass Mode / Fault		
Audible Alarm	Battery Mode : Sounding every 4 seconds Low Battery : Sounding every second Overload : Sounding twice every seconds Fault : Continuously sounding		
Communication Software	Smart RS232 Software support Windows family, Linux, Sun Solaris, IBM Aix, Compaq True64, SGI IRIX, FreeBSD, HP-UX and MAC		
Optional	SNMP Card for power management from SNMP manager and web browse USB for Windows family and Mac OS		

PHYSICAL DATA SHEET				
Dimension (W x D x H) mm	Tower	145 x 400 x 220	192 x 460 x 340	
	Rackmount	Standard with built-in batteries = 447 x 600 x 130 (3U)		
		S-Model UPS Module = 447 x 450 x 89 (2U) + Battery Bank = 447 x 450 x 89 (2U)		
Weight (KG) Standard with Batteries	Tower	14	34.5	35.5
	Rackmount	18.5	32.5	33.5
Weight (KG) S-Model without Batteries	Tower	7	15	16
	Rackmount	15.5	16.5	16.5
Operation Temperature		0 ~ 50°C		
Relative Humidity		0 ~ 95% (Non-condensing)		
Noise Level		< 45dB @ 1 meter		< 50dB @ 1 meter

* UPS with enhanced charger (S Model) has no internal batteries

Note: UPS specifications and data may subject to change for improvement without prior notice

MicroMate®

Technical Specification

ZC Series On-line UPS: 6KVA to 20KVA

Model (Tower)	ZC6K-11	ZC10K-11	ZC10KS-31	ZC15KS-31	ZC20KS-31
Model (Rackmount)	ZC6KR-11	ZC10KR-11	ZC10KRS-31	N.A.	
Capacity	6KVA	10KVA		15KVA	20KVA
INPUT					
Voltage	220 / 230 / 240V		380 / 400 / 415V		
Low Line Transfer	176Vac ± 3Vac		304VAc ± 3Vac		
Low Line Comeback	185Vac ± 3Vac		322Vac ± 3Vac		
High Line Transfer	276Vac ± 3Vac		478Vac ± 3Vac		
High Line Comeback	266Vac ± 3Vac		461Vac ± 3Vac		
Frequency	50Hz: 46 ~ 54Hz; 60Hz: 56 ~ 64Hz				
Power Factor	≥ 0.98		≥ 0.95		
OUTPUT					
Voltage	220 / 230 / 240V				
Voltage Regulation	± 1%				
Power Factor	0.7 / 0.8 / 0.9				
Output Power	4.2 / 4.8 / 5.4KW	7 / 8 / 9KW		10.5 / 12 / 13.5KW	14 / 16 / 18KW
Frequency	Synchronization range (line mode); 50 or 60 x (1 ± 0.05%)Hz (Battery mode)				
Current Crest Ratio	3 : 1				
Voltage Distortion	≤ 2% THD (Linear Load), ≤ 5% THD (Non-Linear Load)				
Output Waveform	Pure Sinewave				
BATTERY					
Battery Type	12V / 7.2Ah or 12V / 9Ah		Depending on the capacity of external batteries		
Number of Batteries	20				
Backup Time (Full / Typical Load)	12 ~ 24 mins	8 ~ 16 mins			
Recharge Time	7 hrs to 90%	8 hrs to 90%			
Charging Current (Max.)	2A				
* ***Optional*** Enhanced Charger Current (S Model, without battery fitted)	4.2A				
Charging Voltage	274Vdc ± 1V				
TRANSFER TIME					
AC to DC	Zero				
Inverter to Bypass	2.5ms (Typical)				
DISPLAY / INTERFACE					
Status & Indication	Load Level / Battery Level / Battery Mode / AC Mode / Bypass Mode / Fault				
Audible Alarm	Battery Mode : Sounding every 4 seconds Low Battery : Sounding every second Overload : Sounding twice every seconds Fault : Continuously sounding				
Communication Software	Smart RS232 Software support Windows family, Linux, Sun Solaris, IBM Aix, Compaq True64, SGI IRIX, FreeBSD, HP-UX and MAC				
Optional	SNMP Card for power management from SNMP manager and web browse USB for Windows family and Mac OS				

PHYSICAL DATA SHEET						
Dimension (W x D x H) mm	Tower	260 x 570 x 717				
	Rackmount	Standard UPS Module = 447 x 600 x 130 (3U) + Battery Bank = 447 x 600 x 130 (3U)			N.A.	
		S-Model UPS Module = 447 x 600 x 130/177 (3/4U) + Battery Bank = 447 x 600 x 130 (3U)			N.A.	
Weight (KG) Standard with Batteries	Tower	90	93	N.A.		
	Rackmount	N.A.				
Weight (KG) S-Model without Batteries	Tower	35	38	38.5	55	55
	Rackmount	36	39	39.5	N.A.	
Operation Temperature	0 ~ 50°C					
Relative Humidity	0 ~ 95% (Non-condensing)					
Noise Level	< 50dB @ 1 meter			< 55dB @ 1 meter		

* UPS with enhanced charger (S Model) has no internal batteries

Note: UPS specifications and data may subject to change for improvement without prior notice

EMERGING COMPANY
BUSINESS OF THE YEAR
MALAYSIA 2005

CRYSTAL WINNER
BUSINESS SUMMIT
MALAYSIA 2007

INTERNATIONAL GOLD STAR
FOR QUALITY AWARD (ISAQ)
GENEVA 2008

KECEMERLANGAN PERNIAGAAN BERETIKA
MINISTRY OF DOMESTIC TRADE
MALAYSIA 2010

CE