



## Mars Intelligent On-line UPS

In today's world we are heavily reliant on technology and the power that drives it. If you do not have the correct protection you are putting your business at risk of downtime, lost data and even component damage. The intelligent Mars series is a cost effective way of meeting your critical power needs and integrated seamlessly into the modern network environment.

- Double Conversion Online Technology
- Unity Input Power Factor
- Single-Chip Microprocessor Control
- Pure Sine Wave Output
- User Friendly Display
- Smart RS232 Communication Interface
- User-friendly Plug and Play Design
- Customer Options Slot
- Matching Battery Cabinet
- Optional Powerful Charger Available



Easy  
Communication



Plug & Play



Extended  
Backup Time



Self-Diagnostics



# Mars Intelligent On-line UPS

## Unity Input Power Factor

Meets today's industry standard for energy saving and low reflected harmonic pollution to the Utility.

## Single-Chip Microprocessor Control

The Mars series uses a field proven MPU to substantially reduce the component count. This provides greater reliability, functionality and smaller size than other designs. Using the latest high frequency techniques and quality components reliability is further increased. High system efficiency is achieved in all operating modes saving electricity.



## User Friendly Display

The front panel clearly communicates all major system parameters and system status including load level, battery remaining and fault status for easy service.



## User Friendly Plug and Play Design

The Mars series can easily be installed by the end user. All units up to 2KVA are supplied with input cables and IEC output cables as standard. For convenience, we also add local sockets in addition to IEC outlets.



## Complete Protection Circuitry

The Mars series was designed with today's technology in mind and is particularly suited to computer and telephony switch mode power supply.

Through careful design, maximum security is provided to the load. In particular the units feature high overload handling without transfer to bypass. Short circuit and over temperature are protected as standard.

The input PFC circuitry can handle very wide range of AC input voltages to avoid the frequent use of Battery energy. Consequently, the system security and battery life can be maximized ensuring that the batteries are available when you need them most... Power failures!

## Customer Options Slot

A true RS232 communication port is supplied as standard with each UPS. This can be used with the software provided or an external SNMP adapter. The options slot allows further flexibility in network configuration. Three cards are available: an internal SNMP card, AS400 card or a true relay card to provide isolated contacts for industrial and remote alarm panel applications.

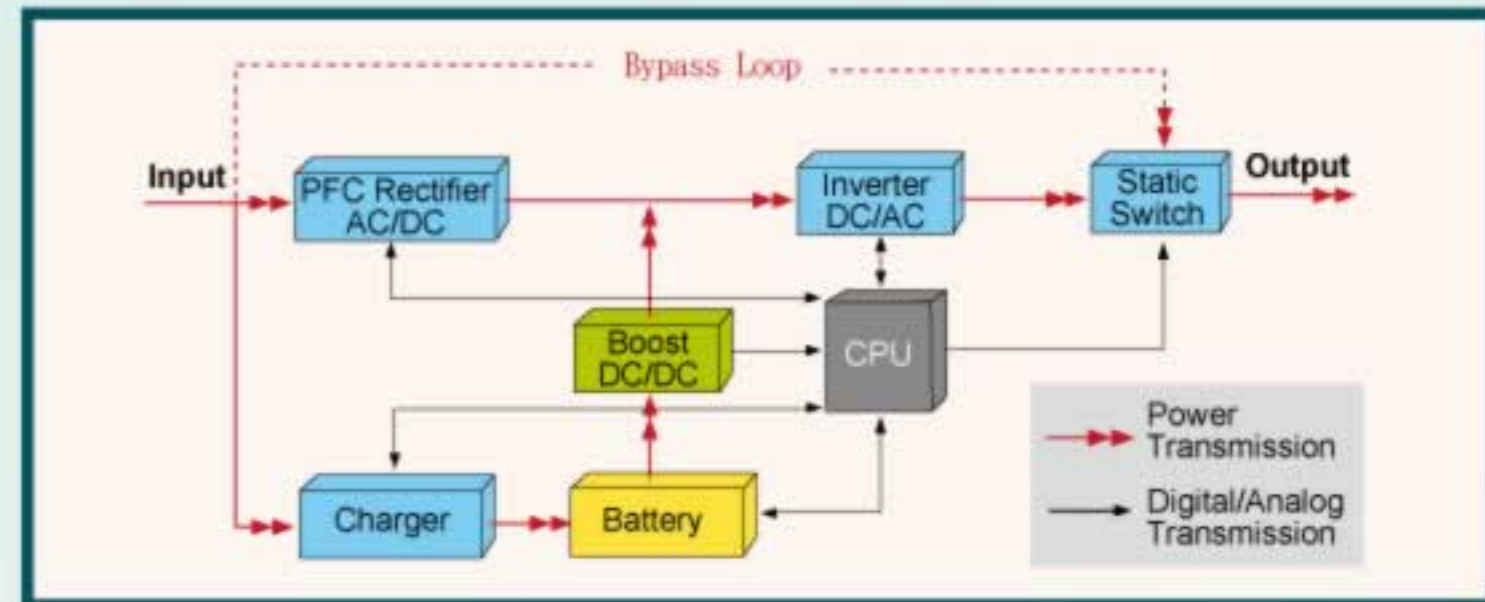






## Double Conversion On-Line Technology

Completely re-generates the utility power to correct the power disturbances in the Mains. The unit provides clean A.C. power 24 hours a day 365 days a year.



## Matching Battery Cabinet

Standard matching battery cabinets are available to easily extend the UPS runtime to several hours.

The battery cabinets are available with their own independent chargers to provide safe and fast recharging.

## Smart Battery Management System (SBM)

Smart battery management system monitors the battery charging and discharging status.

## Communication

The Mars series are all shipped with shutdown software as standard. The software allows not only the control of the UPS and graceful shutdown when the Utility fails, but also allows the user to:

- remotely test the major operating functions of the UPS
- communicate via SNMP/web/network adapter
- access UPS functions via the web
- alert users via SMS messages against specific events

The free software supplied supports Novell Network, Windows 95/98/2000/ME/XP/NT/Vista, Linux and FreeBSD.

Major Unix platforms are available as a cost option.



Easy Communication



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Extended Backup Time



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# Technical Specification

MODEL	MS1000	MS2000	MS3000
<b>INPUT</b>			
Voltage (Vac)	80~140 or 160~280		
Frequency (Hz)	50/60±5%(Auto Sensing)		
Phase	Single		
Input Power Factor	>0.98(Full Load)		
<b>OUTPUT</b>			
Voltage (Vac)	100/110/120/127 or 200/220/230/240		
Capacity (VA/W)	1000VA/700W	2000VA/1400W	3000VA/2100W
Rated Power Factor	0.7		
Load Power Factor Range	0.5 Lagging to Unity within KW rating of unit		
Wave Form	Sine Wave, THD < 3%(no load to full load)		
Voltage Regulation	±2%		
Transient Response (ms)	±4% under full load, change and correct within 60ms		
Frequency Stability	±0.5Hz (Free Running)		
Synchronization	Slew Rate: 1Hz/Sec. Max. Synchronizing Window±5%		
Transfer Time	0 ms		
Crest Factor	3:1		
Efficiency (AC to AC)	up to 88%		
Autonomy	>7min.		
DC Start	Yes		
<b>BATTERY</b>			
Type	Sealed Lead Acid Maintenance Free		
Quantity (pcs)	3	6	8
Voltage(Vdc)	36	72	96
Recharge Time	8 Hours to 90%		
Supplementary Charger	Optional 200W/500W Charger for extended backup application		
<b>DISPLAY</b>			
LED	Utility, Battery Low, Inverter, Bypass, Self-Test, Over Load, Load/Battery Level, and Fault conditions		
Self Diagnostics	Push Button(On demand)		
<b>PROTECTION</b>			
Overload	AC Mode: 1) <105% continuously. 2) 105%~120% delay 50 seconds before switching to bypass. 3) 120%~150% delay 10 seconds before switching to bypass. 4) >150% immediately switching to bypass. Backup Mode: Same delay time as AC mode, then completely shutdown.		
Short Circuit	Hold Whole System		
Overheat	Switch to Bypass		
High Voltage Trip	Switch to Backup Mode		
Battery Low	Alarm and Switch Off		
Noise Suppression	Complies with EN62040-2		
Spike Suppression	Complies with EN61000-4-5		
<b>ALARMS</b>			
Audible and Visual	Line Failure, Battery Low, Transfer to Bypass, Over Load, System Fault Conditions		
<b>PHYSICAL</b>			
Dimensions (WxHxD, mm/inch)	147x223x401/5.8"x8.8"x15.8"	130x365x479/5.1"x14.4"x18.9"	190x365x453/7.5"x14.4"x17.9"
Outlets (NEMA)120Vac	4x5-15R	4x5-15R + 2x5-20R	6x5-15R+2x5-20R
Outlets (IEC/Local) 230Vac	3pcs/1pce	3pcs/2pcs	Terminal/2pcs
Net Weight(Kgs/lbs)	15/33.0	27/59.5	32/70.5
<b>ENVIRONMENT</b>			
Operating Temperature	0°C ~ 40°C / 0°F ~ 140°F		
Temperature Warning	The battery design life is based on a temperature of 25°C / 77°F. Ambient temperature above this range will reduce battery life.		
Altitude	0~2000m/6600ft up to 40°C/104°F, 3000m/9900ft up to 35°C / 95°F		
Humidity	90% RH Maximum, Non-Condensing		
Noise	< 45dB (at 1meter/3.3ft)		
<b>COMPUTER INTERFACE</b>			
Interface Type	Standard RS232		
Communication Slots	Relay Contact Board, SNMP/WEB card, etc.		
Compatible Platforms	Windows 95/98/NT/2000/XP/Vista, Novell NetWare, Linux, etc.		
<b>SAFETY CONFORMANCE</b>			
Quality Assurance	ISO9001 Certified Company		
Safety Standard	EN62040-1-1, UL		
EMC Standard	EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A		
Marks	CE, UL, cUL		

\* Above specifications are subject to change without prior notice



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