

# MAKELSAN®

UPS USER MANUAL

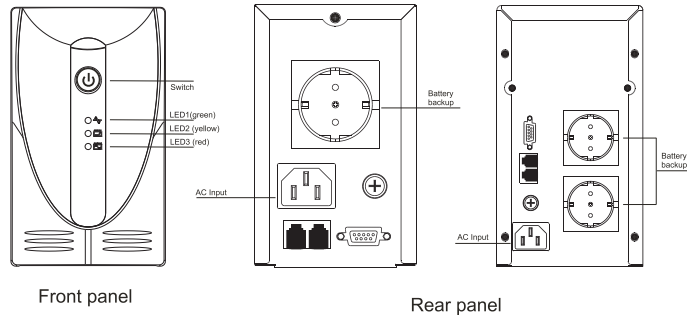
## Army UPS

MAKELSAN®

- |        |                          |
|--------|--------------------------|
| 650VA  | <input type="checkbox"/> |
| 800VA  | <input type="checkbox"/> |
| 1000VA | <input type="checkbox"/> |
| 1400VA | <input type="checkbox"/> |
| 2000VA | <input type="checkbox"/> |



## Front panel and Rear panel



Indicator	Buzzer	Situation
LED 1 (green) illuminates	No sound	Mains normal, mains supply the load
LED 2 (yellow) illuminates	No sound	Mains normal, battery charging
LED 3 (red) illuminates	Beep every 2 second	Mains abnormal, battery supply the load
LED 3 (red) illuminates	Beep every 1 second	Mains abnormal, battery low
LED 3 (red) illuminates	Beep continuously	Battery exhausted, UPS will protect itself and switch off
No LED illuminate	No sound	UPS shutdown

## Installation Procedure

Connect the serial cable to the UPS and computer serial port.  
 Connect the AC plug of UPS into an AC source.  
 Kindly charge UPS battery for 12 hours when plugged into AC source for first time. Turn ON the AC source and switch ON the UPS ON/OFF switch

## Operation

### 3.1.1 Start-up, mains available

Press switch, LED '1' (green) would be continuously on.  
 Then the equipment connected to the UPS can be switched on.

### 3.1.2 Start-up, mains not available

If the mains input is absent (power cord not connected, or mains failure):  
 Press switch, LED '3' (red) would illuminate.  
 The UPS would be on battery mode and discharge the batteries.

### 3.1.2 Switch off

Press switch

## SPECIFICATIONS

### Ratings

Voltage Amperes (VA),:	<b>650VA</b>	<b>800VA</b>	<b>1000VA/1400VA</b>	<b>2000VA</b>
with computer type load				
Watts (W):	360	480	600 / 840	1200
with resistive load				

### Input

AC input voltage window:	165-275V
Input frequency (typical):	50 Hz
Input frequency range:	nominal $\pm 10\%$

### Output

AC output voltage (typical):	220 V
AC output voltage tolerance:	nominal $\pm 10\%$
Output frequency:	50Hz
Output frequency stability:	<0.5Hz (batterymode)
Output waveform:	step sine wave
Power factor:	0.6
Transfer time:	typical 4ms

### Batteries (ratings given for 25 °C)

Nominal voltage (Vdc):	12			
Number x capacity (Ah) of batteries:	1x7	1x9	2x7	2x9
Type:	12V, sealed lead acid, maintenance free			
Service life:	3-5 years (depending on use)			
Battery recharge time for 90% capacity (hours, approximation):	8			
Autonomy: runtime in minutes at full load :	$\geq 3.5$			

### General

Net/gross weight (kg):	6/6.5	7/7.5	13.3/14
Dimensions (hxxwx d, mm):	140x85x340	140x85x340	140x85x340
Enclosure / protection:	steel-plastic / Ip20		

### Environment

Safety:	EN 50091-1-1
Electromagnetic compatibility:	EN 50091-2
Ambient temperature:	-10 to +40°C;
Sound at 1 meter:	<45 dB(A)
Maximum relative humidity:	95% (non-condensing)