



**Su-Kam**  
powered by innovation

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# Line Interactive UPS

LIVE LIFE NON-STOP.

Sine Wave Line Interactive UPS  
Digital UPS



**Su-Kam**  
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# Digital UPS



**SOFT  
MANAGER**



**SOFT  
MANAGER *i***

Digital UPS available from Su-Kam is popularly known as Soft Manager, which is a 600VA/12V LI UPS & is ideal for various applications as mentioned below.

- Personal Computer • Printer • Modem • Security system • Fax machine
- POS (Point of sale) Terminals. • Telecommunication Equipments

# Sine UPS Series (600VA to 3 KVA)



The range available in this category starts from 600VA to 3 KVA. Various models in this category are as under:

- 600VA/12 V Internal Battery(1 x 7.2AH)
- 800VA/12 V With External Battery
- 800VA/24V Internal Battery(2 x 7.2AH)
- 1000VA/24V With External Battery
- 1000VA/24V Internal Battery(2 x 7.2AH)
- 2000VA/48V With External Battery
- 3000VA/48V With External Battery



### Applications:

- Personal Computer • DMP • Modem • EPABX • Fax machine • Telecommunication Equipments
- SOHO- Ideal for small office, home office. • SMB- Small & Medium Business



### Salient Features

- Micro-controller based PWM technology Using MOSFET.
- A highly advanced self-start automatic voltage regulator (AVR).
- A convenient NO Load shutdown at battery mode.
- Very fast change over time.
- An extra wide input voltage control.
- Smart SMPS based battery charger.
- Self start AVR.
- Auto start in case of battery drain/failure.
- Cold Start capable.
- No load shutdown at battery mode with LED indication.
- RS232 interface for UPS monitoring.
- Inbuilt Mobile Charger (With Internal Battery mode).
- Unique insta-mode switch over.
- A highly sophisticated pulse charge.
- Battery deep discharge protection.
- CE certified product.
- Audible alarms.
- Future upgradeability

### Safety Features

- Software Controlled Overload and short circuit protection.
- Battery deep discharge protection.
- An Extra Wide Input Voltage Control.
- Audible warning alarms.

### Salient Features:

- Micro-controller based PWM technology Using MOSFET.
- Pure Sine Wave Output to run PC with other appliances efficiently and noiselessly.
- Wide input AVR range and narrow output window.
- Very fast change over time. Smart SMPS based battery charger with automatic power factor correction.
- Cold Start capable at full load.
- No load shutdown at battery mode.
- RS232 interface for UPS monitoring.
- Inbuilt Mobile Charger (With Internal Battery mode).
- Intelligent thermal management.
- Overload and short circuit protection.
- Low battery shut down with auto data saving.
- Battery deep discharge protection.
- DC fuse protection.
- Audible alarms.
- Future upgradeability.

### Recommended Battery for LI UPS with External Battery

CAPACITY	BATTERY	LOAD	RECOMMENDED BATTERY
800VA	12V(Ext.)	1 PC + 1 Printer	65Ah
1000VA	24V(Ext.)	3 PC + 1 Printer	65Ah
2000VA	48V(Ext.)	6 PC + 1 Printer	65Ah
3000VA	48V(Ext.)	9 PC + 1 Printer	65Ah





## Technical Specifications

Line Interactive UPS

Ratings	600VA	800VA	1KVA		2KVA	3KVA
Model No.	SU600WB	SU800EB	SU1000EB	SU1000WB	SU2000EB	SU3000EB
Type	1 phase in - 1 phase out					
Series	Sine Wave Line Interactive UPS					
Technology	Microcontroller based PWM technology using MOSFET					
<b>INPUT PARAMETERS</b>						
Input Supply	1 Phase, 3 Wire					
Voltage Range	145VAC - 295VAC		155VAC - 295VAC		160VAC - 290 ± 5V	
Frequency Range	44Hz to 59Hz					
Power Factor (charging)	>0.9					
<b>OUTPUT PARAMETERS</b>						
Voltage Regulation	200VAC - 255VAC ± 5V					
Frequency Regulation	50Hz ± 0.2Hz					
Peak Efficiency	>85%					
Output Waveform	Sine Wave					
Total Harmonic Distortion	< 5% (On Linear Loads)					
Crest Factor	> 3:1					
Transfer Time (Typical)	8mSec.					
Overload Handling Capacity	105% for 3 Mins., 160% for 5 Secs.					
<b>BATTERY PARAMETERS</b>						
Battery Voltage(Nominal)	12V / 7.2Ah	12V / 65Ah	24V / 65Ah	24V / 7.2Ah	48V / 65Ah	
Battery Charging Current	1A	6A	6A	1A	6A	
<b>USER INTERFACE</b>						
Communication Port	RS-232					
Operating System	Windows 95 / 98 / NT / 2000 / XP / 2003 Server					
<b>ENVIRONMENTAL PARAMETERS</b>						
Operating Temperature	0-45°C					
Acoustic Noise (at 1mts)	< 50dB					
Relative Humidity	Max 95% non-condensing					
<b>OTHERS</b>						
Indications & Alarms	LED Indications & Alarms					
Protection Class	IP20					
Dimensions-WxDxH (in mm)	112x345x150	148x365x216	148x365x216	148x365x216	180x458x264	243x425x343
Weight (in kgs)	6.5	9.8	10.9	12.2	24	34

Specifications are subject to change without prior notice.



## Technical Specifications

Line Interactive UPS

Ratings	600VA
Type	1 phase in - 1 phase out
Series	Quasi Sine Wave Line Interactive UPS
Technology	Microcontroller based PWM technology using MOSFET
<b>INPUT PARAMETERS</b>	
Input Supply	1 Phase, 3 Wire
Voltage Range	140VAC - 295VAC
Frequency Range	44Hz to 59Hz
<b>OUTPUT PARAMETERS</b>	
Voltage Regulation	200VAC - 250VAC ± 5V
Frequency Regulation	50Hz ± 0.2Hz
Peak Efficiency	>85%
Output Waveform	Quasi Sine Wave
Crest Factor	> 3:1
Transfer Time (Typical)	5-10 mSec.
<b>BATTERY PARAMETERS</b>	
Battery Type	12V/7.2Ah
Battery Voltage(Nominal)	12V
Battery Charging Current	0.5A to 0.9A
<b>USER INTERFACE</b>	
Communication Port	RS-232
Operating System	Windows 95 / 98 / NT / 2000 / XP / 2003 Server
<b>ENVIRONMENTAL PARAMETERS</b>	
Operating Temperature	0-45°C
Acoustic Noise (at 1mts)	< 50dB
Relative Humidity	Max 95% non-condensing
<b>OTHERS</b>	
Indications & Alarms	LED Indications & Alarms
Protection Class	Ip20
Dimensions-WxDxH (in mm)	100x330x144
Weight (in kgs)	6

Specifications are subject to change without prior notice.



## FAQ's

Q: What is this document all about?

A: This is a FAQ document on Line Interactive (LI) Uninterruptible Power Supplies(UPS). It is intended to provide insight for those people who know their applications & can relate to the product range available.

Q: What is a UPS?

A: An Uninterruptible Power Supply is a device that sits between a AC power supply (e.g. a wall outlet) and a device (e.g. a computer) to prevent undesired features of the power source (outages, sags, surges, bad harmonics, etc.) from the supply from adversely affecting the performance of the device.

Q: Are these LI UPS Plug n play systems?

A: Certainly, the LI with internal Battery systems are plug n play & can be installed without the assistance of Licensed Technicians. However, it is recommended that UPS with External Battery be connected by a Licensed Technician.

Q: How can it help me?

A: An UPS will generate continuous power in case of power failure. It will help you to save your work & execute an orderly shutdown of your PC. Advantages:

1. Computer jobs don't stop because the power fails.
2. Users not inconvenienced by computer shutting down on its own.

Q: What sort of stuff does a UPS do?

A: A UPS traditionally can perform the following functions:

1. Absorb relatively small power surges.
2. Smooth out noisy power sources.
3. Continue to provide power to equipment during line sags.
4. Provide power for some time after a blackout has occurred.

Q: How long can equipment on a LI UPS keep running after the power goes?

A: That depends on the load connected to UPS. Typically IPC load connected, will give you approximately 15 mins backup.

Q: How important is the UPS output waveform?

A: You should always run your equipment on the best approximation of sinusoidal input as a non-sinusoidal supply may actually damage the equipment.

Some suggestions to keep your UPS in perfect condition:

- Perform regular maintenance on your UPS. This includes changing the batteries periodically. Don't ever run on bad batteries.
- Don't deep cycle the batteries any more than is necessary.
- Don't subject the UPS to temperature or humidity extremes, water, excessive dust, or excessive static electricity. Keep the area around the UPS clean and dry.
- Don't overload the UPS.
- If the UPS shows signs of misbehavior or malfunction, disconnect it from the equipment & call up our service centre & get it rectified form technically qualified personnel.

Q: How is the capacity of UPS determined?

A: UPS have VA (Volts x Amperes) rating The VA rating is the maximum number of Volts \* Amps it can deliver. The VA rating is not the same as the Power of the equipment (In Watts). It is recommended to use 75% of VA capacity of UPS for optimal performance.

Q: Can I Use LI UPS for connecting a Laser Printer?

A: No, since the current drawn by a laser printer is very high & LI would not be able to support a LP.

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