

Uninterruptible Power Supply

Types of UPS

There are basically three types of uninterruptible power supply. Users can make the choice depending on their needs. They all function independently and may vary in terms of cost.

Offline UPS/ Standby

With increase blackout, brownouts and power surge, user can benefit if he /she has this kind of UPS. This UPS allows the device connected to it to function normally when the voltage from the main power source is unstable. When this is detected, the backup battery in the UPS will take over.

Line-Interactive UPS

They also function like offline UPS. The only difference is that they are designed with an automatic-voltage regulator which tries to make any rectification in the amount of voltage that comes from the main power sources without having to switch to its backup battery. This can help in cases of overvoltage.

On-line UPS:

This kind of uninterruptible power supply system draws current stored in the backup battery. This process is continuous as the battery also get charged. This ensures that the voltage is stable and can't destroy the machines. It's mainly used with organizations to keep their servers safe.

Things to be considered

Run-Time and Battery Capacity

Check how much power a back can be able to hold and for how long it can work. Most of them are meant to last for a short time to let user to save the work but again the run-time and battery capacity may vary, so users should make their choices correctly.

Power Output

Battery may be full by the time the power goes off. But the user has to consider the amount of power will need for the available devices. If a user can be able to add the watts together, he / she can know the total output would expect from the UPS system. This helps to choose Uninterruptible Power Supply system that can allow to work for some time before it's off.

Number of Outlets

The number of outlets will determine the number of devices that can be connected to the UPS. And again, it's important to note that only half of the outlets may have backup power. The other outlets cannot protect the devices in case of anything. If a user need to connect many devices, then he / she has to look for a UPS system with many outlets.

LCD Screen

This can help to determine the amount of power that is being drawn for the UPS system. Users can program themselves and know when to save their work

Alarm System

Some users may have no time to see the percentage of battery on the LCD screen. This is where they will appreciate the alarm feature

in the UPS system. It warns user when the UPS are about to go off or when it's faulty.

Power Management Software

Not all UPS system are designed with this feature, but with careful choices, user can find one. This software allows to operate all the other functionalities from the devices just like a user would on the interface of the uninterruptible power supply system.

Specifications for an Uninterruptible Power Supply

Criteria	Minimum Requirement
Brand	(Specify)
Model	(Specify)
Country of Origin & Country of Manufacture / assembly	(Specify)
Manufactured Year	(Specify)
Capacity	650VA
Input Voltage	140 - 300V 5VAC
Frequency	50Hz
Phase	Single + GND
Output Voltage	230VAC +10% -10%
Battery Mode	230VAC 10%
Frequency	50Hz 1Hz (Battery Mode)
Waveform	-Simulated Sine Wave (Battery Mode) -Sine Wave (AC Mode)
Transfer Time	2ms 2-6ms
Battery Type	12V/7 AH — 1pc
Backup Time	7 ~ 20 minutes depending on load
Recharge Time	90% capacity after 8 hours
Surge Protection	Yes
Overload	Line Mode 100 ~ 120% 5mins change to fault mode, 120% change to fault mode immediately
Battery Management	-Battery Mode 100 ~ 102% 5 secs shutdown, 120% -Prevent overcharging
Alarm	Yes
General Noise Level	40dB
Temperature	0°C ~ 40°
Humidity	0 ~ 95% relative humidity
Power Factor	Up to 0.7

Manufacture Experience	Manufacturer should have minimum of ten years' experience in manufacturing of the same brand. (Proof document should be attached)
Bidders Experience	The bidder should have successfully sold same similar product for last 3 years (Bidder should provide documentary evidence to support the above)
Manufacturer Authorization Certificate	Manufacturer Authorization Certificate should be provided (Originals should be provided on request)
Warranty	Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes. Bidder or its parent company or its subsidiary should have Island wide owned branch network Documentary evidence to be provided of the following under bidders' name. (a) Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each ranch/regional)
Warranty Information	A sticker with -Supplier name -Contact Numbers -Date of Commissioning of Hardware -Warranty Period On all UPS
Brochure	Supplier should provide brochure of make/model quoted as per above specification

Specimen Bidder's Compliance Check Sheet

Important:

It is compulsory to use the most recent version of the ICTA Specifications at the time of the Bidding Document Publication. The purchaser should mention the particular version of the specification in the Technical Specification section of the bidding document in the following format:

Example: If the purchaser refers the UPS of this UPS Specification Version

ICTA Version: UPS | ICT-ES-1.1V-F | UPS

Features	Required Minimum Specification	Bidder's Compliance	
		Yes/No	If "No", Bidder's Response
Brand			
Model			
Country of Origin & Country of Manufacture / assembly			
Processor			
Base Frequency			
Cache			
Form Factor			
Chassis			
Chipset			
Motherboard			
Memory			
Maximum memory			
Memory Dims			
Hard disk			
Keyboard			
Mouse			
Optical drive			
Expansion slots			
Video controller			
Network interface			
I/O ports			
Power Supply			
Operating system			
Application Software			
Product certifications of the quoted Model			
Display			
Manufacturer Experience			
Bidders Experience			
Manufacturer Authorization Certificate			
Warranty			
Warranty Information			
Brochure			

Content References

- <https://byte-notes.com>
- <https://pcpartpicker.com>
- <https://www.choice.com.au>
- <https://www.cnet.com>
- <http://www.globusinfocom.com>
- <https://www.icta.lk>
- <https://www.itbusiness.ca>
- <https://www.pcworld.com>
- <https://www.streetdirectory.com>

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