Why The Need For Uninterruptible Power

Visualise for a moment what happens when power supply to your computer system fails. Even for just a fraction of a second...

Gone!!!
That file you had open.....
Were working on.....
Had not saved recently.....

Gone!!!
Your school assignment.....
Your MYOB entries for the day.....
Your quotes.....
Your thesis.....
Your novel.....
Your club records....
Your point of sale transactions....
Your Eftpos transactions....

Any interruption of the electricity supply will interfere with the operation of your computer system. This can lead to loss of data, potential hardware damage and .... *Inconvenience*. Major understatement!!! Let no man judge the value of another's work. That school assignment is no less important than the banking records of an international organisation. Well, not to the student writing it anyway! Despite their very best efforts, our electricity providers cannot prevent power outages and interruptions. These events occur on a daily basis, sometimes without you even knowing.

How can you protect against unexpected power interruptions?

You can plan for and prevent power interruptions by installing a UPS. A UPS is an *Uninterruptible Power Supply.* UPS's protect against loss of the electricity supply by providing battery back-up for a period of time. The UPS can be utilised to provide short-term power during an outage, or until a standby generator is started for longer term power back up as is more likely the case in larger industrial critical power applications.

The UPS will also protect against a number of other power quality problems common in your electricity supply such as surges, sags, brownouts, spikes, RF noise etc.

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But what if I am not at my computer when the power interruption occurs?

What? You dared to leave your work station without shutting down your computer.....

Actually this is not a problem! All Chase Power's UPS's come with very clever software that ensures your piece of mind. When a power interruption occurs, your work is saved and your computer is shut down in an orderly manner. No heartbreak!

What level of protection does a UPS offer?

Various UPS technologies offer different levels of protection. There are three UPS technologies available and selection of the most appropriate technology for your application is of vital importance.

Off-line (Standby) UPS's

When mains supply fails, the offline UPS will switch the load across to a battery fed inverter supply (normally with a delay of 4 to 10 milliseconds). When operating from battery power many offline UPS models produce a square wave voltage (also called pseudo sine) which is acceptable for most computer switchmode supplies, but may not be suitable for some loads. These UPS's are designed to protect a single PC or workstation and only offer back up in the event of a total power interruption. They do not incorporate any significant power conditioning.

Line Interactive UPS's

These UPS's are similar in topology to off-line except a voltage regulating circuit is incorporated which boosts the mains power supply when it fails. These UPS's regulate power without the use of a battery during brownouts or surges in the supply voltage and have a sinewave output, enhanced software and connectivity options. They provide a high level of protection at a very affordable price.

Double Conversion (On Line) UPS's

For critical power applications Chase Power recommend true On-Line Double Conversion technology UPS's. These UPS's provide the highest level of protection, usually only required by businesses operating from a server or in industrial applications. For more technical information about the role of the On-Line Double Conversion UPS, contact Chase Power.

How can I be sure what technology the UPS I am considering purchasing is?

Chase Power recommend care be taken to check this information to ensure you get what you are shopping for. Don't just read the box it comes in - ask for a technical data sheet. Your supplier can and should be able to provide this.

Caution: **Some manufacturers will claim their UPS is Line Interactive UPS, but if you review the technical data sheet you will be able to see for yourself whether the UPS is pseudo sinewave (not a real Line Interactive UPS), sinewave (this is the terminology you would expect to associate with a real Line Interactive UPS) or some other.**

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UPS Sizing

To size your UPS you need to know the VA rating of the connected load.
For sizing phase, VA = Volts x Amps
Example:
Single phase Monitor 240V 1Amp
240 x 1 = 240VA

For 3 phase, kVA = Amps x voltage x 1.73 / 1000

To calculate what size UPS best suits your needs, make a list of the voltage and amperage of all the items you will protect with your UPS. (Monitors, external hard drives, modems, printers etc)

For each item calculate the total using the formula given above, then add up the totals.

Remember to allow for growth. Undoubtedly you have invested a lot of money in your computer system. But somewhere in the future it is likely that you will add additional equipment - a new telephone, external hard drive etc. By over sizing your UPS a little you can add new equipment without having to buy another UPS.

What if I have more questions?

Your supplier should be able to answer all of your questions, but if you have any concerns please don't hesitate to contact us for technical advice.

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