

Why use UPS?

An uninterruptable power supply (UPS) protects IT equipment and other electrical loads from problems that can affect the public electricity supply. It performs the following three basic functions:

- Prevents hardware damage typically caused by surges and spikes. Many UPS models continually condition incoming power as well.
- Prevents data loss and corruption.
 Without a UPS, data stored on
 devices that are subjected to
 a hard system shutdown may
 become corrupted or even lost
 completely. In conjunction with
 power management software,
 a UPS can facilitate a graceful
 system shutdown.
- Provides availability for networks and other applications while preventing downtime. UPSs can also be paired with generators in order to give the generators sufficient time to power up in the event of a power cut.

Eaton UPSs address all of the nine common power problems below:



1. Power failure

typically caused by lightning strike or fault with the power company's equipment. Without a UPS, this will cause a hard shutdown, putting data at risk.



6. Electrical noise

"Interference," typically from radio transmitters, welding equipment etc. Noise can cause hard-to-find intermittent problems.



2. Power sag

Short-term voltage reduction, often caused by start-up of nearby large loads. Power sags can cause equipment crashes and hardware damage.



7. Frequency variation

Changes in supply frequency, usually only found on supplies from generators.



3. Power surge

Short-term high voltage, usually caused by lightning strike nearby. Spikes almost always lead to data loss and/or hardware damage.



8. Switching transient

Instantaneous undervoltage, typically lasting a few nanoseconds.



4. Undervoltage

Reduced supply voltage lasting from minutes to days. Typically occurs when supply network is overloaded. Can lead to computers behaving unpredictably.



9. Harmonic distortion

Disortion of the normal smooth supply waveform. Can be caused by variable spreed drivers and even photocopiers. Can cause communication errors, overheating and hardware damage.



5. Overvoltage

Increased supply voltage lasting from minutes to days. Often triggered by rapid reductions in power demands, overvoltage can damage hardware.