

Online and Offline UPS

An Uninterrupted power supply is essentially a back-up battery to power electronic gadgets like Computer in the event of a power failure. If it happens, the Gadget will draw power from the UPS and will run the load for a prescribed time depending on the capacity of the battery. The change over time from the mains to battery power is a fraction of a second, so that the computer will not shut down. This is essential to protect the data in the computer.

Uninterrupted power supply may be AC/AC or AC/DC based on the output power supply. In AC/AC UPS, the energy source is the AC lines and the output is exactly the same voltage generated by the inverter. In AC/DC type, the UPS delivers DC voltage by converting AC to DC.

Offline UPS and Online UPS

Basically there are two types of UPS. These are **Offline UPS** and **Online UPS**. Offline UPS passes the input AC to the output sockets if the AC power is available. It always monitor the voltage level in the mains, and if there is a voltage drop or mains failure, it switches on the inverter to give AC power to the device until the mains supply returns to normal. The switch over time from AC to inverter AC is less than five milli seconds so that the functioning of the gadget is not affected.



Online UPS



Offline UPS

Online UPS on the other hand uses an Inverter which always on to give sine wave AC in the output socket. The incoming AC is first converted into DC by a transformer to charge the battery as well as to give power to the inverter transformer. The inverter transformer converts the DC to AC continuously to power the load. If power fails, the battery backup circuit switches on and takes the load. Online UPS is more efficient than the Offline UPS and uses a “Constant duty Inverter”. It also has a “Static bypass” system that transfers the load to the AC power if the inverter system fails. The advantage of the Online UPS is that, it clean up the AC waveform by converting it into DC then reconverting this DC to fresh AC.



UPS Battery

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