

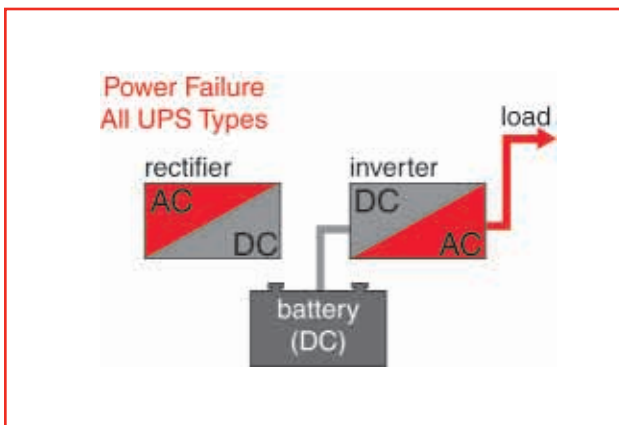
tech tips

TECHNICAL INFORMATION AND PRODUCT SOLUTIONS

UPS Topologies Explained

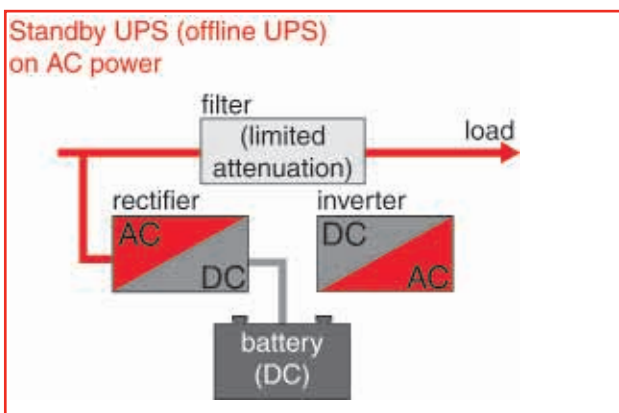
An Uninterruptible Power Supply (UPS) is there in case the power fails. There are three distinctly different UPS topologies available in the market today. Stand-by, Line-Interactive, and On-Line.

All UPS systems switch to battery when the power fails.



As illustrated, all UPS systems switch to battery when the power fails. The difference in UPS technology lies in how the power is handled under normal circumstances. Let's take a closer look at the difference in technologies.

What is a Stand-by UPS?



A stand-by UPS protects your connected equipment by monitoring incoming utility (AC) power for any change in voltage. When this voltage becomes too high or too low to safely operate your equipment, the UPS automatically switches to battery backup mode. Unlike a line-interactive UPS, a stand-by UPS goes into battery mode to protect against these fluctuations.

Desk Power UPS is ONEAC®'s stand-by UPS product line.

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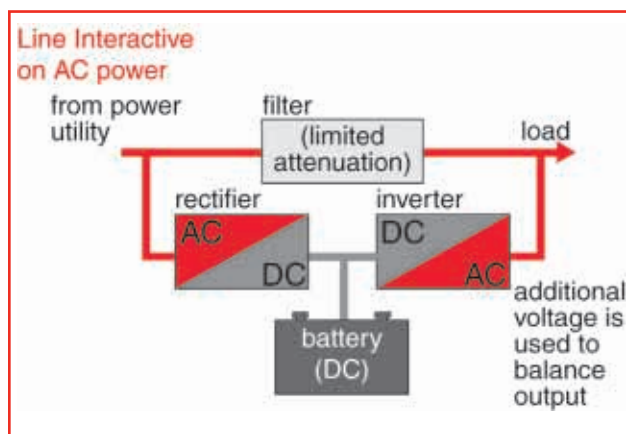
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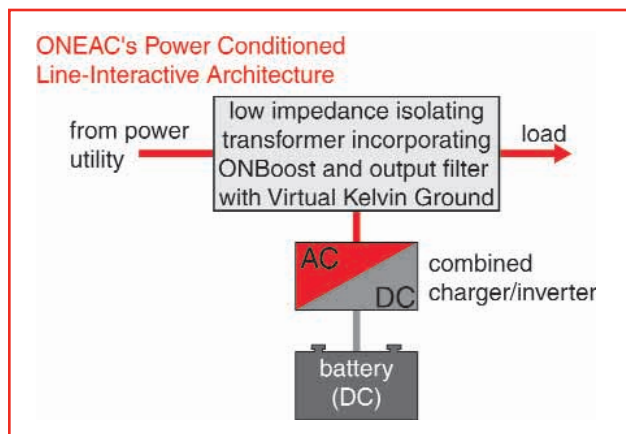
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What is a Line-Interactive UPS?

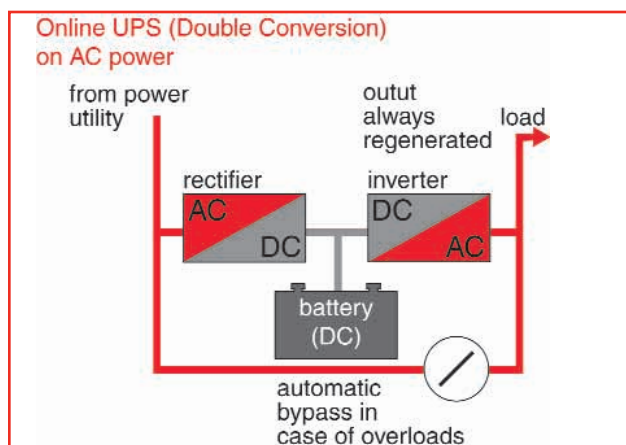


A line-interactive UPS runs constantly on incoming utility power, and uses built-in voltage regulation circuitry to adjust incoming power if it is too low or too high. The process allows the UPS to protect connected equipment from small changes in voltage without using its internal batteries. This voltage regulation extends the life of the UPS batteries and preserves backup power for when it is needed most – during complete blackout conditions. The line-interactive UPS switches from AC to battery power much faster than a standby UPS does.



ONEAC's *ON Series*® UPSs are Line-Interactive products that produce a true-sine wave output while on battery. ONEAC's *ON Series e* UPSs are line-interactive products that produce a pseudo sine wave output while on battery. In addition to providing battery backup if AC power is lost, ONEAC's line-interactive UPSs are isolation transformer-based so they provide full-time power conditioning to protect against the much more common occurrences of surges, sags, and spikes (also known as AC line "noise").

What is a True On-Line Double Conversion UPS?



An "on-line UPS" provides a constant source of electrical power from the battery, while the batteries are being recharged from AC power. Online systems are constantly regenerating clean power. In other words, the on-line UPS converts incoming AC utility power into DC power and then back into clean AC power to operate your equipment. This "double-conversion" process provides power that is isolated from utility power disturbances. If the utility AC fails, the UPS continues to run using its internal batteries.

ONEAC's *Sinergy*® Series and *EDP Series* UPS product lines are true on-line double-conversion isolated UPS systems.