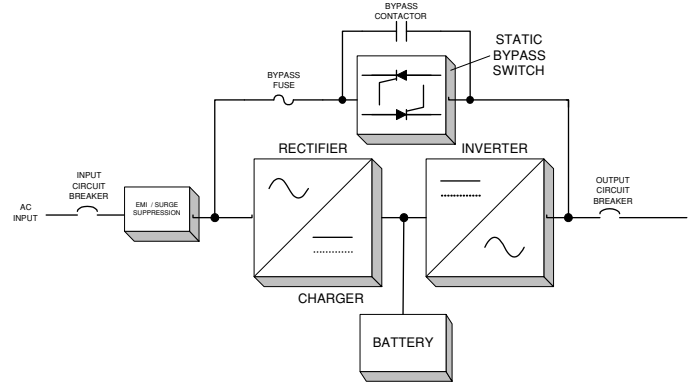
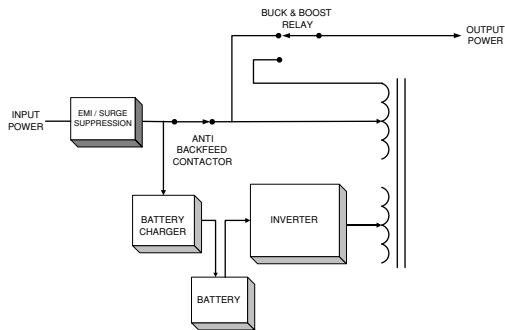


Double Conversion "On-Line" vs. Line-Interactive Technology

Double Conversion is the most popular in high-end equipment installation due to the fact it is the highest quality and most reliable UPS available today.



Line Interactive UPS normally operates as a multi-tapped transformer, positioned between the input and the load. Input power is filtered through surge suppression circuitry then passed to the load, eliminating rectification and subsequent conversion. This allows distortion or other input anomalies to be carried through to the load, until the inverter begins operating from battery, and disconnects the input from the load.

Line interactive units typically allow output voltages to vary from 103VAC to 132VAC before trying to regulate the output by changing internal transformer taps. Each time the voltage is corrected, there is a break in power to the load — similar to what would be seen when it transfers to battery operation taking over 6ms. During buck and boost compensation, the UPS typically allows the output voltage to vary from 97VAC to 127VAC.

The typical line interactive UPS must transfer to battery operation between 87-93VAC, resulting in more battery usage, reducing life and less up time for the critical load.

Double Conversion UPS provides a source of conditioned power 100% of the time.

Incoming AC power is filtered through surge suppression circuitry and then *rectified to DC power*. This DC power charges the battery and is inverted back into an AC sine wave output to power the load.

By carrying out continuous double conversion, an on-line UPS significantly filters the load from the utility power events that could damage critical equipment. Double conversion UPS with Digital Signal Processing (DSP) will accept input power between 80-138 VAC with 1% regulation on the output. Since a double conversion UPS inverter is always supplying the output there is no transfer time when utility power is lost.