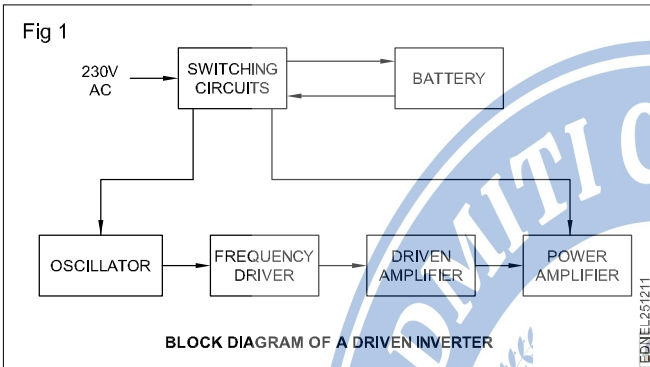


Drawing of block diagram of instruments & equipment of trades

Block diagram of Invertor

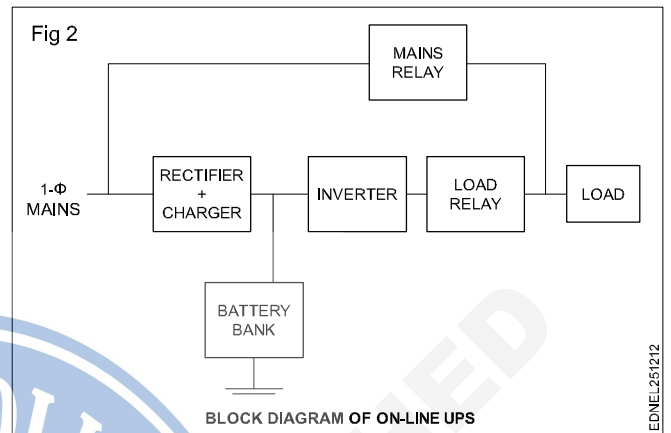
Devices that change DC into AC are referred to as invertor. The invertor takes in DC and provides an AC supply for other equipment in which it is turned back to DC, the invertor is also used for the operation of true AC equipment like motors and servos.

The block diagram of a driven invertor is shown in Fig 1.



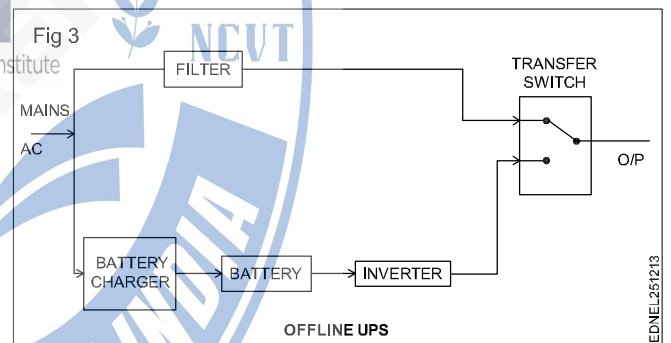
ON line UPS

On line UPS are also known as double conversion UPS or True On Line UPS. There are two stages in its operation. In the first stage the mains AC is rectified to DC. There is a DC bus. DC bus can get power from both the DC battery and DC obtained by rectifying the mains AC. In the second stage DC power available from DC bus is converted to AC by the inverter and this AC is connected to the output. In normal operation output comes from mains AC via rectifier and inverter. When mains AC fail, output comes from DC battery via inverter. The changeover is instantaneous. There is no power transfer switch and hence no time delay. When mains AC is available normal operation continues and the rectifier recharges the battery. A bypass switch connects mains AC directly to the output in case there is some problem with the UPS. (Fig 2)

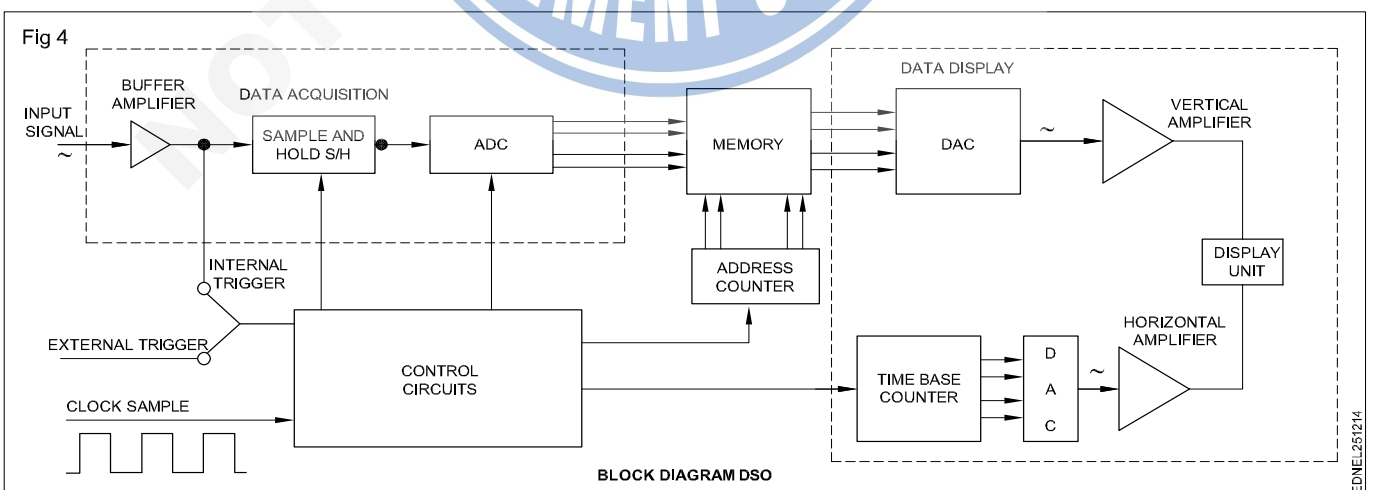


OFF line UPS

An OFF line UPS is shown in Fig 3. It is also known as stand by UPS or Backup UPS and supplies emergency power when mains AC fail. The capacity of an off line UPS is generally below 1kVA. A very common application is with PC. In the event of sudden load shedding the off line UPS supplies emergency power to the PC so that work can be continued till normal power is restored or the PC can be safely switched off.



Block diagram of DSO (Fig 4)



Block diagram of Function generator (Fig 5)

