

## Abstract

DC to AC converters are known as Inverters. The function of an inverter is to change a dc input voltage to a symmetrical ac output voltage of desired magnitude and frequency. The output voltage could be fixed or variable at a fixed or variable frequency. A variable out put voltage can be obtained by varying the input dc voltage and maintaining the gain of the inverter constant. On the other hand, if the dc input voltage is fixed and it is not controllable, a variable output voltage can be obtained by varying the gain of the inverter, which is normally accomplished by pulse width modulation control within the inverter. The inverter gain may be defined as the ratio of the ac output voltage to dc input voltage.

The aim of this project is to make the SPWM Inverter for AC LOCO CONVERTER (SCD). The function of AC LOCO CONVERTER (SCD) is to convert the single-phase supply to three-phase supply.

AC LOCO CONVERTER (SCD) is used in the train for supplying the power to the auxiliary load. In AC LOCO CONVERTER (SCD) single-phase voltage is converted to dc voltage by semi converter circuit. Sinusoidal Pulse Width Inverter converts the dc voltage to three-phase ac voltage.