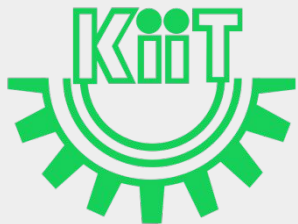


TOPIC



Course Faculty:
basic electrical engineering
(Tapaswini ma'am)

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Section:A34

SCHOOL OF ELECTRICAL ENGINEERING

Introduction

An alternating current(AC) is an electrical current that regularly reverses direction and change its value constantly with time,contrary to DC current which travels only in a single direction.For many decades of electric power,the sinusoidal current and volatge used in power business and home.

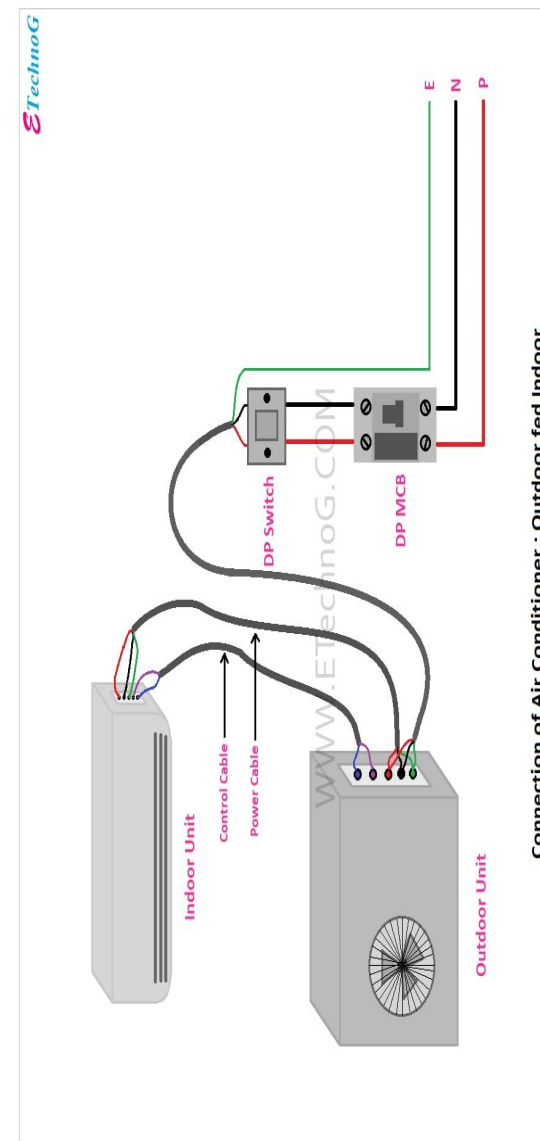
Components used

- Evaporator coil
- Compressor
- Condenser coil
- Expansion valve

Rating

INPUT RATING: 230V,50HZ
POWER CONSUMPTION:1610W
OPERATING CURRENT:7.4A
MANUFACTURER:LG india

Circuit Diagram



Working Principle

The basic working principle of an air conditioner is a vapour compression cycle to minimize the air temperature with the help of a condenser ,compressor,expansion valve and evaporator.The complete cooling process is a heat transfer between the room air and refrigerant gas.As the liquid refrigerant inside the evaporator coil converts to gas ,heat from the indoor air is absorbed into the refrigerant ,thus cooling the air as it passes over the coil .

The indoor units blower the fan and then pumps the chilled air back through the homes duct work out into the various living areas.An air conditioners collect warm air from a given locations processes it with the help of an refrigerant and a series of coils within it and then release the cold air to the place where the hot air was initially collected.Virtually all air conditioners system works on this principle .

Application

Application of air conditioning is to provide thermal comfort to humans and other living beings and also to provide conditions required for various products and processes in industries air conditioning.

Manufacturer/company address

Voltas is one of the leading companies within the Tata group with a footprint of over 25,000 customer touchpoints. It has also recently launched a range of Voltas Beko home appliances, through its JV in India, in equal partnership with Arcelik.The company was incorporated on 6 September 1954 in Mumbai, as a collaboration between Tata Sons and Volkart Brothers

Future scope

Regarding AC units growth ,AC household ownership at global level could rise from 30% in 2016 to more than 60% in 2050 according to IEA.With no further efforts that existing energy efficiency policies,the consumption of electricity for cooling could be multiplied by four by 2050 in the residential sector.Demand for air conditioner world wide from 2012 to 2021 aere in million units.For example : in 2018 demand in million units is 110.97. And in 2019 it was 115.87.