INTRODUCTION TO ELECTRICAL PHYSICS

Physics is the branch of pure science that studies energy and its interaction with matter, or rather how it affects matter.

Matter can be seen, but energy cannot. Thus energy is measure in relation to matter and conditions using rate mathematics.

A general concept in physics is that energy exerts force to do work. Work is usually done by a person or machine. How fast or slow a work is done shows the power of the person or machine doing the work. Every force has an opposite and equal reaction force. The opposing force is usually called friction in mechanics and resistance in electrics.

There are several types of energy. They include mechanical energy, electrical energy, light energy, sound energy, magnetic energy, thermal energy, etc. Each branch of physics tends to study a particular type of energy and how it affects matter.

Electrical energy is the kind of energy that is possessed by charged bodies (or matter). When these charged particles are made into a circuit they release electrons which exert electrical force that could do work, e.g. light a bulb.

Electrical Physics is the branch of physics that studies electrical energy, its characteristics, behaviour and how it can affect matter. Note that electrical physics is a science and not a technology. Technology is not science in that it applies scientific principles and law (discoveries) in the manipulation of materials to make (or invent) products of use for humans. Thus electrical physics discovers laws and principles behind electricity or rather electrical energy. It is Electrical/Electronic Engineering that is the technology based on electrical physics principles.