

An intelligent digital low voltage power factor optimizer

*Mustafa Ahmed Nayyef, Yasir Abdulhafedh Ahmed,
Omar Kamil Dahham Alazzawi*

Abstract:

In this paper, an intelligent digital low voltage power factor optimizer has been built. This power factor optimizer operates according to the measurement the value of phase shift angle between both of current and voltage, thus the power factor has been measured. It is simply that it will improve the power factor through connecting a set of shunt capacitors in order to reach to an optimal value of the power factor (close to unity). The proposed intelligent digital power factor optimizer for low voltage is built and simulated using the software which is called electronic work bench package (EWB) Multisim. Finally, this optimizer presents a good result when applied to different loads and variable currents. This optimizer is feasible, affordable and ready to be implemented especially in countries that suffer from higher prices of electrical power.