

Intelligent power factor controller with new measuring method and fuzzy logic control

ABSTRACT

This paper introduces an intelligent power factor controller for reactive power control with new measuring method for the power factor and fuzzy logic technology. The capacitors are used for compensating the reactive power in power factor controller. This new measuring method is for measuring the power factor adopting directly the measuring of active power energy meter and reactive power energy meter. The new measuring method can improve the installation of the sensor part of power factor controller. The installation is much easier than the installations of voltage transformer and current transformer. This fuzzy logic technology of power factor controller is supported by a software package. This software package was developed in this project by the authors. The prototype machine could be completed because we owned this software package development tool. The control method of this intelligent power factor controller can extend the life of the capacitors and the AC contactors. The controller can keep power factor in high accuracy and can reduce the amount of switching operation. Reducing the amount of switching operation that is the way to extend the life of controller.

Keyword : New measuring method, Power factor controller, Extending life of equipment, Fuzzy logic control.