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| **Abstract:** |  |
| Abstract— This paper presents a microcontroller-based automatic power factor improvement plant for the power system protection laboratory of the Department of Electrical and Electronic Engineering of the Green University of Bangladesh. The load is three three-phase induction motors which cause low and lagging power factors. The microcontroller in the plant senses the phase angles of voltage and current and then decides which capacitor to turn on or which one to turn off. Accordingly, capacitors are coupled with the load from a bank of three-phase capacitors. The controller tries to set the power factor as close to unity. The capacitors are connected to or disconnected from the load through magnetic contacts and relays. Experimental observation shows that the designed power factor improvement plant works very well. | |