Design and Realization of Programmable Induction Motor Drive

Sisil Kumarawadu, Ranindu D., Gamunu Rathnayakae. Sreeskanth V., Sriragu A., Sudarsan GI.
Dept. of Electrical Engineering, University of Moratuwa, Sri Lanka

E-mails: *sisil@elect.mrt.ac.lk, ranindu@yahoo.com, gamunu04@yahoo.com, vsreeskanth@yahoo.com, asriragu@yahoo.com, mora_sutha@yahoo.com*

Abstract

There are different algorithms available for speed control of induction motors, while every algorithm has its relative merits over the other. The inverters available in the market are mostly designed using application specific ICs and a specific algorithm is implemented. This paper discusses about design of programmable induction motor drive, which implements different algorithms using new type of controllers and technology as a one system. In addition to this, the critical design issues in developing a motor drive such as dead band time implementation, optical isolation of circuits, overvoltage and overcurrent protection and precise speed sensing and are discussed.

PIC Microcontroller. This produces the s