

عنوان مقاله:

Design and Implementation Fuzzy Controller in the Frost-free Refrigerator by Using Multivariate Regression

محل انتشار:

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خلاصه مقاله:

Growth and increasing use of home cooling systems, especially domestic refrigerators and freezers have made improved their controllers. Nowadays, frost-free refrigerator is a proper alternative to the classical refrigerator that should be defrost manually. Considering the energy efficiency and effective performance, designing a suitable control system for such refrigerator is necessary. In present study, a new controller for temperature and relative humidity that are two important factors in the quality preservation of products is presented. The control system consists of two separated parts: control of temperature and control of relative humidity. Variation of temperature and relative humidity and their rates are the inputs of controller and frequency of compressor and voltage of evaporator fan are outputs. In terms of practical issues for implementation of the fuzzy controller in the microcontroller, Multivariate nonlinear regression is used. Nonlinear dynamic model of refrigerator [1, 2] and the unknown model of user-pattern are two causes that the fuzzy logic controller is designed

کلمات کلیدی:

Frost-free refrigerator; Fuzzy controller; Multivariate Regression

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