A Computerized Temperature Control System

W.A.T. Weerasinghe and D.U.J. Sonnadara
Department of Physics, University of Colombo.

The objective of this work is to control the temperature of a furnace using an IBM compatible computer. The input data to the system are temperature sensor readings taken at constant intervals. An output signal from the computer is used to control the power supply to the furnace. The temperature sensor is a thermocouple. An interface circuit amplifies and converts the sensor output to an 8 bit digital value prior to input through the printer port of the computer. The output signals from the printer port are used to control the interface circuit and the relay used for controlling the power supply. An accuracy of ± 2 ^{o}C was obtained with the present setup which can be constructed for under Rs. 1000/-.