

ABSTRACT

The series of measuring devices that are interfaced to this personal computer, are designed to measure wind speed and direction. The wind that hits the cup anemometer will move the cup, so that the anemometer shaft coupled with a direct current motor rotates and produces an analog voltage output, which is the input for Analog to Digital Converter (ADC) so that the output is obtained in digital form. Likewise, when the wind hits the wind vane, it will move the shaft so that the propeller rotates, this will cause the circle plate that has been perforated as long as 45 degrees and is a translucent part, rotating between eight optocoupler sensors. If the translucent part is exposed to infrared LED light, then there is an output on the optocoupler, this condition is called logic 1. On the contrary if the part that is not translucent is exposed to infrared LED light, this condition is called logic 0. Every output of the sensor has been converted to signal form digital, in the form of a binary number so that it can be read and processed by a computer through the PPI8255 module interface. The input data information is used to determine the wind speed and direction with the help of the Visual Basic program, then the measurement results are displayed on the computer monitor screen.

Keywords: Wind, Gauges, Wind Speed, Wind Direction.