

ABSTRACT

Peak flow meter is a device used to measure the amount of air flow in the human airway or often referred to as PFR (Peak Flow Rate). Peak Flow Rate (PFR) measurement is a simple and reliable way to detect airway obstruction. PFR measurement is a simple, non-invasive, fast and economic method to assess the strength and speed of expiration in L / min, through maximum expiration of capacity total lung. The results of peak flow data can illustrate early warning signs for an illness that in some cases may show a decrease in lung function 1-3 days before other respiratory symptoms become apparent.

This module is designed using MPX5100GP sensor. This sensor has a pressure range of 0-100 Kpa. Nature module is also equipped with data storage facilities using an SD Card so that the measurement data can be processed using Ms. Excel to find out graph data for further diagnostic purposes. The inspection results can be directly viewed on the display and also automatically stored in the SD Card storage that has been available.

This module has the highest error rate of 4.41% and the lowest error value of 0.42% compared to the original device. From the data collection that has been done it can be concluded that this module can be used for the inspection process.

Keywords : Peak Flow Meter, PFR, MPX5100GP