

## ABSTRACT

In early 2020, the world was shocked by a virus that attacks human respiration and can cause death. The virus, called SARS-CoV-2 or also known as the coronavirus, originated in China and quickly spread to all corners of the world. Until now, the number of cases of coronavirus in Indonesia is increasing rapidly. The transmission of the disease caused by the coronavirus is relatively fast. This coronavirus can spread from people through small droplets from the nose or mouth when coughing, sneezing or talking. It is also possible for a person to become infected with the coronavirus when accidentally inhaling droplets from an infected person. This virus spreads through the bloodstream to several organs, one of which is the lungs, so it can cause difficulty breathing.

In this final project, a system is designed to determine the value of the inspiration flow on the ventilator. This design uses the mpxv7002dp sensor which is connected to the Hamilton flow sensor as a detector of the air flow released by the ventilator during inspiration. The data obtained from the sensor readings will be processed by Arduino and will be displayed on the LCD. The test results obtained are for the mpxv7002dp sensor to get an accuracy rate of 94.61% with an error percentage of 5.39%. For Hamilton flow sensors get an accuracy rate of 92.3%.

**Keyword:** *Ventilator, MPXV7002DP, Sensor Flow Hamilton*