SafeMed

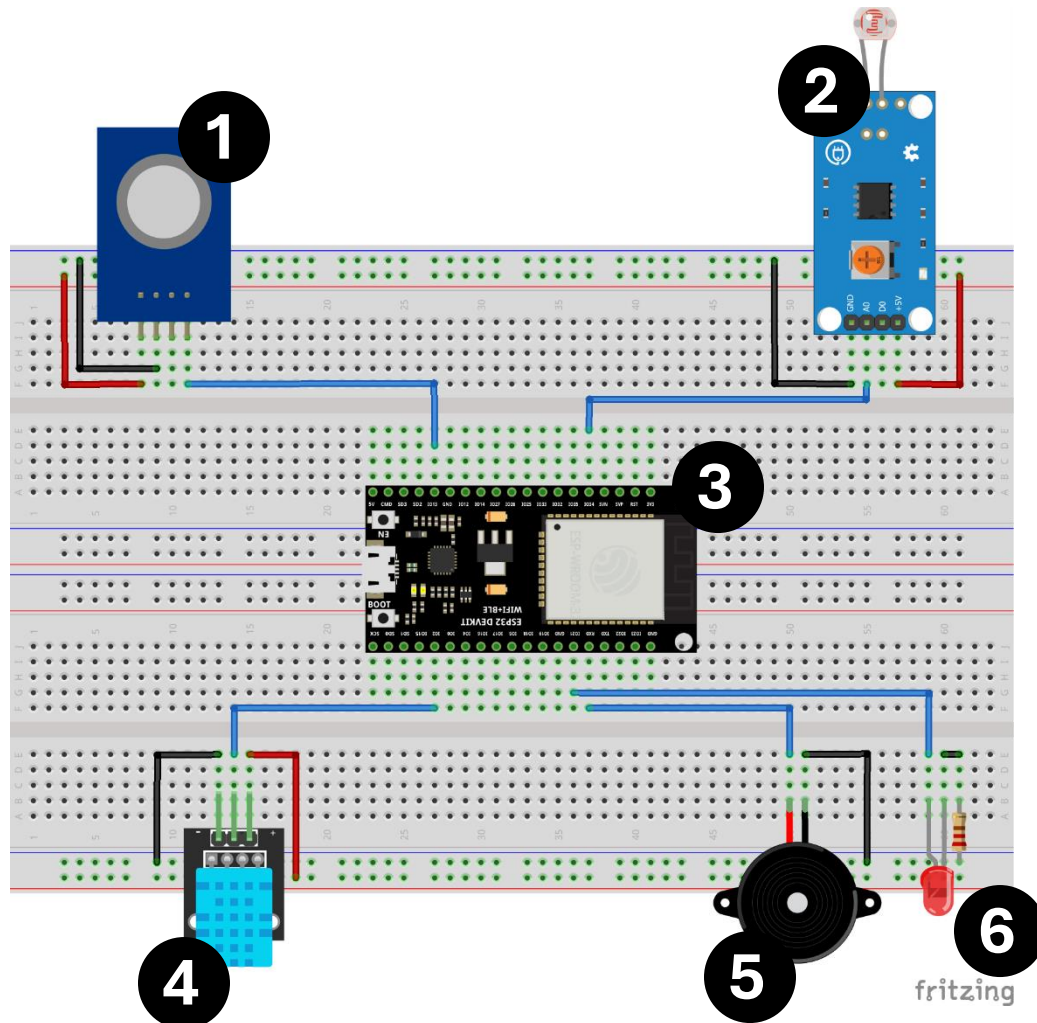## Monitoring System for Storage Systems

OPERATIONS MANUAL

SafeMed: Monitoring System for Storage Systems

Operations Manual
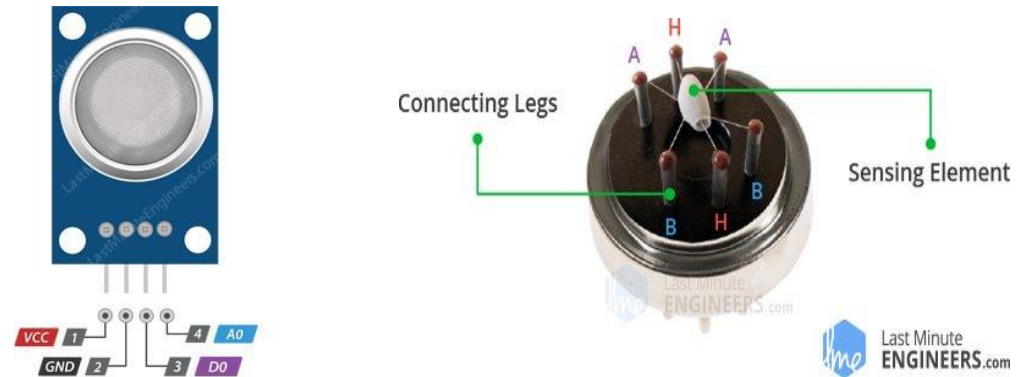
1. System Diagram:
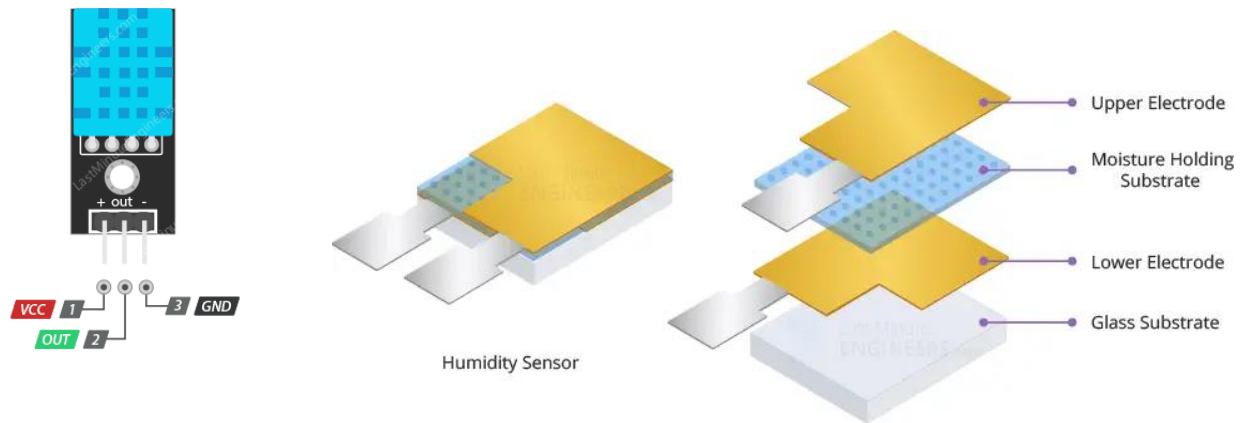

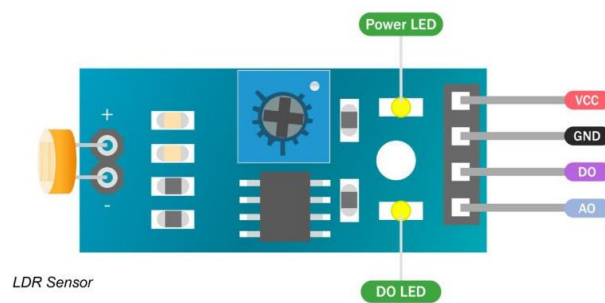| 1 | MQ-2 Gas Sensor Module | 4 | DHT-11 Temperature – Humidity Sensor |
| 2 | LDR Light Sensor Module | 5 | Buzzer |
| 3 | ESP-32 WROOM DevKit | 6 | LED |

2. Components Operation & Assembly:

2.1. MQ-2 Gas Sensor:

2.2. DHT-11 Temperature & Humidity Sensor:

2.3. LDR Light Intensity Sensor:

2.4. ESP-32 WROOM DevKit:

The System is powered using a 20000mAh Power Bank that's connected to the ESP-32 using a USB cable. The power bank supplies the ESP-32 with a constant 5V electrical input that's capable of supporting all 38 pins of the ESP while operating the internal components & modules such as the Wi-Fi module and the BLE module. After the connections shown in the first page are connected successfully, you can connect the ESP-32 to a laptop and upload the code accessible through this QR code to the board using Arduino IDE Software.

3. Dashboard Operation:

Users are greeted with the following home screen when they first load the web application. The home screen contains a simple dialogue box that offers multiple options for the users to set up their SafeMed systems: either to choose an existing preset, or to create a preset from scratch. Based on the substance and the storage facility the system is operating in.

If the user chooses the option "My Storage Isn't Listed", they will be redirected to the following screen to fully customize their SafeMed system based on the Storage Facility the system operates in, and users will be redirected to the main dashboard.