

EE356 – FINAL REPORT

GROUP-G5

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EE356 - Electronic Product Design

Title

Smart Gas Leakage Detector

Introduction

The project entitled “Smart Gas Leakage Detector”, will be a great help in terms of preventing any danger caused by gas leakage. The idea behind our project is to detect the presence of LPG leakage as a part of a safety system and then, activating the sounding alarm and displaying the warning. In addition to this, the authorized person will receive a message informing him about the leakage.

Specifications (Proposed)

- **BODY**

Dimensions 170(L) x 95(W) x 40(H) mm

Weight 300g

- **DISPLAY**

Type LCD Display - Character

Size 61.8(L) x 25.2(W) mm

Resolution 16 x 4 characters

- **POWER RATINGS**

Voltage Rating 5V DC

Current Rating 2A

Dimensions - Outer size and gross weight



Height- 4 cm
Length- 16.5 cm
Width- 11 cm
Weight- 450g

Circuit Diagram

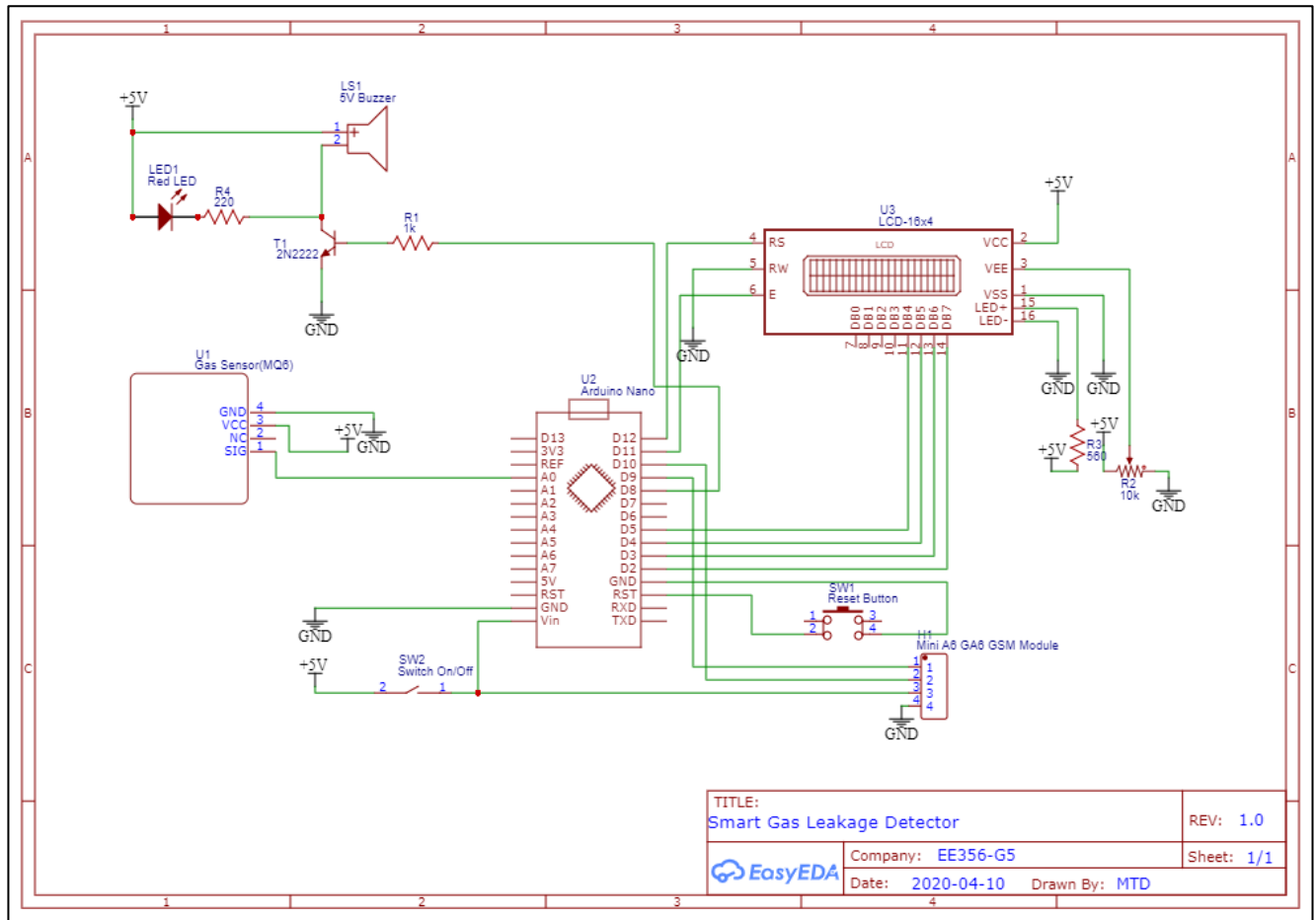



Figure 2: Device Schematic Diagram

Proposed Budget

Part	Unit Cost (Rs.)	Number of Units	Total Cost (Rs.)
Arduino Pro Mini	250	01	250
GSM SIM900 Module	1500	01	1500
Gas Sensor	350	01	350
Micro USB Module	30	01	30
16x4 LCD Display	800	01	800
Buzzer	20	01	20
Other Accessories			200
Encloser			500
Total Cost			3650

Product Manual

<div><div>USER MANUAL</div><div><div>SMART GAS LEAKAGE DETECTOR (With mobile wireless sensor networks)</div></div></div>	<div><div>Foreword</div><div><p>Gas supplement is crucial to maintain daily running of cities, and is name as "lifeline" of cities. Due to the large scale of pipelines systems and overtime service, gas leakage occurs quite frequently and causing serious causality and economic loss.</p><p>INFLAMIO gas leak detector is a new-generation product for detection of gas leak. Due to its imported sensor which guarantees its high sensitivity, great stability, quick response, smooth operation and large successive range</p><p>This is a real time early warning gas leakage monitoring system for large scale region. A mobile Wireless Sensor Networks was highlighted through mounting sensor terminals on stationary place and mobile vehicle, and the mobile sensor terminals could be powered continuously by vehicles and overcome the power supply problem</p></div><div>1</div></div>	<div><div>Getting Started...</div><div><div>1. Safety information and user notice</div><div>1.1 Safety precautions</div><div>1.2 Use range</div><div>1.3 Use notice points</div><div>2. Type and Specifications</div><div>2.1 Incoming inverter inspect</div><div>2.2 Specifications</div><div>2.3 Outer size and gross weight</div><div>3. Installation and wiring</div><div>3.1 Placement of the device</div><div>3.2 Wiring notice points</div><div>3.3 Basic wiring diagram</div><div>4. Run and operation explanation for the device</div><div>4.1 Running the device</div><div>4.2 Appearance and Parts</div><div>5. Troubleshooting</div></div><div>2</div></div>
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