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AUTOMATIC CAR DASH BOARD

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ABSTRACT: The main intend of this project is to scrutinize the vehicle parameters such as engine temperature, engine oil. Normal existing meters are analog meter. The one shortcoming in this meter are we cannot know that accurate fuel quantity in the tank but in this project the exact quantity is displayed in the digital form and we can also monitor the engine temperature.

KEYWORDS: Arduino, level sensor, temperature sensor, LCD

1. INTRODUCTION

A fuel gauge (or gas gauge) is an instrument used to indicate the level of fuel contained in a tank. Commonly used in cars, these may also be used for any tank including underground storage tanks. The systems consist of two important circuitry that is for sensing and indication of fuel level. The sensing unit usually uses a float type sensor to measure fuel level while the indicator system measures the amount of electric current flowing through the sensing unit and indicates fuel level. There are different techniques to implement sensing and indicating systems. we are presenting a tutorial on how to interface LM35 and Arduino along with its program. Once we successfully interface arduino and lm35, we will go on to build a temperature display using arduino and a 16×2 LCD module which continuously monitors temperature around the measurement field/range of LM35 and displays the same on LCD module. So lets get to building the project! LM35 is an analog, linear temperature sensor whose output voltage varies linearly with change in temperature. LM35 is three terminal linear temperature sensor from National semiconductors. It can measure temperature from-55 degree Celsius to +150 degree Celsius . The voltage output of the LM35 increases 10mV per degree Celsius rise in temperature. LM35 can be operated from a 5V supply and the stand by current is less than 60uA.

2. AUTOMATED CAR DASHBOARD

In this paper you are going to know how the automated car dashboard is achieved by using arduino,lm35,level sensor,lcd.All these components is interfaced with the software arduino IDE. Lm35 is a sensor which is used to sense the temperature; it acts as a sensor which sense engine temperature.Fuel level sensing is achieved by level sensor,such that few parts of car dashboard is automated.

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3. HOW TO USE LM35 TEMPERATURE SENSOR

LM35 is a precession Integrated circuit Temperature sensor, whose output voltage varies, based on the temperature around it. It is a small and economical IC which can be used to measure temperature anywhere between -55°C to 150°C. It can easily be interfaced with any Microcontroller that has ADC function or any development platform like ArduinoPower the IC by applying a regulated voltage like +5V (V_S) to the input pin and connected the ground pin to the ground of the circuit. If the temperature is 0°C, thenoutput voltage will also be 0V. There will be rise of 0.01V (10mV) for every degree Celsius rise in temperature.

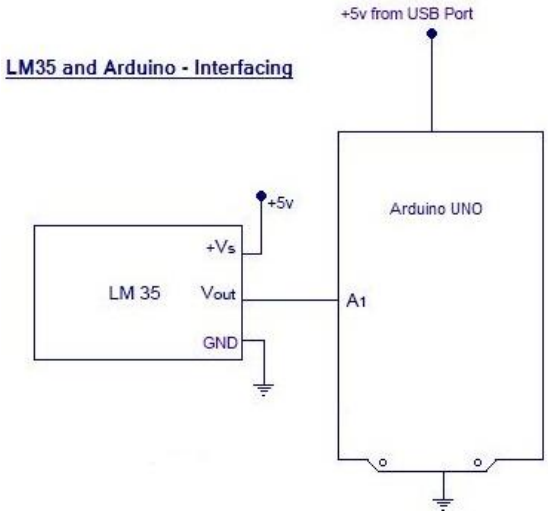

Fig.1 LM35 and Arduino interfacing circuit

4. INTERFACING OF LM35 AND LEVEL SENSOR

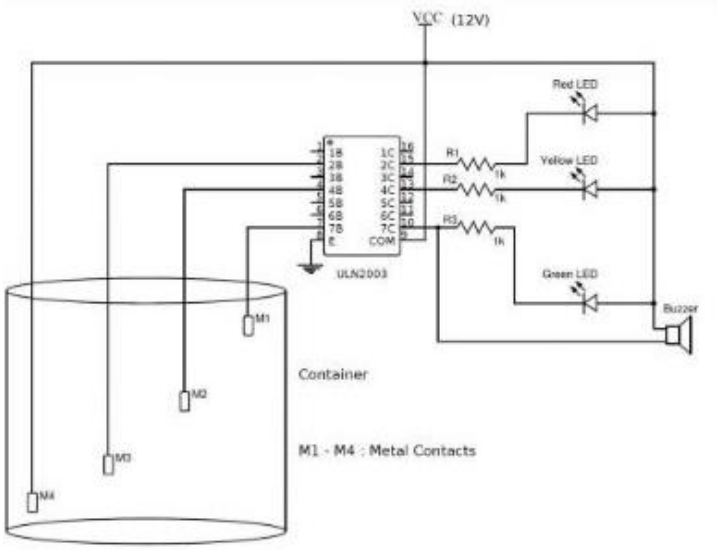

Fig.2: Circuit Diagram LM35 and Level sensor

5. LEVEL SENSORS

Level sensors notice the level of liquids and other fluids and fluidized solids, including slurries, granular materials, and powders that exhibit an upper free surface.Substances that flow become basically horizontal in their containers (or other physical limitations) because of gravity whereas most bulk solids pile at an angle of repose to a peak. The substance to be calculating can be inside a container or can be in its natural form (e.g., a river or a lake). The level measurement can be either continuous or point values. Continuous level sensors measure level within a specified range and determine the exact amount of substance in a certain place, while point-level sensors only indicate whether the substance is above or below the sensing point. Generally the latter detect levels that are extremely high or low.

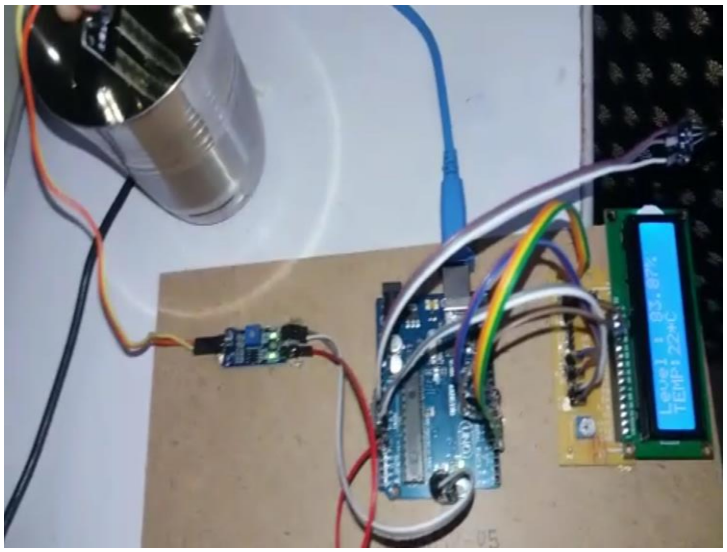

Fig. 3 Hardware implementation

6. CONCLUSION

Overall, the above discussion about the Quality Function Deployment is a ideal method to solve the current problem and mainly the house of quality matrix which is usefulcome close to to satisfy the customer prospect and design the product in view of that . With this QFD process the problem caused in the car dash board is solved from the customer point of view and is been highlighted. In highly competitive market it is important to survive for any company to make good business strategies and provide high quality product according to customer expectations. QFD helps translating the voice of customer into design requirements, guideline for product development process and improves the success rate of new product. From the above analysis, we get to know the company's strength and weakness points in the product growth of car dash board system. This process will help to know where the company lacks in their product. The scope of this report is to provide a customer with good dash board in which the customer

can get comfortable use of electronic ports (USB) with suitable position and make the drive convenient. The customers need to provide with finest look of dash board by using quality material and make it more smart to customers. The dash board should be provided with rigid and strong material and control the vibration in the cabin and make the drive more comfortable with noise free to the customers.

REFERENCES

[1] Akao Y (1994) Development history of quality function deployment. The customer driven approach to quality planning and deployment. Minato, Tokyo 107 Japan.
[2] Akao Y (1990) Quality function deployment: A literature review. European Journal of Operational Research 143: 463-497.
[3] Chan LK, Wu ML (2002) Quality function deployment: A literature review. European Journal of Operational Research 143: 463-497.