HIGH SENSITIVE ALCOHOL SENSOR WITH AUTO CAR IGNITION DISABLE FUNCTION

Technical Specifications:

Title of the project : High Sensitive Alcohol sensors with auto car ignition disable function

Domain : Safety Management.

Power Supply : +5V, 500mA Regulated Power Supply

Sensor : Alcoholic MQ-3

DC Motor : 60 RPM

Display : LED indication

Applications : driving and all public areas

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ABSTRACT:

Driving while either intoxicated or drunk is dangerous and drivers with high blood alcohol content or concentration (BAC) are at greatly increased risk of car accidents, highway injuries and vehicular deaths. Every single injury and death caused by drunk driving is totally preventable. Although the proportion of crashes that are alcohol-related has dropped dramatically in recent decades, there are still far too many such preventable accidents. Unfortunately, in spite of great progress, alcohol-impaired driving remains a serious national problem that tragically affects many victims annually.

At present drunken drivers have increased enormously and so is the deaths due to drunken drivers. The main reason for driving drunk is that the police are not able to check each and every car and even if they catch any one the police can be easily bribed. So there is a need for an effective system to check drunken drivers.

In our alcohol detection system the ignition of the fuel is regulated by a sensor circuit. The sensor circuit is used to detect whether alcohol was consumed by the driver recently. Our design also consists of sensor which is used to check whether alcohol is consumed while driving. The effects of drinking and driving are always risky and can often be lethal. In this project we are going to design a prototype which detects the amount of alcohol taken by the person. When the amount of the alcohol is reached to a threshold limit (Dangerous/maximum) it automatically turns off the combustion engine of the vehicle with buzzer indication and simultaneously with a LED indication. The components which we are going to use in this project are alcohol Sensor, relay unit, ignition unit (DC motor). When the CO concentration is high then Relay circuit will be activated which in turn turns ON music generator and at the same time vehicle (DC Motor) turns OFF automatically.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.
Block Diagram: High Sensitive Alcohol sensors with auto car ignition disable function