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Review on Password Based Circuit Breaker

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ABSTRACT: The serious issue in the power framework is the electrical mishaps while fixing the electrical lines because of the absence of correspondence between the electrical substation and support staff. This venture gives an answer for this issue to guarantee line man security. Likewise, the heap dispersion framework has been proposed in what sharing of the heap is done between town side and city side. An electrical switch is a consequently worked electrical switch intended to shield an electrical circuit from harm brought about by over-burden or short out. Its fundamental capacity is to identify an issue condition and interfere with current stream. In contrast to a wire, which works once and afterward should be supplanted, an electrical switch can be reset (either physically or consequently) to continue typical activity. When worked physically we see lethal electrical mishaps to the line man are expanding during the electric line fix because of the absence of correspondence and coordination between the support staff and the electric substation staff.

KEYWORDS: Circuit Breaker, Manual Load Shedding, Voltage Regulator, Microcontroller.

I.INTRODUCTION

These days, electrical mishaps to the line man are expanding, while at the same time fixing the electrical lines because of the absence of correspondence between the electrical substation and upkeep staff. This task gives an answer for this issue to guarantee line man wellbeing. In this proposed framework the control (ON/OFF) of the electrical lines lies with line man. This task is organized so that upkeep staff or line man needs to enter the secret word to ON/OFF the electrical line. Presently on the off chance that there is any shortcoming in electrical line then, at that point, line man will turn off the power supply to the line by entering secret word and easily fix the electrical line, and subsequent to going to the substation line man switch on the stock to the specific line by entering the secret word.

This framework is completely constrained by a microcontroller from the 8051 family. A network keypad is interfaced to the microcontroller to enter the secret key. The entered secret phrase is contrasted and the secret key put away in the ROM of the microcontroller. Assuming that the secret key entered is right, then, at that point, just the line can be turned on/off. The actuation/deactivation of the electrical switch is demonstrated by a light that turns on or off.

II.LITERATURE SURVEY

Mr.TarunNaruka, Vivek Kumar Sharma, Vikram Singh, Vishnu Sharma presents paper on ”PASSWORD BASED CIRCUIT BREAKER” This project control system is a system that access only specified password to control the circuit breaker. Here, there is also a provision of changing the password. The system is fully controlled by the 8 bit microcontroller from 8051 family which has an 8KB of ROM for the program memory. A matrix keypad is interfaced to the microcontroller to enter the password, while a relay driver IC is used to switch ON / OFF the loads through relays. The complete circuit is built with on board power supply. The power supply consists of a step down transformer 230/12V, which steps down the voltage to 12V AC. This is converted to DC using a Bridge rectifier. The ripples are removed using a capacitive filter and it is then regulated to +5V using a voltage regulator which is required for the operation of the microcontroller and other components. Athira P Nair, Josephin J, Electric line man safety system with OTP based circuit breaker, IJRET: International Journal of Reach in EngineeringandTechnology. This project focuses on the safety of the lineman while working so they do not feel the sudden electric shock. As lineman has to deal with live wires very often, the chances of critical accidents are already very high. However, with the right amount of coordination among lineman and substation, a lot of these accidents can be avoided. The project aimed at providing the solution that ensures the safety of maintenance staff. Here, as soon as the lineman detect the fault in the electric line, an SMS will be sent to the substation staff, who would switch off the line and turn it on when the fault is being resolved, thus reducing the chances of accidents and saves the power as well. The proposed system is fully operated on a microcontroller

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III.SYSTEM DEVELOPMENT

In this task, the power is dispersed more than two areas. Initial one is supply unit and second one is Breaker unit. Input Supply is given to transformer it changes over into 5v AC supply. Rectifier circuit convert into DC supply voltage controller (IC 7805) direct the 5v DC supply and that supply given to microcontroller. During support maintainer may met with deadly mishap. Thus, for insurance of maintainer, transfer is worked by secret phrase. This is finished with the assistance of microcontroller. As a matter of first importance, the secret word is preset by programming. At the point when we entered the secret phrase by the keypad assuming it is coordinated by preset secret key then the microcontroller conveys a message to trip the secret key based transfer. Again when upkeep is done, secret phrase to be enter and in the event that it coordinated with preset secret key, signal is send by microcontroller and transfer ON. Secret phrase Based Circuit Breaker is a basic task that aides in controlling the electrical lines with the assistance of a secret word.

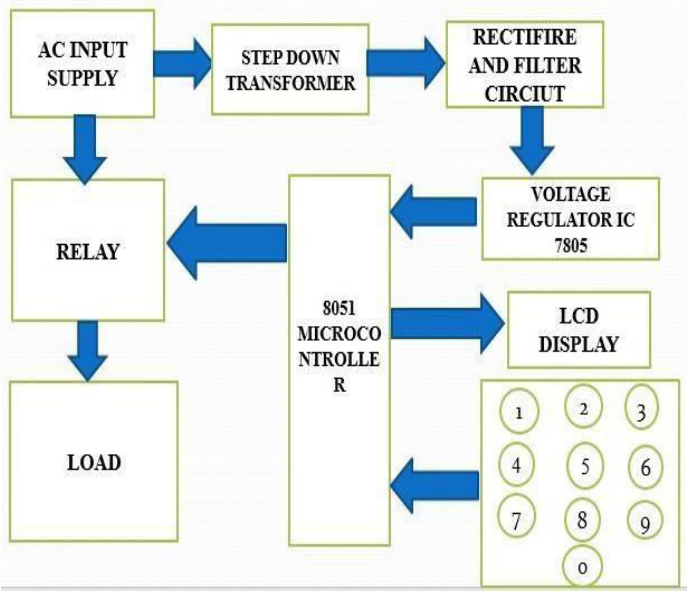

Fig. 1.1 Block diagram

As now assuming there is any upkeep work whatsoever conveyance the whole line will be wound down which causes bother to the customers. The proposed framework utilizes a microcontroller of the 8051 family and an amended power supply. A grid keypad is interfaced to the microcontroller toenter a secret word. The secret word entered is shown in the LCD. The entered secret word is contrasted and secret word put away in the ROM of the microcontroller. Assuming the secret word entered is right, then, at that point, just the line can be turned ON/OFF. Whenever there is an upkeep work in the principle line, the line can be separated just when the secret key entered will coordinate with the put away secret phrase. The hand-off ON/OFF activity will be shown by the Led's; additionally, it makes an impression on the beneficiary with regards to the line disengagement. When the support work is done then line man ought to enter a similar secret phrase as used to disengage the line prior.

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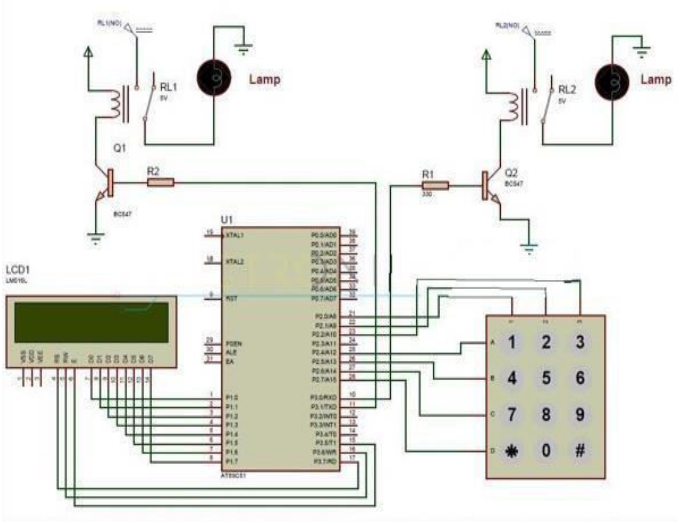

Fig. 1.2 Circuit Diagram

IV. RESULT

This project can be used to ensure the safety of the maintenance staff e.g. line man. The line can be only turned off/on by the line man. This system provides an arrangement such that a password is required to operate the circuit breaker (ON/OFF). Line man can turn off the supply and comfortably repair it, and then turn on the line by entering the correct password. Since it has the provision of changing the password, person can give any password of his will &have his work done safer.

V.CONCLUSION

It can deal with a solitary given known secret phrase. No one else can reclose the breaker until the put away secret key is entered. It gives no extent of secret key taking. It is powerful in giving security to the functioning staff. It is affordable and it very well may be effortlessly introduced.

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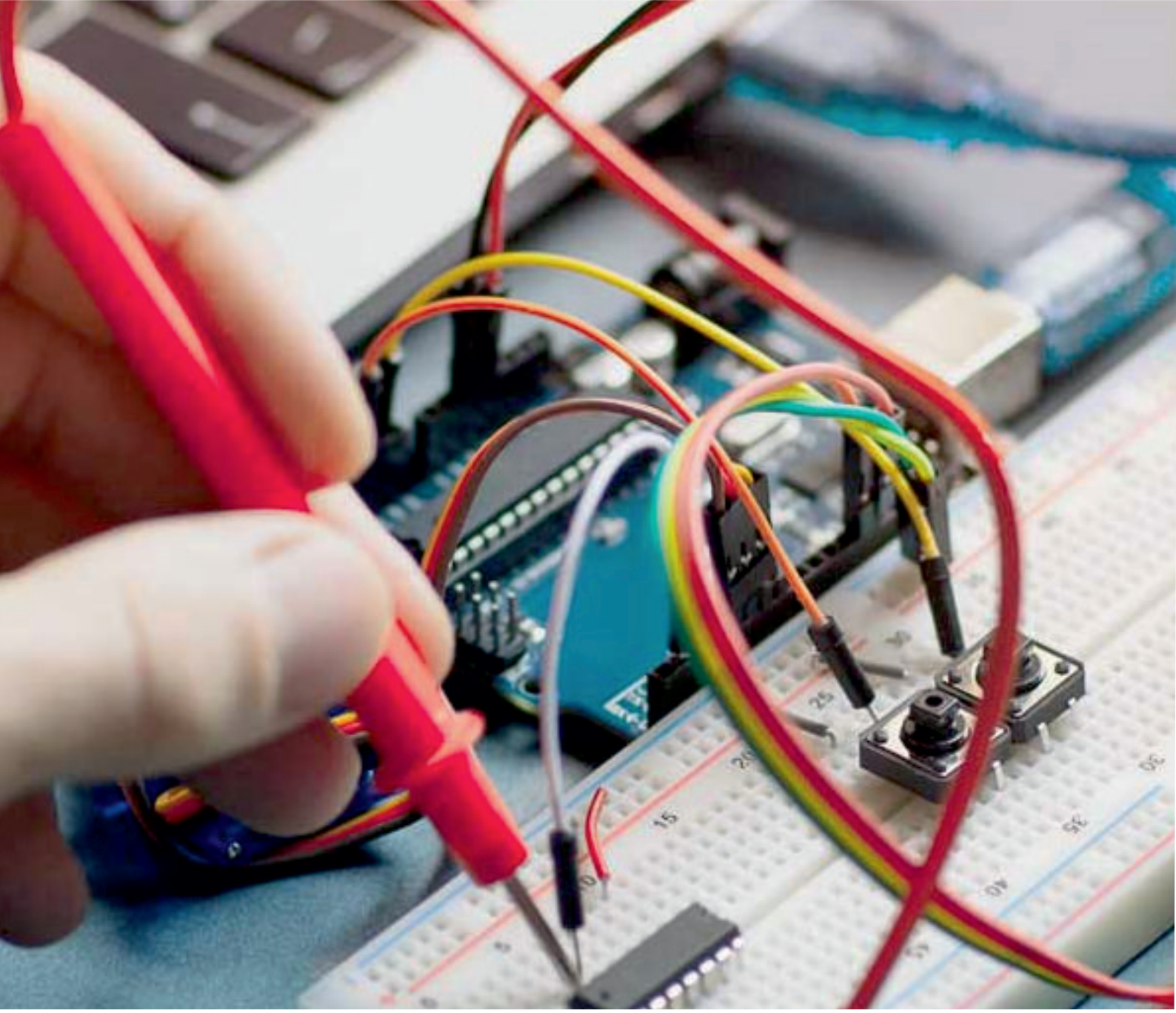

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