

AUTOMATION SUPPLY CONTROL OF SUBSTATION DURING DISASTER

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1. ABSTRACT-

Substation automation is the act of automatically controlling the substation via instrumentation and control devices. Substation automation refers to using data from Intelligent Electronic Devices (IED's), control and automation capabilities within the substation, and control commands from remote users using SCADA to control power-system (switchyard) devices. Substation automation system is commonly used to control, protect and monitor a substation. However, over the years advances in electronics, information and communications technology have brought about sweeping changes in the way substations are operated. The advent of software-based substation automation systems connected by serial links rather than rigid parallel copper wiring gradually became the norm rather

than the exception. Though successful and widely accepted, these systems were based on either the manufacturers' own proprietary communication solutions or the defined use of communication standards from other application domains. Substation Automation (SA) is a system to enable an electric utility to remotely monitor, control and coordinate the distribution components installed in the substation. High speed microprocessor based Remote Terminals Units (RTUs) or Intelligent Electronic Devices (IEDs) are used for substation automation and protection.

2. INTRODUCTION

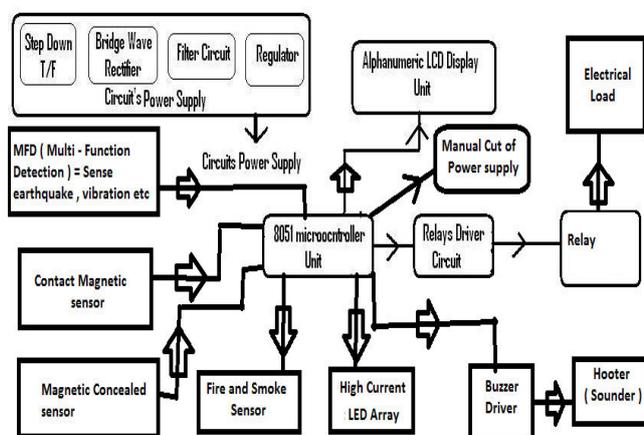
Technology has made a significant place in our life. With advancement of technology things are becoming simpler and easier for us. Automation is the use of control systems and information technologies to reduce the need for human work in the production of goods and services. Automation is a step beyond mechanization. Whereas mechanization provided human operators with machinery to

assist them with the muscular requirements of work, automation greatly decreases the need for human sensory and mental requirements as well. Automation plays an increasingly important role in the world economy and in daily experience. Automatic systems are being preferred over manual system. Through this project we have tried to show automatic control of a cars condition.

In old era it was simple and have tough access to its features. Today this access is not made simple but made automatic using modern era sensors. The automobile industry can be a innovative place if we include all these modern sensor in the industry.

In this project our main aim is to revolutionaries the automobile industry using these sensors and make high cost features cheap. Some of the feature we have include in our project are these.

3. BLOCK DIAGRAM



Electric Power Subsector Profile:

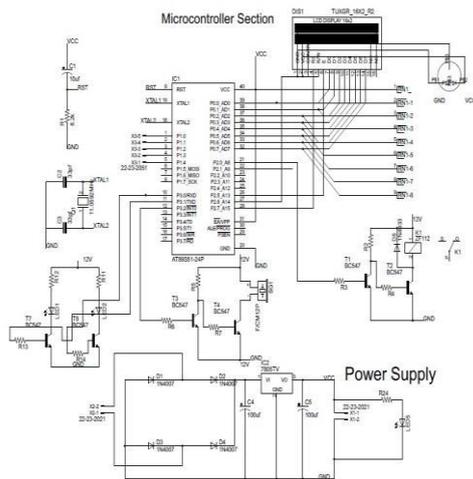
Electricity critical infrastructure assets and facilities are owned by public and private entities. In addition, some types of consumers, such as large industrial complexes and other critical infrastructure facilities, operate cogeneration plants or generators, usually to maintain backup electricity capabilities. A

proliferation of distributed energy sources, mainly photovoltaics (PV), was recorded during the last decade, even to the low voltage level of residential consumers Overall, the electric power subsector faces a paradigm change to a much more horizontal (and complex) system where end-consumers will play a much more active role. It is noted that consumer empowerment is at the core of the EC energy policy as expressed in the Clean Energy Package for all Europeans.

Natural hazards and electric power systems:

— The Proposal for a Regulation of the European Parliament and of the Council on riskpreparedness in the electricity sector discussed in Box 1, the resilience of electric power systems against natural hazards is addressed in several other EU policy areas. — First, Article 6 of the Union Civil Protection Mechanism Decision requires all Participating States (including all 28 EU Member States plus Iceland, Montenegro, Norway, Serbia, the former Yugoslav Republic of Macedonia and Turkey) to develop and regularly update a National Risk Assessment

4. CIRCUIT DIAGRAM



ADVANTAGES

- This setup is relatively simple to design and install.
- This is very useful to all climatic conditions and it is economic friendly.
- Micro controllers make system error free.
- This is safest and no manpower is required.
- 78xx series ICs do not require additional components to provide a constant, regulated source of power, making them easy to use, as well as economical and efficient uses of space. Other voltage regulators may require additional components to set the output voltage level, or to assist in the regulation process. Some other designs (such as a switching power supply) may need substantial engineering expertise to implement.

- B. 78xx series ICs have built-in protection against a circuit drawing too much power. They have protection against overheating and short-circuits, making them quite robust in most applications. In some cases, the current-limiting features of the 78xx devices can provide protection not only for the 78xx itself, but also for other parts of the circuit.

5. CONCLUSION

After working on this project we have reached to the conclusion that this project has proved itself to be very simple, user friendly, cheap in comparison with its utility, accurate and fast. It can be used to establish completely automated control on distanced switching of the motor or other appliances through the mobile of user. Which can further give rise to many other applications.

6. REFERENCE

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