

The biggest section of power system is transmission network. For dependable transmission of electric energy along transmission network, its security and safety is vital for power engineers across the globe, providing a solution is the motivation behind this research work. This paper presents a password based power transmission circuit breaker, with a protection scheme capable of giving an access to a transmission line for free flow of energy as soon as the correct password is inserted. The protection system consists of a keypad, Buzzer, Relay and an ATMEGA2560 microcontroller programmed in C-Language. The system was designed to smartly senses a situation where the correct or wrong password is inserted via the keypad. A relay is triggered to allow free flow of energy through the transmission line as soon as the correct password is pressed whereas in the case of a wrong password entered, access is denied and the buzzer is activated. The results obtained from the test carried out on the prototype system shows that access is granted when the correct password is entered and denied when the wrong password is entered for each transmission line via the keypad likewise the relay opened and closed at the stated condition thereby securing it from unauthorized state.

Keywords— Keypad.; Password; Power System; Protection; Relays; Transformers and Transmission Line