

Islanding Scheme for Microcontroller Based Load Frequency Controller

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Abstract: *This paper is for detecting power sync errors. The actual power grid consists of power sources that are synchronously connected to power the system. These power supplies must be powered according to grid rules. These rules include voltage and frequency fluctuations within certain limits. Deviations from these limits require that this data source be immediately disconnected from the network and affected. This is known as solo operation. It is used to avoid large voltage drops or power outages from the grid. Our system is designed to warn the network of a power failure, so the network can use other backup data sources as needed to avoid a complete power failure. Our system demonstrates this with the ATmega328P microcontroller. MC is used to detect voltage and frequency from a set of comparators. Since the frequency cannot be changed, use the frequency generator (555 timer). Standard variacs are also used to vary the input voltage of the system. Normal loads are used to indicate the expected power outage or power outage if the voltage / frequency deviation exceeds the limit.*

Keywords: Synchronization, Islanding, Voltage and Frequency etc.

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