

Frequency (Hz) Vs Time

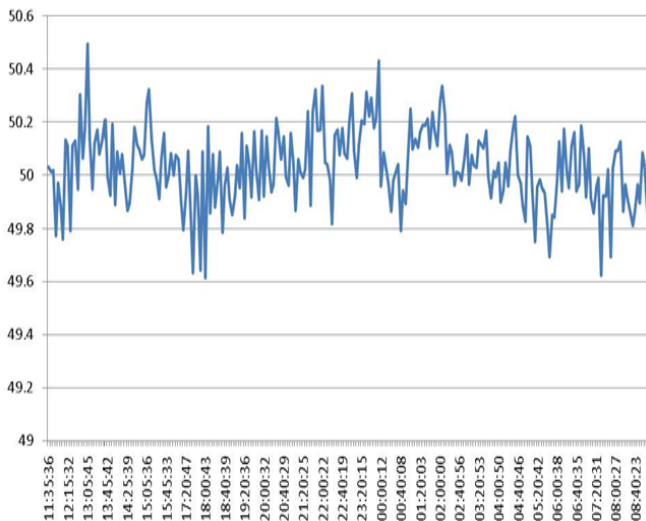


Figure 4: Variation in Frequency with respect to time

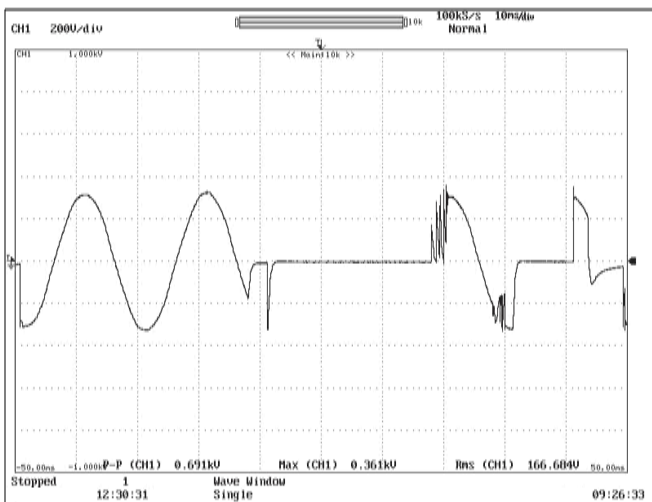


Figure 5: Voltage waveform by oscilloscope

4. Conclusion

The first sign of a power-quality problem is a distortion in the voltage waveform of the power source from a sine wave, or in the amplitude from an established reference level, or a complete interruption. The disturbance can be caused by harmonics in the current or by events in the main voltage supply system. The disturbance can go for a fraction of a cycle (milliseconds) to great durations (seconds to hours) in the voltage supplied by the source.

The aim for method for correction is to make the power source meet an international standard. Power quality problems can basically start at four levels of the system that delivers electric power, first one, includes Power plants and the entire area transmission system. The second one are Transmission lines, major substations whereas third one includes distribution substations, primary, and secondary power lines, and distribution transformers and last and fourth one includes service equipment and building wiring.

In addition, the problems can be caused by the equipment supplied with electric power—for example, power-electronic

converters. Redundancy at all levels of the electric-power system reduces the incidence and duration of line-voltage disturbances.

References

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Author Profile



Surjya Neogy has received his B.Tech degree from Institute of Radiophysics & Electronics, University of Calcutta in the year 2007. He received his B.Sc degree with Physic (H) from the same University prior to his

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