

Use of non-contacting electric and magnetic field sensors in operation and health monitoring of power grids

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Abstract—This work describes design and testing of the new power line sensor. Use of a novel electric field sensing technology is proposed in fault detection and power quality monitoring. The presented solution is a viable alternative to traditional voltage and current transformers used by utility companies. This non-contacting technique is not only safer and easier to install, but also provides ability of detecting events that are beyond the capabilities of traditionally used instruments.