

# Underground Cable Fault Detection and Monitoring System

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**Abstract:** *Underground cables were widely used in the development of the power grid. Underground cables are susceptible to a variety of failures due to subsurface conditions, wear and tear, and rodents. Identifying the source of the fault is difficult because the entire line must be dug to verify the fault on the cable line. Mechanics know exactly which part is at fault and only that area needs to be dug to determine the source of the fault. This saves a lot of time and money and allows for faster maintenance of underground cable lines. The aim of this project is to determine the distance of an underground cable fault from the base station in km.*

**Keywords:** Underground, Fault , Detect , Money , Repairman, Save The Time

## REFERENCES

- [1] "Detection and localization of cable faults by time and frequency domain measurements", Qinghai Shi, Troeltzsch U, Kanoun O. Conf. Systems and Signals and Devices, 7th International conference, Amman.2010; 1-6
- [2] "Underground Cable Fault Location" ,B. Clegg. New York: McGraw- Hill, 1993.
- [3] "A line to ground fault location algorithm for underground cable system", M.-S. Choi, D.-S. Lee , and X. Yang. KIEE Trans. Power Eng., pp. 267–273, Jun. 2005.
- [4] "Computerized underground cable fault location expertise", E. C. Bascom .in Proc. IEEE Power Eng. Soc.General Meeting, Apr. 10–15, 1994, pp. 376–382.J.
- [5] "A Treatise on Electricity and Magnetism, 3rded, vol. 2", Clerk Maxwell. Oxford: Clarendon, 1892, pp.68–73.
- [6] "Detection of incipient faults in distribution underground cables",T. S. Sidhu and Z. Xu, IEEE Trans. Power Del., vol. 25, no. 3, pp. 1363– 1371, Jul. 2010.
- [7] "Detection of Incipient Faults in Distribution Underground Cables", IEEE Transactions on Power Delivery, Tarlochan S. Sidhu, ZhihanXu, Vol. 25, NO. 3, JULY 2010.
- [8] "Locating Underground Cable Faults: A Review and Guideline for New Development", Md. Fakhru Islam, Amanullah M T Oo, Salahuddin. A. Azad1. 2013 IEEE