

## Fault Location Detection in Active Distribution System

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**Abstract :** Recent increase of the DGs and microgrids in distribution systems, disturbs the tradition structure of the system. Coordination between protection devices in such a system becomes the concern of the network operators. This paper presents a new method for fault location detection in the active distribution networks, independent of the fault type or its resistance. The method uses synchronized voltage and current measurements at the interconnection of DG units and is able to adapt to changes in the topology of the system. The method has been tested on a 38-bus distribution system, with very encouraging results.

**Keywords :** fault location detection, active distribution system, micro grids, network operators

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