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APPLICATION OF GSM TECHNOLOGY FOR IDENTIFICATION OF PHASE-TO-GROUND FAULTS IN ELECTRIC NETWORKS WITH ISOLATED NEUTRAL AND PIN-TYPE ISOLATION

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A method for identifying single-phase-to-ground faults through pin isolation in networks with isolated neutral is proposed. It involves installation of devices on each tower of overhead power line. Those devices will be powered by the current of the single phase-to-ground faults. When the short-circuit current flows through the grounding step-down of the tower, the device sends a signal through a GSM network to the control center. It is shown that such devices can be powered even by the minimum values of the fault current, that is why there is no need in further short-circuiting to find the localization of the fault. Estimated the minimum required capacity of the energy accumulator for reliable transmission of the signal through the GSM network. References 5, figures 5.

Key words: electric network, isolated neutral, single phase-to-ground faults, search for a fault location, identification method.

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