APPLICATION OF DIGITAL SYSTEMS TEST FOR VERIFICATION DISTANCE PROTECTION

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Abstract

When configuring a scheduled inspection and remote protection, special protection is performed on a digital basis, there are difficulties in ensuring technical means of verification. In particular, the traditional analog hardware can't provide appropriate accuracy and require significant time costs.

Currently abroad created tools for configuration and testing of relay protection and automation (RPA), as carried out in the analog and the digital principle. Preference is given to devices on a digital basis. These devices allow you to quickly and efficiently set up and perform a comprehensive test of the RPA devices, including distance protection.

The mathematical model of the electrical network, made its digital implementation and created digital module testing system for checking the optimal distance protection.

With the created module:

- Manages device;
- Set options for checking specific devices RZA, including distance protection;
- Generated in digital form to check relay device voltage and current signals are formed by a specific law;
- Given change in output binary signals;
- Displays test results RZA devices;
- Generated test protocols;
- Formed library facilities inspection.

Module test distance protection is designed to configure and test of remote protection of both foreign and domestic firms sold for electromechanical, semiconductor and digital technology.

Using this module allows you to test virtually all the characteristics of distance protection - zones triggering certain steps with regard to acceptable errors, the time characteristics of certain triggering levels, resistance to higher harmonic components, the reaction relay devices for various power system disturbances such as induction course and swing, as well as some other characteristics.