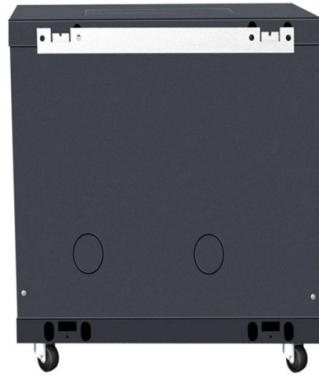


Relay protection tester for low frequency



Overview

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Key Takeaways

Relay protection testers for low-frequency applications provide multi-phase current and voltage outputs, low-level input simulation, and precise waveform generation for testing both traditional and modern protection relays.

Key Features of Low-Frequency Relay Testers



Multi-Phase Outputs: Modern testers, such as the LND-802 and HVTestPro systems, offer up to six-phase current and four-phase voltage outputs, enabling comprehensive testing of transformer differential protection, overcurrent, and distance relays (LND-802, HVTestPro) . **Low-Level Input Simulation:** Devices like the SVERKER900 LPIT101 adapter simulate low-level outputs from Rogowski coils and LPVTs, accurately reproducing frequency variations, harmonics, and transient conditions for relays with low-level inputs (SVERKER900 LPIT101) . **High Accuracy and Waveform Quality:** Testers employ DSP and FPGA-based control with high-resolution DACs to generate high-fidelity sine waves, ensuring precise current and voltage outputs even at small amplitudes, which is critical for low-frequency testing (LND-802, HVTestPro) . **Software and Automation:** Advanced software platforms, such as OMICRON's Test Universe, allow automated testing, relay simulation, fault playback, and parameter verification independent of relay type or manufacturer. This facilitates efficient low-frequency testing and system-based protection verification (CMC 356) . **Field and Laboratory Use:** Many testers are portable and can be connected directly to laptops or industrial PCs, making them suitable for both on-site commissioning and laboratory testing. They often include self-diagnosis, heat dissipation, and soft-start features for safe operation (HVTestPro, LND-802) . **Primary Injection Capability:** Some testers, like the CMC 356, support high-current primary injection, which is useful for testing high-burden electromechanical relays and verifying current transformer wiring and plausibility (CMC 356) .

Examples of Low-Frequency Relay Testers

- **LND-802 Microcomputer Relay Protection Tester:** Offers four-phase voltage and three-phase current outputs, DSP + FPGA control, high-fidelity waveform generation, and Windows XP-based interface for intuitive operation .
- **CMC 356 (OMICRON):** Universal six-phase tester with high dynamic range, low-level outputs for LPCT/LPVT simulation, and modular software for automated system-based testing .
- **SVERKER900 LPIT101 Adapter (Megger):** Specialized for low-level input relays, simulating LPCT and LPVT signals with harmonics and transient conditions .
- **HVTestPro Relay Protection Tester:** Supports six-phase outputs, high-fidelity linear amplifiers, automated calibration, fault playback, and three-phase differential protection testing .

Conclusion

For low-frequency relay protection testing, the ideal tester should combine multi-phase output capability, low-level input simulation, high waveform fidelity, and advanced software automation. Devices like the LND-802, CMC 356, SVERKER900 LPIT101, and HVTestPro provide versatile solutions for both field and laboratory applications, ensuring accurate and reliable testing of modern and traditional protection relays.

Article Content

KINGSINE KFA320 Mini Universal Protection Relay Test Set

The Kingsine KFA320 handheld mini protection relay test set utilizes innovative technology, module design, and a simple internal

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