Comprehensive testing of coils and transformers

By combining Hioki measuring instruments, it is possible to conduct comprehensive reliability testing of coils and transformers.

*If impulse testing is required, Hioki instruments can be combined with products from other manufacturers.

Key information
In reliability testing of coils and transformers, an overall pass or fail result is determined by means of insulation resistance measurement, dielectric withstand testing, resistance measurement, and impulse testing.

Coils and transformers, which must deliver a high level of reliability, are subject to insulation resistance measurement, dielectric withstand testing, resistance measurement, and impulse testing. Since instruments recommended by Hioki for use in this type of application can be controlled using their RS-232C or GP-IB interface, it is possible to build a reliability testing system using a computer or PLC. Because the High Voltage Scanner 3930 supports operation in either multi mode (switchable among four channels at user-defined points) or single mode (switchable among eight channels between common and high) and connection of up to four modules, this solution offers a high degree of design freedom so that you can create an architecture that meets the needs of your system.

*A separate instrument from another manufacturer is necessary in order to carry out impulse testing. For detailed impulse tester specifications, please refer to documentation from an impulse tester manufacturer.

Products used:
Resistance Meter RM3545
Automatic Insulation/Withstanding HiTester 3153
High Voltage Scanner 3930

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The information in this Application Note was compiled in February 2014. It may be altered or revised without notice.