

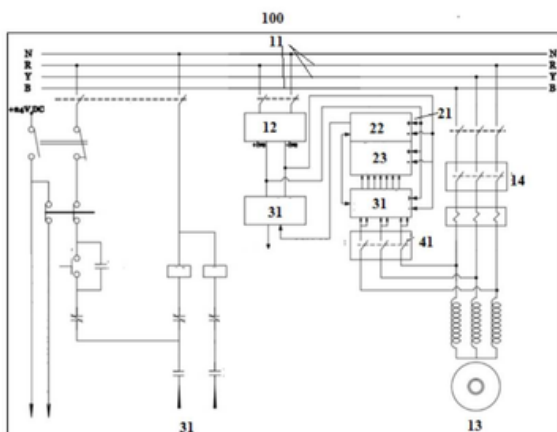
SYSTEM AND METHOD FOR AUTOMATIC MOTOR WINDING RESISTANCE TESTING

Seeking parties interested in licensing and commercialization of technology.

Technology Brief

This technology provides an automated system and method for testing the stator winding resistance of a three-phase induction motor before operation. Controlled by a Programmable Logic Controller (PLC) with an integrated RTD module, the system automatically isolates the main AC power source via a dedicated checking contactor and logic relay units before measuring resistance sequentially across all phase terminals (R-Y, Y-B, B-R). The PLC compares the measured values against each other and predefined thresholds in memory; if the readings are balanced and within safe limits, the main contactor is engaged to start the motor, while any detected fault prevents startup to eliminate the risk of motor burnout.

Block Diagram



Technical Applications

This technology is primarily applied in electric vehicle (EV) powertrains, automated industrial manufacturing lines, and heavy industrial motor control centers where pre-operational safety checks are critical. It is well suited for integration into continuous-duty pump systems, HVAC plant equipment, conveyor drives, and OEM motor testing rigs to automate fault detection, prevent sudden motor burnouts, and improve uptime without manual diagnostic intervention.

Salient Features

- ✓ Automated Isolation & Testing
- ✓ PLC & RTD Driven Precision
- ✓ Fault-Protected Safe Startup

Glimpse of the Technology



REFERENCE NUMBER

iTNT-TECH-0181



TECHNOLOGY SECTOR

Automobile, Auto-components & EV



IP STATUS

Patent Granted



APPLICATION NUMBER

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TECHNOLOGY READINESS LEVEL

TRL 4

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