



Millington, TN > 901-873-5300  
Little Rock, AR > 501-375-9178

## **PdMA Motor Testing Service**

Combining the latest technology, analysis, and information systems, the PdMA MCEMAX is a complete motor / asset management tool for today's motor management needs.

Powered by MCEGold software, the PdMA MCEMAX offers the most versatile approach to troubleshooting and trending electric motor performance. With MCEGold software the entire test history of your electric motor along with the latest in acceptance criteria from IEEE and NEMA is at our fingertips.

MCEMAX provides dynamic (on-line) and static (off-line) testing for all types of motors and generators including AC Induction, Synchronous, Wound Rotor, and DC motors. So, whether your motor is running or shutdown, Hi-Speed can provide you an accurate and comprehensive health assessment of your components condition.

### **Benefits**

-  **Reduction in unexpected motor failures**
-  **Less down time, less scrap materials, better inventory controls**
-  **Improved quality assurance**
-  **Energy Cost Analysis**



Visit [www.GoHiSpeed.com](http://www.GoHiSpeed.com) to learn more about Hi-Speed Industrial Service.





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## PdMA Testing Capabilities

### Stator • Power Circuit • Power Quality • Air Gap • Rotor • Insulation

#### • Stator

Phase-to-Phase resistance, inductance, impedance, and current imbalances are used to determine turn or phase shorts as well as faulty internal connections. PdMA testing evaluates incoming power quality and alerts the user if the distortion or harmonic content exceeds IEEE limits.

#### • Power Circuit

All connections, components, and cables between the MCC and the motor must be resistively balanced. Potential problems occur when loose or corroded connections are introduced in a circuit. PdMA testing compares each phase of resistance, current, and voltage to ensure a perfect balance.

#### • Power Quality

The power being fed to a motor is the fuel it needs to operate efficiently. PdMA testing monitors three phases of voltage and current, and alerts users when an unhealthy condition exists.

#### • Air Gap

Bowed shafts, cocked end rings, and degraded bearing journals create magnetic imbalances. These imbalances show up as 1st & 3rd sidebands around eccentricity frequency or as a “bow tie” shape on the Rotor Influence Check (RIC). Air Gap analysis checks for non-symmetry or eccentricity.

#### • Rotor

Identify cracked / broken rotor bars, shorted iron, porosity, and high resistance connections on the end rings through motor current signature analysis (MCSA) and the Rotor Influence Check (RIC)

#### • Insulation

Resistance-to-Ground values for motor windings decrease as moisture, humidity, and contamination increases. PdMA provides testing capabilities up to 5000VDC and offers continuous graphing polarization index (PI) testing as well as automated step voltage tests to safely confirm winding integrity and check for deterioration.

Combined with Hi-Speed's full suite of Predictive Maintenance services, PdMA Testing provides you the opportunity to operate at maximum efficiency, minimize production losses, decrease operating costs, and increase profitability!

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