MotorDoc® EMPOWER™

Electric Motor Performance Optimization
Waveform Evaluation and Recognition

MotorDoc® Motor Current Signature Analyzer

MotorDoc LLC

Doing what everyone else just talks about

Available Options

- *EMPOWER Basic: Upload and view data and spectra
- *EMPOWER Induction: Upload, view, organize, reporting, and auto-analyze motors and driven equipment
- **EMPOWER Synchronous: Same as Induction except it works on synchronous motors
- **EMPOWER DC Motors: For DC motors.
- **EMPOWER Windpower
- More on the way

* Beta available October, 2024. Version 1 in January, 2025.

** Spring 2025

EMPOWER is designed to use the airgap of an electric machine as the vibration transducer for detecting electrical and mechanical defects and degradation in an electric motor, coupling and driven equipment.

This includes the detection of component and bearing conditions through couplings, gearboxes and belts.

The MotorDoc line of MCSA devices and software provide basic to advanced users a trustworthy and affordable method to address any size electric motor system with simple readings, regardless of voltage or current rating.

The basic package allows the user to take data either directly or via relay CTs and view the wave-forms and can take data with any BNC mV/Amp style clamp-on (or fixed) Current Transformer or Rogowski coil.

The advanced packages provide built-in analytics for virtually any type of electric machinery and driven equipment - analytics using a rules-based expert system at the click of a button that will also provide visual representation so that analysts can learn as they go.

Data is loaded into a Windows® based computer or tablet as a *.wav file which allows for enhanced analysis and trending using any basic data analytic system, including MotorDocAI specialized AI/ML/Cloud and our Time to Failure Analytics TTFE system.

The use of cloud-systems is not required and all data may be kept locally.

Registered users receive free minor updates and additional tools as they are developed in addition to technical support and free online pre-recorded training.

Advanced training is available online or on-site.

Energy and emissions associated with defects are estimated based on machine voltage and several load assumptions and included in reporting from the advanced systems.

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TECHPRO PLUS

Induction Motor Package (Advanced)

Power/Motor	EMPOWER
Induction Motor	X
Wound Rotor	X
Rotor Bars	X
Bearings	X
Wedges	X
Winding Stress & PD	X
kW Loss by Defect	Estimated
CO2 Emissions	Estimated
Inrush Analysis	V. 1.5
Continuous Monitoring	V. 2.0
Static and Dynamic Eccentricity	X
Winding and Core Looseness	X
Weighs less than 0.5 lbs	X
Pumps/Fans	X
Pump/Fan Bearings	X
Gearbox Gears	X
Gearbox Bearings	X
Belt and Sheave	X
Belt Slip	X
Lubrication	X
Soft Foot	X
Ground	X

Laptop/PC/Tablet Requirements

- Windows 10, 11
- 248 GB storage or more
- 8 GB Ram
- 1048 x 768 screen resolution or better
- USB 3.0 or USBc Comm and Power
- Sound card 44.1kHz, 24 bit
- Note: Software is stand-alone

MOTORDOC LLC

VOSB

EASA The Electro-Mechanical Authority EUROPEAN & WORLD CHAPTER

AWEA Business Member

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