

FMA-4 FFT and Motion Analyzer[®]

Advanced Analyzer for Requirements in the Field



Motion/FFT Analyzers

FFT and Motion Analyzer

Compact, highly portable, and lightweight state-of-the-art solution for performing vibration FFT and Motion analysis in the field



M.E.A. Testing Systems Ltd.
www.meatesting.com

FMA 4 - An Advanced FFT and Motion Analyzer for Sophisticated Requirements in the Field



This easy-to-use FFT and motion analyzer is designed for the most modern needs in on-site measurements. The M.E.A. FFT and Motion Analyzer is based on a last-generation, state-of-the-art ultra mobile personal computer (UMPC), of a reduced size. The system delivers quick and highly accurate measurements and analysis, yet is exceptionally easy to use. All modern on-site requirements are integrated into its compact and lightweight body. The high-performance multifunctional M.E.A. FFT and Motion Analyzer is emerging as the new standard for modern-day field testers.

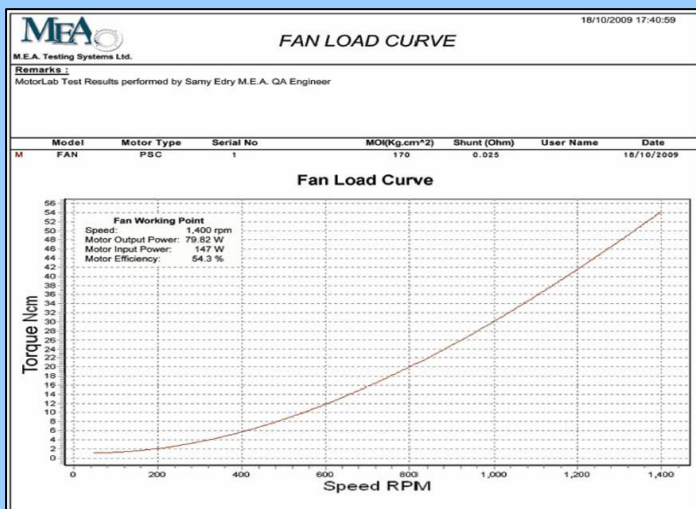
FMA 4 Capabilities

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|---|---|
| <ol style="list-style-type: none"> 1. Real time behavior of rotating/moving systems (speed-time and speed spectrum, torque-time, torque spectrum). 2. Analysis of current/voltage waveform for analyzing vibration, noise, pressure, strain, etc., with same time/frequency base. 3. <i>Voltage range: Flexible, according to the adapted accessories; can go from 10mVr to 230Vr.</i> 4. <i>Frequency range: 10mHz - 200KHz.</i> 5. Data recording according to user pre-defined data sampling time. 6. Flexible Data Sharing. 7. Data is saved simultaneously in different data formats. | <ol style="list-style-type: none"> 8. Test reports presented in PDF and Excel format. 9. Direct connection via USB. 10. Lightweight handy unit, compact and very highly portable for all sites. 11. 3 hours of battery operation. 12. Touch Panel Operation with option for flexible computer keyboard, Windows 7, Vista, or XP TM operating system, with standard USB port, SD memory Card; includes most of general-purpose standard PC interfaces, allowing easy data sharing in the existing environment. 13. Accepts large capacity external memory cards. 14. Printing capabilities. |
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Unique Capabilities (Example)

By using input data, the FMA-4 gives:

- Motor's efficiency on the application
- Motor's output power on the application
- Application's Working Speed
- Application's Speed vs. Friction Torque / Load Curve (Fan, Pump, Valve, etc.)

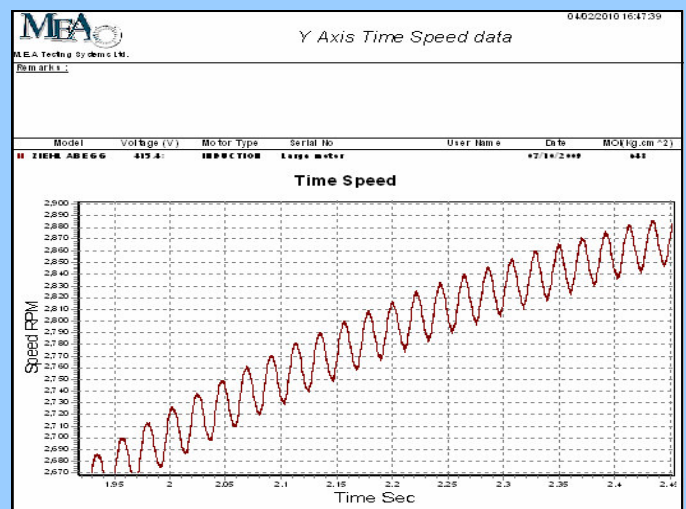


Fan-Load vs. Speed

Standard Capabilities (Example)

Time axis data for:

- Simultaneously, 2 channels of speed sensors (encoders, revolvers, sine/cosine, etc.)
- 12 analog input signals
- 8 digital input/output signals

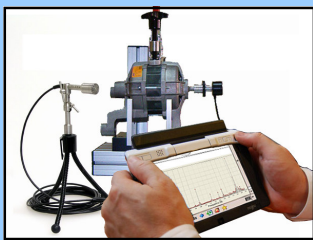


Time vs. Speed

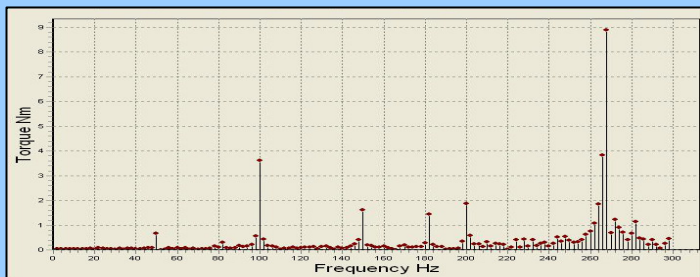
Standard Capabilities (Example)

Noise, Vibration & Torque Measurements

- Option for directly read values as Voltage (V) and Current (I).
- For each sensor, waveform values are converted to physical quantities when displayed, eliminating the need to convert from voltage values to physical quantities (Noise [dB(A)], Vibration [m/S²], Pressure [kg/cm²], Strain [kg], etc.).
- Gives Dynamic Torque data



Microphone - Noise data dB(A)



Torque Spectrum

Standard Capabilities (Example)

Noise & Vibration Measurements in sharing with Rotating measurements

- All data can be displayed as time-domain data and frequency domain.
- Give the user the option to create limits for all frequency ranges.
- The Analyzer works on Windows 7, Vista, and XP TM platforms, therefore enabling different mathematical functions, such as coherence function, for evaluating the linearity and correlation of input and output of a transmission system.

Additional special capabilities, determining:

1. which rotational speeds increase noise and vibration
2. which rotating parts cause noise and vibration
3. which speeds create the largest noise
4. other...

- Customized solutions
- Customer support
- Technical services
- 1-Year warranty
- Optional extended warranty program
- Local sales offices throughout the world