

LMS Qsources Excitation Hardware Product portfolio

Simcenter solutions

Intro

The LMS Qsources product range has been designed for fast and accurate Transfer Function testing and includes electrodynamic inertia shakers. The force level is sufficient for full vehicle excitation. The internal suspension decouples the inert mass dynamically from the test structure minimizing mass loading and enabling fast installation without time consuming alignment work and the need for external support. Integrated force and acceleration sensors result in high accuracy FRFs.

Features Shakers

- Patented internal decoupling suspension
- Compact design
- Internal reference sensors

Benefits Shakers

- Minimum mass loading
- Self-supporting and self-aligning
- Excitation possible in any orientation
- Excite there where no one has excited before

High Frequency shaker



- Frequency range: 500 – 10 000 Hz
- Dynamic mass loading: 2 grams
- Integrated force sensor
- Force: 0.8N rms

Miniature Shaker



- Frequency range: 50 – 5 000 Hz
- Integrated force and acceleration sensor
- Force: 2 Nrms

Integral Shaker



- Frequency range: 20 – 2 000 Hz
- Integrated force and acceleration sensor
- Allround: component to full vehicle FRF
- Force: 7 Nrms

Thumper Shaker



- Excitation possible from 5 Hz
- Long stroke suspension
- Integrated force sensor
- Force: 25N rms

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Features Sources

- Internal sound Source strength sensors
- Reciprocal and direct excitation
- Wide Frequency range

Benefits Sources

- Compact design
- Monopole source characteristic
- Full frequency range
- Compatible with LMS Testlab Spectral and MIMO FRF

Low Freq. Monopole Source



- Dual driver technology
- Cavity FRF from 5Hz
- Vehicle Body reciprocal FRF from 30Hz
- Monopole until 1 000 Hz
- Internal source strength sensor

Miniature Source



- Frequency range: 50 – 1 000 Hz
- Highly compact design with very low diffraction
- Nearfield acoustic FRF

Mid High Frequency Source



- Frequency range: 150 – 10 000 Hz
- Real-time volume acceleration reference signal
- Monopole characteristic
- Nozzle diameter: Ø30mm
- Nozzle aperture: Ø10mm

Measurement Power Amplifier



- Accurate amplification
- Frequency range: 4 – 40 000 Hz
- High pass filter

Low Mid Frequency Source



- Frequency range: 10 – 1 000 Hz
- Real-time volume acceleration reference signal
- Human torso diffraction effect

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