

INGENIERIA ELECTRONICA APLICADA A LAS VIBRACIONES

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IRD Mechanalysis Ltd



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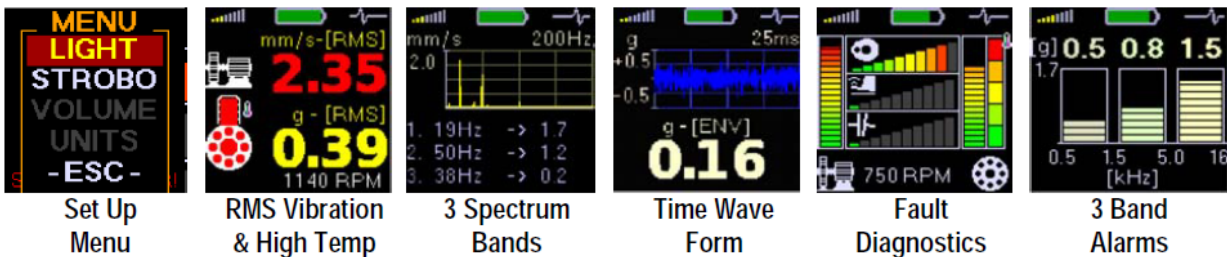
PRODUCT DATA SHEET
IRD449 Vibration Diagnostic SmartMeter



The IRD449 is a portable multi-function SmartMeter that bridges the gap between the overall level vibration meter and the advanced FFT data collector / analyser and associated analysis software. It is a complete machine condition diagnostic tool that produces results on-site without the need for a computer. It is designed for the technician, engineer and consultant who require portability, ease of use and speed to identify prime machinery faults without taking expensive delicate instruments to plant sites. It is the ideal replacement for the IRD838 basic analyser.

This single instrument undertakes overall Vibration Measurement, Three Band FFT Spectrum, Time Wave Form, Diagnostics, Temperature, a Tacho for speed and Stroboscope. In addition it incorporates a handy inspection torch.

The IRD449 caters to ISO 10816-3 with expert rules covering machinery health vibration levels: that identifies prime machine faults: Unbalance, Looseness and Alignment. An anti-friction bearing health level indication is also incorporated. Below is a selection of the many informative screens available:



Do your machines work under optimum conditions? The IRD449 will:

- Determine the condition of your bearings, including slower-running rotors (120rpm)
- Identify insufficiently lubricated bearings
- Indicate unbalance, looseness, misalignment
- Check machine speed, unbalance and alignment etc by built-in stroboscope
- Measure in either Metric or English units



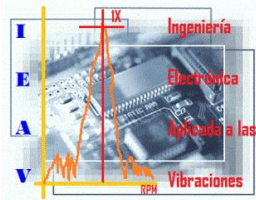
Operation of IRD449 is easily learned. The screen displays machine status in colours green, orange and red. Determination of individual machine or bearings defect types is undertaken directly during the measurement process without the need of a computer or software.

While the IRD449 is big in performance, it is compact, rugged and fits in the palm of the hand.

The model IRD449 takes a variety of measurements as selected:

- Overall RMS and PEAK velocity (10 - 1000 Hz)
- Overall RMS and PEAK acceleration (500 - 16 000 Hz)
- Overall RMS and PEAK displacement (2 - 100 Hz)
- Velocity Spectrum (200 Lines FFT)

The IRD449 is supplied complete with standard accessories: accelerometer, coiled cable, magnetic base, headphones and carry case. The headphones enable one to listen to machinery noise related to vibration and effects of the process. When measuring transmissions or slow-running bearings, the benefit of the headphone accessory is readily appreciated.



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IRD449 Vibration Diagnostic SmartMeter



TECHNICAL SPECIFICATION

Measurements:

Input

- 1 x ICP powered accelerometer

Input Range

- 60g PEAK, with standard 100mV/g sensor
 - (e.g. for 600g PEAK 10mV/g sensor, sensitivity is programmable in the IRD449.)

DETECTION	UNITS	FREQUENCY - RANGE	DISPLAY
RMS	mm/sec, ips	10-1,000 (opt. 1-1,000) Hz	0-999
PEAK	mm/sec, ips	10-1,000 (opt. 1-1,000) Hz	0-999
RMS	G	500-16,000Hz	0-999
RMS	G	1500-16,000Hz	0-999
RMS	G	5000-16,000Hz	0-999
RMS	um, mil	2-200Hz	0-999
PEAK	um, mil	2-200Hz	0-999
Time Wave Form	G	500-16,000Hz	0-999
FFT Spectrum	mm/s, ips	4-200Hz	0-999
Temperature	°C, °F	0-380 °C, (32-716 °F)	°C, °F

Display

- Colour OLED, 128 x 128 pixels, diagonal 1.5" (38mm)

Stroboscope

- High intensity LED, 10 – 18000RPM (0.17-300Hz)

Torch

- High intensity LED

Output

- 1 AC signal 8 Ω /0.5W for external headphones (signal listening)

Power:

- 2xAA 1.5V (alkaline, NiMH, LiFe), Battery condition indicated on meter display

Environmental

- Operating temp -5°C to 50°C, Storage temp: - -20°C to 65°C

Packaging

- Aluminium with dust and splash proof seal; quick access for change of batteries
 Carrying case with internal protective foam

Weight & Dimensions

Instrument only:

- 350g. (with batteries)

Instrument with Accessories:

- 1 Kg. (complete with accessories in carrying case)

Dimensions (Instrument):

-150mm (L) × 60mm (W) × 35mm (H)

BILL OF MATERIALS	Qty	Part Number
Model IRD449 Vibration Diagnostic SmartMeter		M449001
Sensor Accelerometer, model IRD511, 2-10KHz, 100mV/g, Top Exit, Mil 2 Pin, 1/4"-28UNF Female Mounting Thread with National Traceable Cal. Cert.	1	M5111005001000
Cable for model IRD449 Binder to accelerometer IRD511 expandable to 2.5m	1	M60164
Magnetic holder for IRD511 Accelerometer	1	M24746
Prod (Stinger) AI Straight for Sensor	1	M11030
Headphones with Ear Defenders	1	M91208
Carrying Case	1	M25352
Manual - Operating instructions in English and CD	1	M44999

IRD **Mechanalysis**® Ltd continues to be an industry leading provider of Condition Management Solutions. With a heritage of over 60 years experience in machinery vibration and associated technologies, IRD designs, manufactures and supports proven instrumentation suitable for harsh industrial environments.

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IRD Mechanalysis Ltd. strives to continue to improve the above specification and retains the right to change them without notice

condition management solutions