

INGENIERIA ELECTRONICA APLICADA A LAS VIBRACIONES

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IRD Mechanalysis® Ltd



PRODUCT INFORMATION

IRD811 Vibration Spike Energy Detector



The IRD Mechanalysis model IRD811 plays a dual role in machinery maintenance: - It is used for periodic vibration checks for unbalance, misalignment, looseness, etc. With an industry standard high frequency detection circuit, it pinpoints incipient bearing and gear deterioration.

Its solid-state circuitry provides wide dynamic range and long battery life. From precision bearing inspection to plant-wide maintenance, the IRD811 has the sensitivity for measuring fractions of a micrometer to 3000 micrometers with 8 easy to read overlapping ranges.

The IRD811 also includes the widely acclaimed IRD Spike Energy™ (gSE™) circuit. The broadband measurement of gSE units has proved to have the advantage of simplicity and earlier warning of bearing and gear defects.

By detecting and measuring “bursts” of Spike Energy at ultrasonic frequencies, bearing defects such as micro spalls, cracks and lack of lubrication can be quickly identified.

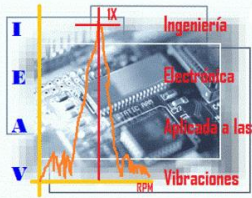


BILL OF MATERIALS	Qty	Part Number
IRD811 Vibration Spike Energy Detector with Std Accessories:		M81101
Sensor Accelerometer, model IRD511, Standard, 2-10KHz, 100mV/g, Top Exit, Mil 2 Pin, 1/4"-28UNF Female Mounting Thread with National Traceable Cal. Cert.	1	M5111005001000
Cable Assembly for IRD511 Sensor, 1.5m length, rubber insulated, shielded	2	M60021
Magnetic Portable Base, IRD500 Series Accelerometers	1	M24828
Stinger, Al 225mm long for Sensor	1	M24827
Battery Set, 3 Nos. of 9V, 100mAH Dry Cells for model IRD811	1	M30643
Carrying Case	1	M25345
Manual Operating	1	M21072

Optional Accessories	Part Number
Inductive Velocity Sensor model IRD544	M45260
Cable Assembly for IRD544 Sensor, 8m length, rubber & shielded	M21045
Magnetic Portable Base, IRD544 Inductive Velocity Sensors	M24823
Magnetic Deflecting Shroud for IRD544 Sensor	M60017
Cable Assembly for IRD511 Accel, 8m length, rubber & shielded	M21044
Scope/Analyser AC output Cable	M58570
Manual Training - IRD MVT1	M51001
Shaft Fish Tail Stick - Absolute Vibration IRD500 Series Sensors	M24824

Frequency – with Accelerometer

Displacement (350 CPM):	- 350 to 60,000 CPM	(5.8 Hz to 1,000Hz)
Displacement (1400 CPM):	- 1400 to 60,000 CPM	(23.3 Hz to 1,000 Hz)
Velocity:	- 350 to 600,000 CPM	(5.8 Hz to 10,000 Hz)
Acceleration:	- 350 to 600,000 CPM	(5.8 Hz to 10,000 Hz)
Bearing/Gear	- Up to ultrasonic frequencies	
RMS	- V _{RMS} – vibration severity evaluation as per ISO 10816-3	



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Measurement Ranges

Acceleration Range:	- 0 to 100 g Pk in 8 overlapping ranges
Bearing/Gear Check Range:	- 0 to 100 gSE™ in 8 overlapping ranges
Spike Energy:	- Special circuit designed to detect gSE™
Displacement Range:	- 0 to 3,000 microns Pk to Pk in 8 overlapping ranges
Velocity Range:	- 0 to 3,000 mm/sec Pk in 8 overlapping ranges

Frequency – with IRD544 velocity sensor

Displacement (350 CPM):	- 600 to 60,000 CPM	(10 Hz to 1,000 Hz)
Displacement (1400 CPM):	- 1400 to 60,000 CPM	(23.3 Hz to 1,000 Hz)
Velocity:	- 600 to 60,000 CPM	(10 Hz to 1,000 Hz)

Input / Output

Inputs:	- Accelerometer/ IRD544 Velocity Sensor
Outputs:	- Analog amplitude meter, microns, mm/sec, g, gSE™
	- Time Waveform (TWF) signal for Scope/Tape Recorder/Analyser

Power Requirements

Internal Batteries:	- Battery Set, 3 Nos. of 9V, 100mAH Dry Cells
Battery Test:	- Battery condition indicated on meter front

Environmental

Operating temp:	- -1°C to 65°C
Storage temp:	- -20°C to 65°C

Packaging

Enclosure:	- Aluminium with dust and splash proof seal
Battery compartment:	- Easy access for quick change of batteries
Carrying case:	- Good quality rugged leather case for space provided for instrument and standard accessories

Weight & Dimensions

Instrument:	- 1.05 Kg
Dimensions:	- 210mm (L) × 116mm (W) × 78mm (H)
Weight:	- 2.50 Kg (inc. meter, standard accessories housed in the carrying case)

Optional Extras: IRD544 inductive velocity sensor and shaft stick for absolute vibration measurements, details above



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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