



## PRODUCT INFORMATION

### MIL811 Vibration Spike Energy Detector (Accelerometer)

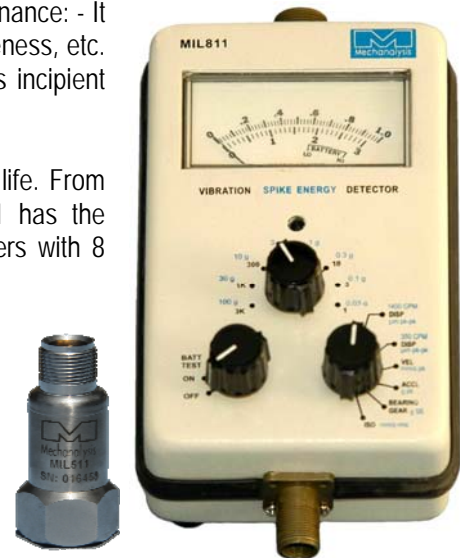
Part Number M81101

The Mechanalysis model MIL811 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 MIL811 has the sensitivity for measuring fractions of a micrometer to 3000 micrometers with 8 easy to read overlapping ranges.

The MIL811 also includes the widely acclaimed IRD Spike energy circuit. The broadband measurement of Spike Energy (units of gSETM) 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, defects such as micro spalls and cracks and lack of lubrication can be quickly identified.



#### Standard Accessories

Sensor Accelerometer, model MIL511, Standard, 2-10KHz, 100mV/g, Top Exit, Mil 2 Pin, 1/4"-28UNF Female Mounting Thread with National Traceable Cal. Cert.  
 Cable Assembly for model MIL811 to MIL511 accelerometer - 1.2m (4ft), rubber insulated, shielded  
 9" Straight Prod (Stinger)  
 Battery Set, 3 Nos. of 9V, 100mAH Dry Cells for model MIL811  
 Carrying Case  
 Manual Operating

Qty	Part Number
1	M5111005001000
2	M60021
1	M11030
1	M30643
1	M25345
1	M21072

#### Optional Accessories

Inductive Velocity Sensor model MIL544  
 Cable for Model MIL544 Sensor 1.21m (4 ft)  
 Cable for Model MIL544 Sensor 7.62m (25 ft)  
 Cable for MIL accelerometers 7.62m (25 ft)  
 Magnetic Holder for MIL544 Inductive Velocity Sensors  
 Magnetic Holder for MIL Accelerometers  
 Magnetic Shield for model MIL544 Sensor  
 Scope/Analyser AC output  
 Manual Training - Mechanalysis Vibration Technology 1  
 Absolute Shaft Vibration Measuring Stick for MIL sensors

Part Number
M45260
M20432
M21045
M21044
M43320
M24746
M60017
M58570
M51001
M24750

#### 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 RMS	- Up to ultrasonic frequencies	
	- $V_{RMS}$ – vibration severity evaluation as per ISO 10816-3	

## PRODUCT INFORMATION

### 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 MIL544 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/ MIL544 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)

™ Spike Energy and gSE is a trademark of IRD Mechanalysis Inc.

Optional Extras: MIL544 inductive velocity sensor and shaft stick for absolute vibration measurements, details above



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

The Vibration People of Mechanalysis (India) Ltd can be contacted at any one of the following Branches

Mumbai	Delhi	Kolkata	Chennai
Tel: +91(0)22-2852-0178 Fax: +91(0)22-2852-1814 <a href="mailto:mumsa@mechanalysisindia.com">mumsa@mechanalysisindia.com</a>	Tel: +91(0)11-2237-3916 Fax: +91(0)11-2237-0778 <a href="mailto:delsa@mechanalysisindia.com">delsa@mechanalysisindia.com</a>	Tel: +91(0)33-2355-2062 Fax: +91(0)33-2355-9214 <a href="mailto:kolsa@mechanalysisindia.com">kolsa@mechanalysisindia.com</a>	Tel: +91(0)44-2823-0726 Fax: +91(0)44-2823-4702 <a href="mailto:chensa@mechanalysisindia.com">chensa@mechanalysisindia.com</a>