

# VM516A0

# Vibration Meter

Hand-held Vibration meter(VM516A0) is a portable and easy to use instrument which is used in conjunction with Integrated Electronics Piezoelectric (IEPE) accelerometers to measure mechanical vibrations in terms of acceleration, velocity and displacement. It is suitable for both laboratory and field conditions.

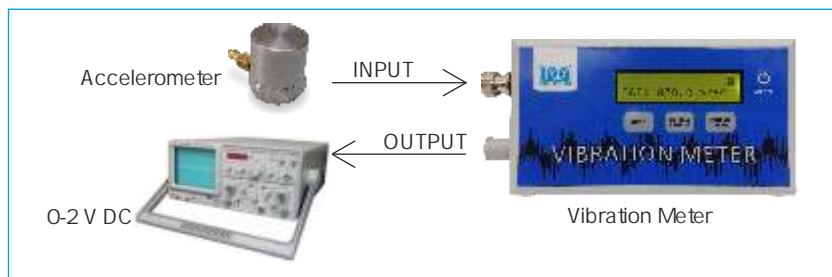
This instrument can be used to monitor vibration levels in production machines on a periodic basis, so that action can be taken before a complete machine failure. Its operation is simple and quite suitable for use by non-scientific personnel not conversant with electronic instrumentation. In combination with IPA piezoelectric accelerometers the unit provides direct read out of vibration parameters on a LCD screen in both Metric and Imperial units. The device uses a 2200mah rechargeable battery which gives a battery life up to 70hrs continuously following a full charge. It features a dedicated power save button for extended battery life. An output of 2V DC (F.S) is available for recording purpose.

## Applications

- Industrial Blowers
- Industrial Gearboxes
- Cooling Towers
- Centrifuges and Decanters
- Electric Motors
- Centrifugal Pumps
- Diesel Engines
- Test Benches
- Small Turbines
- Conveyers



## BLOCK DIAGRAM



## TECHNICAL SPECIFICATIONS

### SENSOR UNIT

#### Electrical

Current Excitation	: 2-20mA
Excitation voltage	: 5 to 24V DC
Grounding	: Signal return connected to casing

#### Physical

Construction (sensing Geometry)	: Compression mode
Size	: Base dia 18mm, height 19mm
Connector position	: Side
Housing material	: Stainless steel
Sealing	: Hermetic seal
Mounting	: M4 bolts
Sensing element	: Piezoelectric crystal

#### Performance

Measuring range	: 0.2g to 50g
Sensitivity(+ -5%)	: 45mv/g
Frequency range	: 10Hz to 5000Hz
Resonant Frequency	: > 15KHz
Transverse sensitivity	: 5%

#### Environmental

Temperature range	: 0 to 60°C
Maximum shock	: 1000g
Casing protection	: IP 65

## ACCESSORIES



### CONTROL UNIT

Model Number	VM516A0
Frequency range	10Hz to 10KHz
Accelerometer	IEPE
Sensitivity calibration	Adjustable for accelerometers having Sensitivity from 10mV/m/s <sup>2</sup> to 100mV/m/s <sup>2</sup>
Display	6 x 2 LCD with yellow back light
Measurement range	Metric and Imperial units.
Acceleration	000.0 - 200.0 m/s <sup>2</sup> (pk), (10Hz to 10KHz) 00.0 - 20.3 g (pk),
Velocity	00.00 - 20.00 cm/s (rms), (10Hz to 1KHz) 00.00 - 7.87 inch/s
Displacement	0.001 - 2.000mm (pk - pk), (10Hz to 500Hz) 0.003 - 78.7 mils (1mil = 1/1000 of an inch)
Output	Analog DC output 2V F.S
Operating temperature	0° to 50° C
Accuracy	A - ± 5% of FS V - ± 5% of FS D - ± 5% of FS
Power supply	7.4V 2200mah rechargeable battery (50hrs of continuous operation)
Auto-off	After 3 minutes of no key operation
Low battery indication	Yes
Power Save	Yes
External supply	NA
Input connection	BNC Connector
Output connection	BNC connector
Weight	295 grams
Dimensions in mm	150 x 82 x 31

## APPLICATIONS



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