

# VM2800A/VM3800A PORTABLE VIBRATION METER

## Datasheet

### OVERVIEW

The VM2800A & VM3800A portable Vibration Meter Kits have been designed for use as both an entry level and also a comprehensive vibration monitoring instrument for maintenance engineers across all types of industry.

The kits consist of the compact vibration meter, a hand held probe, a magnetic mount for more permanent installations, a protective carrying case, an instruction manual and battery chargers for both mains and in-car use.

The meters are microprocessor based and, by selection of the controls, can be easily set up to monitor acceleration (g) levels, velocity (in/sec), displacement ( $\mu\text{m}$ ) and bearing condition (BG or BV). A display hold function is also included.

The units, which conform to ISO 2954 and ISO 10816-3 also have an automatic alarm check for bearing condition.

Operating from an internal re-chargeable Lithium battery, the meters offer 48 hours of continuous operation. From flat, the units can be recharged in 3 hours using either the mains or in-car charger supplied with the kit.

Because of their compact size, ease of use and battery operation, the VM2800A & VM3800A allow engineers to monitor vibration levels on important machinery anywhere around the factory.

### FEATURES

#### VM2800A

- Velocity & bearing condition
- Used to monitor vibrations without installing equipment
- Rechargeable battery used with mains or in-car charger
- Sensor/cable fault indicator
- Display hold function
- Choice of metric or imperial measurement

#### VM3800A

- All above features PLUS:
- Temperature monitoring capability (laser temperature detector)

### APPLICATIONS

- Motors & Generators
- Fans, Pumps & Compressors
- Turbines
- Natural Gas Engines
- Piping Vibration
- Accuracy verification of installed shutdown switches and monitoring systems
- Turbochargers



### SPECIFICATIONS

TECHNICAL PERFORMANCE (BOTH METERS)	
Input	100 mV/g, Constant current accelerometer, other inputs on request
Accelerometer	Handheld, VM2800A supplied with 0.8 M cable, VM3800A supplied with 2.6 ft cable
Vibration Acceleration	0-50g pk
Vibration Velocity	0-13.5 in/s RMS
Vibration Displacement	0-4,000 $\mu\text{m}$ pk-pk (0-158 mils pk-pk)
Vibration Bearing Condition (BG)	0-18g TMS
Vibration Bearing Condition (BV)	0-1 in/s RMS
Accuracy	$\pm 5\%$
Bearing Acceleration	5 Hz to 12 kHz
Bearing Velocity	10 Hz to 1 kHz
Bearing Displacement	10 Hz to 1 kHz
Bearing Condition (BG & V)	1 kHz to 12 kHz, Automatic Alarm Check for Bearing Condition
Display	LCD
Hold Mode	Displays alarm status against ISO 2954 & ISO 10816-3

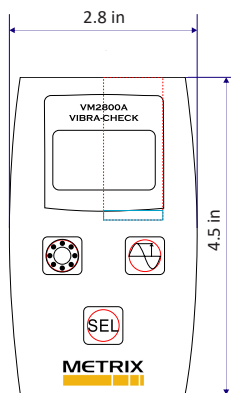
## SPECIFICATIONS (Continued)

LASER TECHNICAL PERFORMANCE (VM3800A ONLY)	
Technical Temperature Range (Laser Sensor Range Only)	-40°F to +300°F
Technical Laser Guide	Red, <1 mW, IEC 60825-1 compliant
Technical Distance Range	For temperature measurement, 0 to 2 meters (6.6 ft.), the farther away, the bigger the target. The laser sensor distance to spot diameter is a ratio of 8:1 (e.g. 1 meter distance provides a 0.125 meter diameter temperature field).
Technical Accuracy	±2%
ENVIRONMENTAL (BOTH METERS)	
Temperature Range (meter)	14 to 122°F Operating -4 to 140°F Storage
Temperature Range (accel)	-4 to 194°F
Sealing	IP54 Dust tight and splash resistant
EMC	EN61326-1:2013

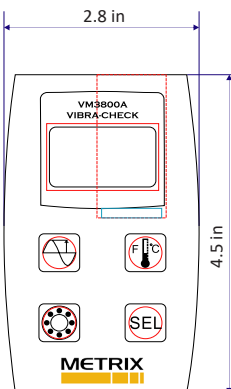
ELECTRICAL (BOTH METERS)	
Power	3.6 Volts, 1700 mA hours, 48 hours continuous operation, lithium rechargeable battery, auto shut-off after 3 minutes
Battery Charge	3 hrs from flat, supplied with meter charger and car charger
MECHANICAL (BOTH METERS)	
Case Material	Plastic
Case Dimensions	13.5 in x 10.4 in x 3.1 in
Case Weight	43 oz.
Meter Dimensions	4.5 in x 2.8 in x 1 in
Meter Weight	Meter - 6 oz. Accelerometer (incl cable) - 7 oz.
Magnetic Mount	26.5 lbs pull strength
Spike	2.8 in

## WEIGHTS AND DIMENSIONS

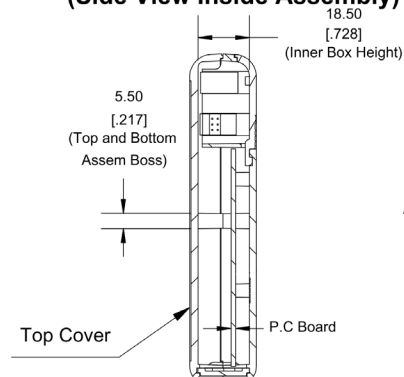
### VM2800A - Standard Model



### VM3800A - Deluxe Model



### (Side View Inside Assembly)



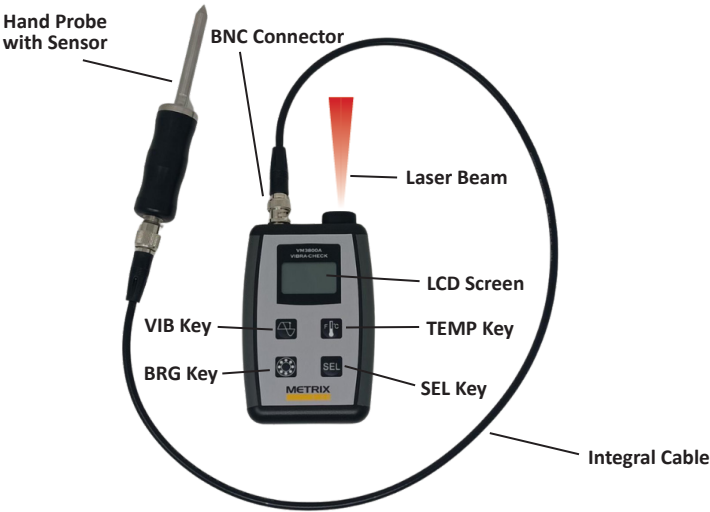
Units: mm [in]  
Aprox. Weight: 5.6 oz.

ORDERING INFORMATION

VM2800A - Standard Model



VM3800A - Deluxe Model



ACCESSORIES

Product	Part Number
Hand-Held Probe	VMA-1005
Magnetic Mount with ¼-28” UNF Male Mounting	VMA-10010
Stainless Steel Vibration Spike 75 mm	VMA-10015
80 cm Cable with BNC & TNC Connectors	VMA-10020
In-Car Battery Charger	VMA-10025
Mains Battery Charger	VMA-10030
Carry Case	VMA-10035
Replacement Battery	VMA-10040

The above accessories are included with each kit.

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