

# mVM001

## VIBRATION MONITOR



- 6' (2m) of durable UL 2517 TPE cable with UV protection
- Potted construction for mounting in harsh environments
- Intrinsically Safe when used with the mBC083 Bus Converter
- 1/2" female conduit fitting for attachment of metallic or non-metallic conduit systems
- Industry standard 1/4" x 28NF mounting system
- Provides RMS velocity, peak velocity or both
- Accelerations up to  $\pm 20g$ 's and 4 KHz can be detected
- Update rate of 1 second
- LED indicator for power on/communications
- No calibration is required

### Product Description

The mVM001 is an application specific vibration monitor with specialized software to detect defective bearings. The sensor is packaged in a potted stainless steel housing complete with a 1/2" conduit fitting.

The sensor can detect both low and middle frequency RMS vibration and high frequency high velocity vibration. The high frequency algorithm is specifically tuned to detect the high frequency, high velocity movements that are indicators of imminent failure of a bearing. The sensor can provide either value as a process signal or can provide both over a single address by multiplying the signals.

The device connects to the single-wire communications bus using the attached 6' (2m) cable and RJ-11 connector. Power is derived from the single-wire bus, external power is not required.

### Typical Applications

Used for monitoring of motor and machinery bearings on fans and hammermills.

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Specifications	Description	Characteristic
IS Sensor Bus	Voltage	5 VDC
	Current	3.0 mA maximum
	Communications	Single-Wire Bus
Output	RMS Velocity	0 - 15 in/sec
	Peak Velocity	0 - 15 in/sec
	Resolution	0.01 in/sec
	Accuracy	Calibrated to 2 in/sec @ 100hz $\pm$ 5%, -4°F to +165°F
Environment	Recommended Operating Range	-40°F to +165°F (-40°C to +70°C)
	Relative Humidity	0 to 100% non condensing
Dimensions	Length	3.125" (80mm)
	Body Diameter	1.0" (26mm)
	Base Diameter	0.85" (22mm)
	Mounting	¼" x 28NF threaded hole. Max penetration is 10mm (0.40")