

FM-VEL-004B Series Velocity Transducer

Piezo Velocity Type Vibration Sensor, Top Connector

Introduction

The Forbes Marshall FM-VEL-004B series transducer is a piezoelectric type velocity vibration transducer which measures the casing vibration of rotating machinery and outputs a voltage signal.

The FM-VEL-004B series transducer has a built-in piezoelectric acceleration detection element and converts the input signal to a voltage signal proportional to velocity vibration by an integrating circuit.

In addition, the built-in integrating circuit can reject external noise to produce a noiseless signal even in the low frequency region.

Industries

Power generation
Steel
Cement
Pulp and paper
Waste water treatment
Automotive
Infrastructure
Mining
Dairy / Food / Beverages
Pharmaceutical

Typical Applications

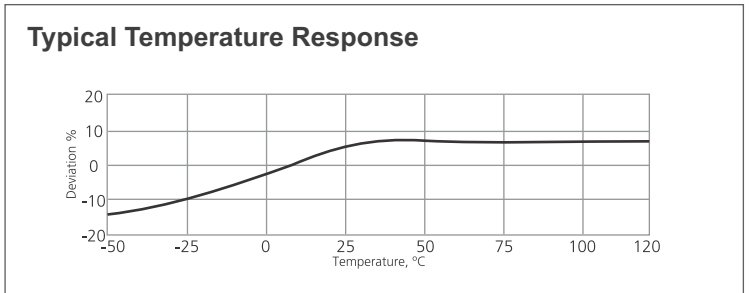
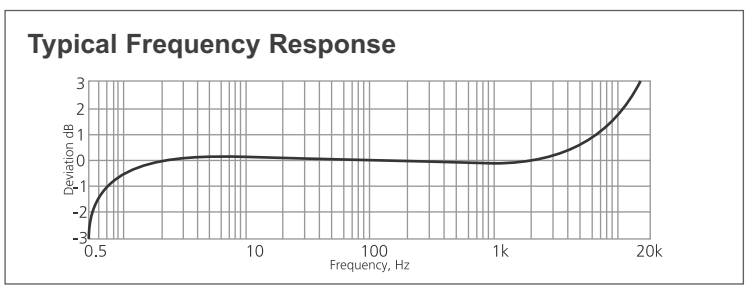
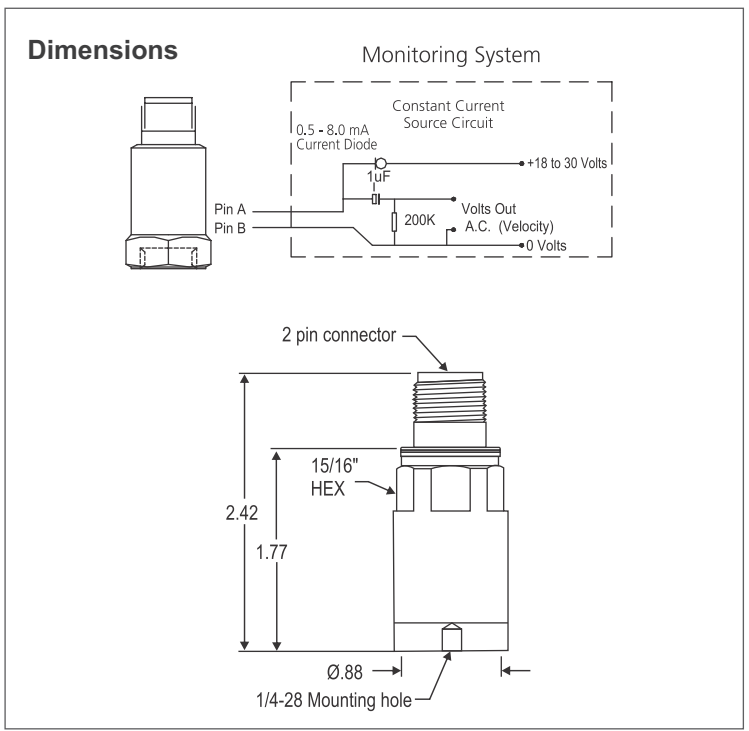
Air compressors
Conveyers
Dryer sections <250°F
Motors
Presses and stamping
Roll and process
Air handlers
Cooling towers
Fans
Gear boxes
Pumps
Spindles
Turbines



Features

Industrial ruggedness
Eliminates distortion caused by high frequency signals
Corrosion resistant
Internally integrated to velocity
Ultra low-noise electronics for clear signals at very low vibration levels
Reverse wiring protection

Technical Specifications	
Dynamic	
Sensitivity, $\pm 10\%$, 25°C	100mV/in/sec
Velocity range	50 in/sec peak
Amplitude nonlinearity	2.5%
Frequency response:	
$\pm 10\%$	3.0 - 3500Hz
± 3 dB	2.5 - 7000Hz
Resonance frequency, mounted, nominal	15 kHz
Transverse sensitivity, max	5% of axial
Electrical	
Power requirement:	18 - 30 VDC
Voltage source	
current regulating diode	2 - 10 mA
Output impedance, nominal	200 W
Bias output voltage, nominal	10 VDC
Grounding	case isolated, internally shielded
Environmental	
Temperature range	-50 to 120°C
Shock limit	2500g peak
Sealing	hermetic
Physical	
Weight	145g
Case material	316L stainless steel
Mounting	1/4-28 tapped hole
Output connector	MIL-C-5015, 2-pin style



Ordering Information

FM-VEL-004B-XX1

FM-VEL-004B		Sensitivity		Cable Type		Thread Size
	1	3.94mV/mm/sec, +/-10%	1	2 Pin connector type	1	1/4"-28UNF, female
			2	5 mtr integral, polyurethane cable		
			3	10 mtr integral, polyurethane cable		

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