

Harsh application vibration sensor



Features

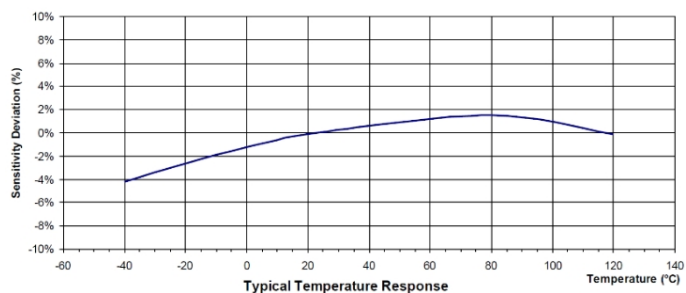
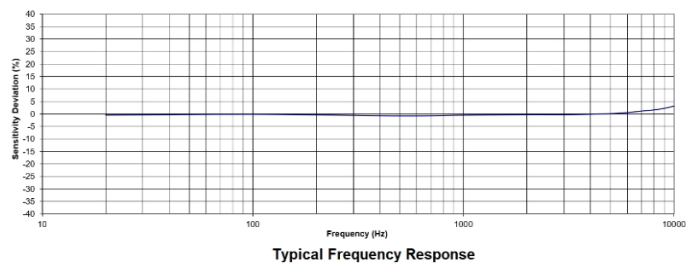
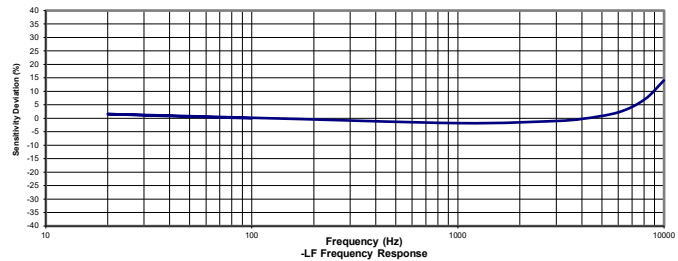
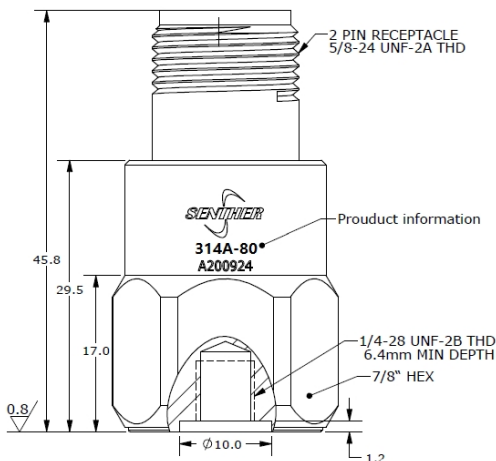
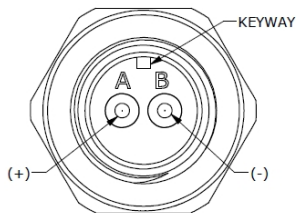
- Rugged design
- Hermetic seal
- Case isolated
- Shock resistant

Application

- Windmill machine
- Gear box monitoring
- Bearing detection
- Machine monitoring

Description

Model 314AM1 is an industrial IEPE accelerometer permitting vibration measurements. 314AM1 features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with in a two-wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is internal shielded and isolated from the outer case of the unit. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded stainless-steel construction provides a hermetic housing. The standard MIL-C-5015 glass insulated connector provides long-term stability over the operating temperature range. In addition to adhesive mounting, 314AM1 has 1/4-28 threaded holes for stud mounting on the test object. The 314AM1 provides wide frequency response and shock resistance, which is ideal for industrial vibration monitoring under incidental shock environment. Senter's model 16-L is a MIL-C-5015 connector mating cable for the sensor.



Specification

Typical at +24°C (+75°F), 24Vdc, 4 mA and 100Hz, unless otherwise stated.

Part Number	-10-LF	-80	
Dynamic Range	±10	±80	g, peak
Sensitivity ±10%	500	100	mV/g
Freq. Resp. ±10%	0.2-7000	1-10000	Hz
Freq. Resp. ±3dB	0.1-10000	0.5-15000	Hz
Resonant Frequency	>30	>40	kHz
Transverse Sensitivity	<5	<5	%
Temp. Resp., -55 to +125°C	±10	±10	%
Non-Linearity	±1	±1	%FSO
Residual Noise(1~10KHz)	0.0002	0.0005	g RMS
Shock Limit	5000	10000	g
Warm-up Time	<10	<2	second
Weight	78	70	Gram

Specifications	Standard	Units
Bias Voltage	10 to 14	Vdc
Supply Voltage	18 to 30	Vdc
Supply Current	2 to 10	mA
Output Impedance	<100	Ω
Case Insulation (@100Vdc)	>100	MΩ
Operating Temperature	-55 to +125°C	°C
Humidity	Hermetically Sealed	
Case Material	Stainless Steel	
Sensing Element	Piezo Ceramic (Shear)	
Connector	2 Pin MIL-C-5015	

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0008	Mounting stud ¼-28 to M6 thread	One stud Included
PM0007	Mounting stud ¼-28 to M10 thread	Optional
PM0445	Adhesive mounting adapter	Optional
MB0001	Flat bottom magnet mounting adapter	Optional
MB0011	Saddle-shaped magnet mounting adapter	Optional
16A-10	10 meter mating cable with MIL-C-5015 connector	Optional
16A-10-B	10 meter mating cable with MIL-C-5015 to BNC connector	Optional
IN-03	3 channels IEPE signal conditioner	Optional
IN-91	Portable vibration analyzer	Optional
IN-SDG	8 channels data acquisition system	Optional

Measurement configuration

Sensor	Mating cable	Data acquisition	Computer
			

Ordering information

314	AM1	-	80	-	LF
Model	Output signal	-	Range	-	Low frequency option
314	A=IEPE output M1=Shock resistant option	-	10=10g 80=80g	-	LF= Low frequency response Blank= Standard FR

