340A

General industrial vibration sensor

Description

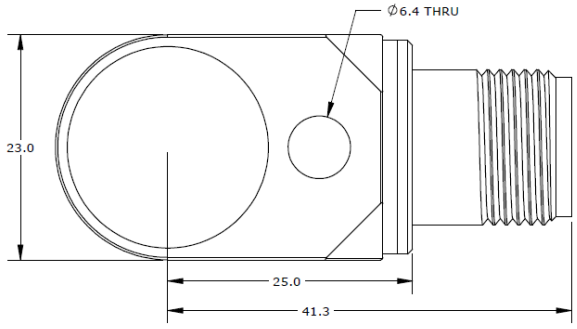
Model 340A is an industrial IEPE accelerometer permitting vibration measurements. 340A features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with in a two-wire IEPE system which transmits its low impedance voltage 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. Side outlet cable enable the compact installation and discretional cable direction. In addition to adhesive mounting, 340A has Ø6.4 through holes for screw mounting on the test object. The 340A provides wide frequency response and shock resistance, which is ideal for industrial vibration monitoring under incidental shock environment. Senther's model 16A-L is a mating cable for the sensor.

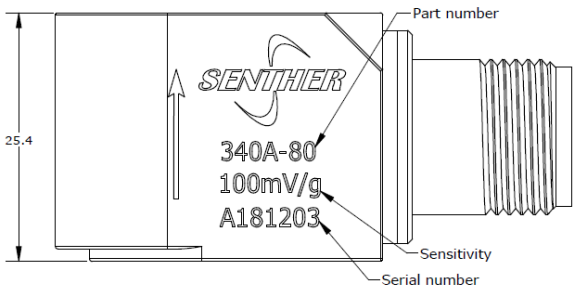
Features

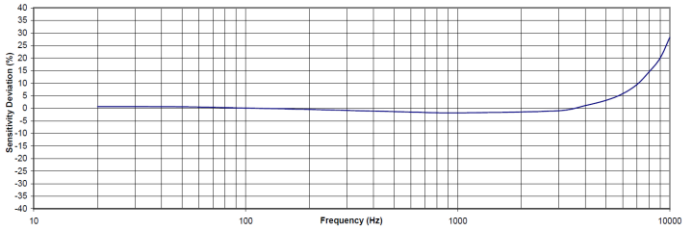
- Rugged design
- Corrosion resistant
- Hermetic seal
- Case isolated
- Side connector
- Shock resistance

Application

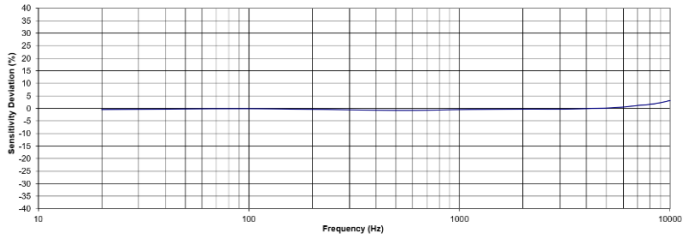
- Windmill machine
- Gear box monitoring
- Bearing detection
- Machine monitoring



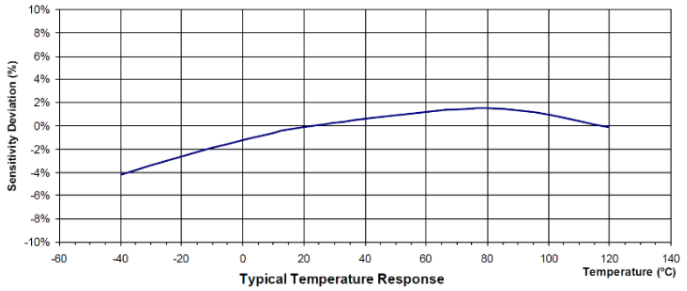




-LF Frequency Response



Typical Frequency Response



Typical Temperature Response

Specification

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

Part Number	340A-5-LF	340A-10-LF	340A-10	340A-20	340A-80	340A-500	
Dynamic Range	±5	±10	±10	±20	±80	±500	g, peak
Sensitivity ±10%	1000	500	500	250	100	10	mV/g
Freq. Resp. ±5%	0.6-3000	0.6-3000	1-3000	1-6000	1-6000	1-6000	Hz
Freq. Resp. ±3dB	0.1-5000	0.1-5000	.3-5000	.3-8000	.3-8000	.3-8000	Hz
Resonant Frequency	18	18	25	25	25	25	kHz
Transverse Sensitivity	<5	<5	<5	<5	<5	<5	%
Temp. Resp., -55 to +125°C	±10	±10	±10	±10	±10	±10	%
Non-Linearity	±1	±1	±1	±1	±1	±1	%FSO
Residual Noise	0.00015	0.0002	0.0005	0.0005	0.0005	0.0010	g RMS
Shock Limit	2000	2000	2000	5000	5000	5000	g
Warm-up Time	<5	<5	<2	<2	<2	<2	second
Weight	117	117	110	110	110	110	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	316L Stainless Steel	
Sensing Element	Piezo Ceramic (Shear)	
Connector	2 Pin MIL-C-5015	

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0118	¼-28x1¼ hex head mounting screw	One screw Included
PM0329	M6x30 hex head mounting screw	
MB0004	340A 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-3062	8 channels data acquisition system	Optional

Measurement configuration

Sensor	Mating cable	Signal conditioner	BNC cable	Data acquisition	Computer
					

Ordering information

340	A	-	80	-	LF	-	B
Model	Output signal	-	Range	-	Low frequency option	-	Mounting stud
340	A=IEPE output	-	5=5g 10=10g 20=20g 80=80g 500=500g	-	LF= Low frequency response Blank= Standard FR	-	A= ¼-28 mounting screw B= M6 mounting screw C*=Special