

RMS output accelerometer



Features

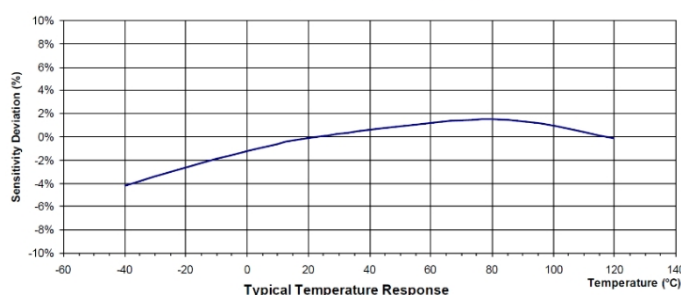
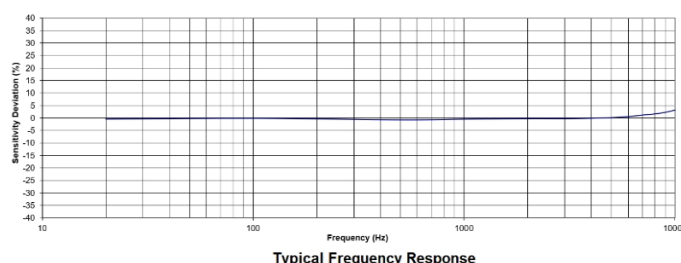
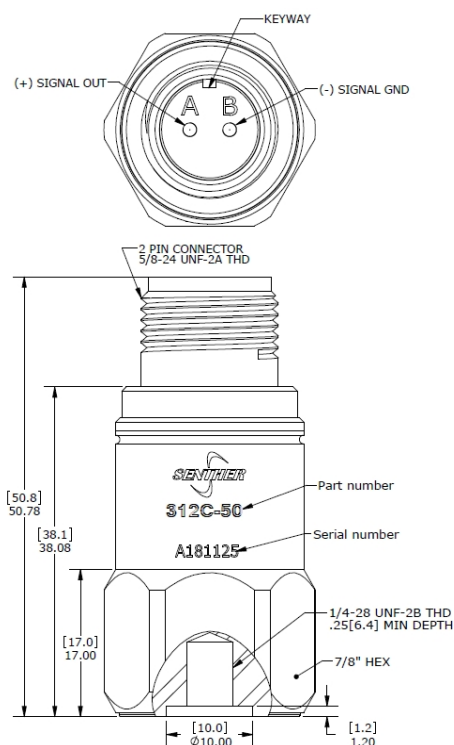
- Lightning protection
- Acceleration RMS output
- 4-20mA current signal
- Hermetic seal
- Case isolated
- EMI / RFI shielded
- Shock resistance

Application

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

Description

Model 312C is a lightning protection piezo-electrical accelerometer permitting vibration measurements. 312C features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with in a two-wire system which transmits the 4~20mA acceleration output through the same cable that supplies the voltage excitation. 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, 312C has 1/4-28 threaded holes for stud mounting on the test object. The 312C 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 and 100Hz, unless otherwise stated.

Part Number	312C-5	312C-10	312C-20	312C-50	312C-100	312C-500	
Acceleration Range	5	10	20	50	100	500	g, RMS
FSO ±10% 25°C	16	16	16	16	16	16	mA
Frequency Response ±10%	5-4000	5-5000	5-7000	5-7000	5-7000	5-7000	Hz
Frequency Response ±3dB	3-10000	3-10000	3-13000	3-13000	3-13000	3-13000	Hz
Resonant Frequency	20	20	32	32	32	32	kHz
Transverse Sensitivity	<5	<5	<5	<5	<5	<5	%
Temperature Response, -55 to +85°C	±10	±10	±10	±10	±10	±10	%
Non-Linearity	±1	±1	±1	±1	±1	±1	%FSO
Shock Limit	2000	2000	5000	5000	5000	5000	g
Warm-up Time	<2	<2	<2	<2	<2	<2	second
Weight	87	87	80	80	80	80	Gram

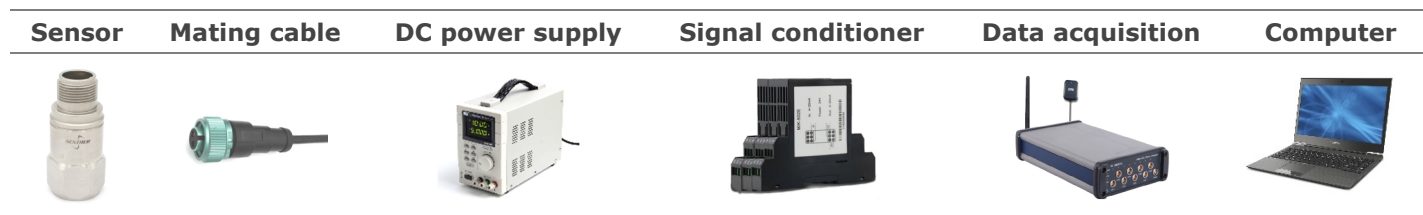
Specifications	Standard	Units
Bias Current ±10%	4	mA
Supply Voltage	12 to 30	Vdc
Output Impedance	<100	Ω
Case Insulation (@100Vdc)	>100	MΩ
High Voltage Insulation (Pin A & Pin B to Case @60Seconds)	4000	Vac
Operating Temperature	-55 to +85°C	°C
Humidity	Hermetically Sealed	
Case Material	316L Stainless Steel	
Sensing Element	Piezo Ceramic (Shear)	
Connector	2 Pin MIL-C-5015	

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0011	Mounting stud ¼-28 to ¼-28 thread	One stud Included
PM0008	Mounting stud ¼-28 to M6 thread	
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-3062	8 channels data acquisition system	Optional

Measurement configuration



Ordering information

312	C	-	50	-	A
Model	Output signal	-	Range	-	Mounting stud
312	C=Acceleration RMS signal by loop current output	-	5=5g 10=10g 20=20g 50=50g 100=100g 500=500g	-	A= 1/4-28 to 1/4-28 thread B= 1/4-28 to M6 metric thread C*=Special

