

Industrial tri-axial accelerometer

Description

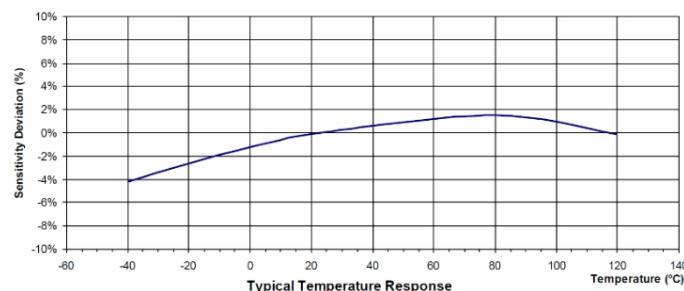
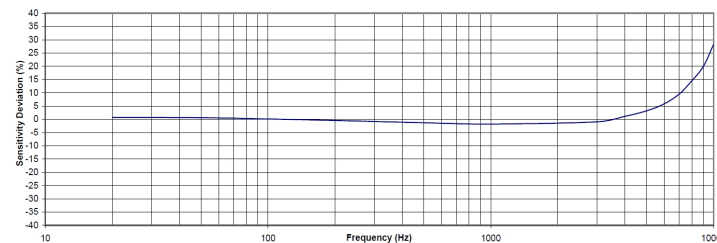
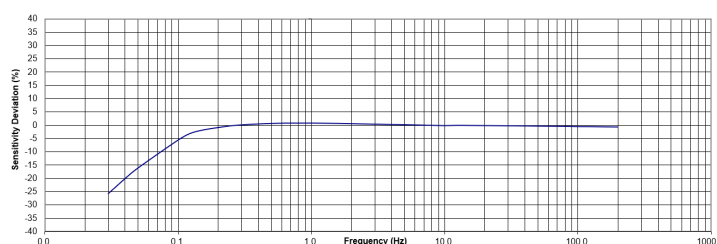
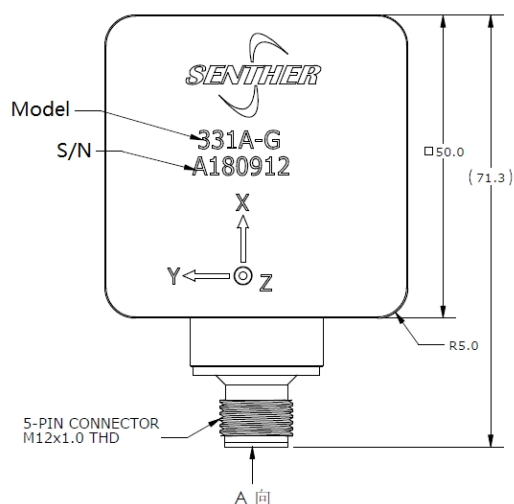
Model 331A is a general purpose tri-axial IEPE accelerometer permitting low frequency vibration measurements. 331A features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with in a two-wire IEPE system which transmits 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 M12 glass insulated connector provides long-term stability over the operating temperature range. In addition to adhesive mounting, 331A has M8 thread holes for stud mounting on the test object. The 331A provides low frequency response and shock resistance, which is ideal for high structure vibration monitoring under incidental shock environment. Senter's model 19T-L is a M12 connector mating cable for the sensor.

Features

- Low frequency response
- Tri-axial output
- High sensitivity
- Hermetic seal
- EMI / RFI shielded
- Temperature signal available

Application

- High speed train
- Heavy-duty bearing
- High structure monitoring



Specification

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

Part Number	±5-LF	±10-LF	g
Sensitivity ±10%	1000	500	mV/g
Freq. Resp. ±5%	0.3-4000	0.3-4000	Hz
Freq. Resp. ±3dB	0.1-6000	0.1-6000	Hz
Resonance Frequency	20	20	KHz
Bias Voltage	10 to14	10 to14	Vdc
Supply Voltage	18 to 30	18 to 30	Vdc
Supply Current	2 to 10	2 to 10	mA
Residual Noise	0.00015	0.0002	g RMS
Shock Limit	2000	2000	g
Transverse Sensitivity	<5	<5	%
Non-Linearity (BFSL)	±1	±1	%FSO
Temp. Resp., -55 to +125°C	±10	±10	%
Output Impedance	<100	<100	Ω
Warm-up Time	<5	<5	Second
Operating Temperature	-55 to +125	-55 to +125	°C

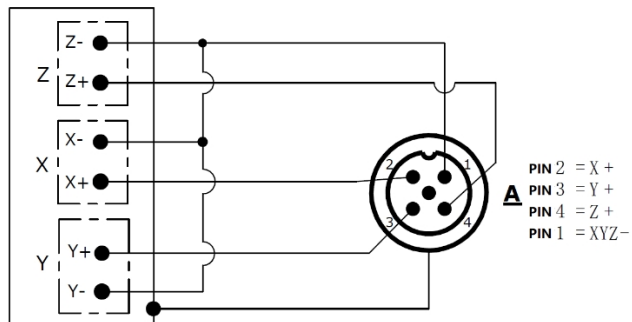
Overall configuration	Standard	Units
Case Material	316L Stainless Steel	
Protection	IP68	
Insulation Impedance (@500Vdc)	>100	MΩ
Lighting Insulation (@AC 4000V)	>60	Second
Operating Temperature	-55 to +125	°C
Weight	<400	gram

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0359	M8x14 mounting stud	Included
PM0107	M8x12 socket head cap screw	Optional
18T-10	10 meter mating cable(PVC) with M12 connector	Optional
19A-10-B2	10 meter mating cable(TPU) with M12 to BNCx3 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



Model 18T mating cable:

Wire definition	
1	Brown
2	White
3	Blue
4	Black
5	Gray

Ordering information

331	A	-	10	-	LF
Model	Output signal	-	Range	-	Low frequency option
331	A=IEPE output	-	5=5g 10=10g	-	LF=Low frequency HLF=High & Low frequency

