411

Shock & Impact testing accelerometer

Description

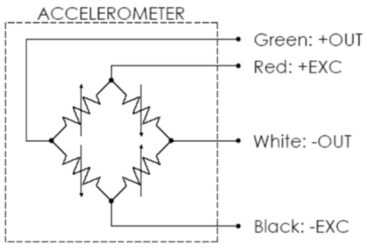
Model 411 accelerometer is based on a latest piezo-resistive MEMS sensing element which offers exceptional dynamic range and stability. This piezo-resistive accelerometers are rugged undamped units designed for shock measurements. The etched silicon chip includes the inertial mass and strain gages arranged in an active four-arm Wheatstone bridge circuit. The low mass, extremely small size and unique construction of the element provide high resonance frequency with characteristics such as low impedance, high overrange, and zero damping for no phase shift. The high resonance frequency of these sensors permits their survival in the presence of high frequency signal after shock pulse that could shatter the seismic system of accelerometers having lower resonance. High resonance frequencies and zero damping also allow the accelerometer to respond accurately to fast rise time, short duration shock motion. With a frequency response extending down to static or steady state accelerations, these transducers are ideal for measurements of long duration transients. Model 411 adopts a strong and reliable structure, which greatly reduces the damage probability of cable joints in wiring and shock.

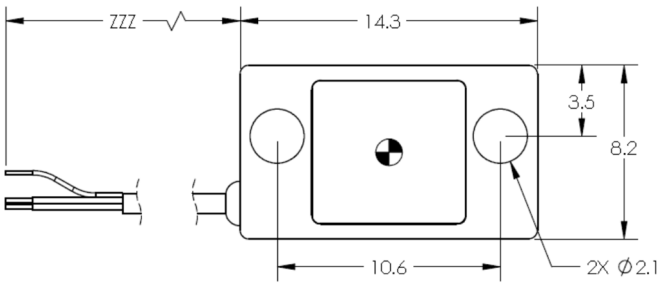
Features

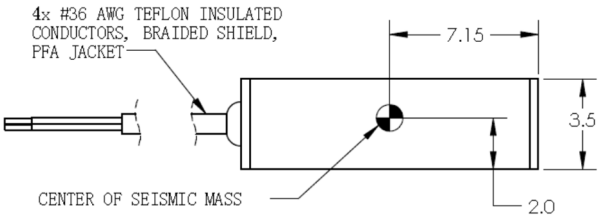
- ±200kg full range
- High resonance frequency
- Minimal zero shift after shock
- Titanium housing
- Hermetically sealed
- Bolt mounted

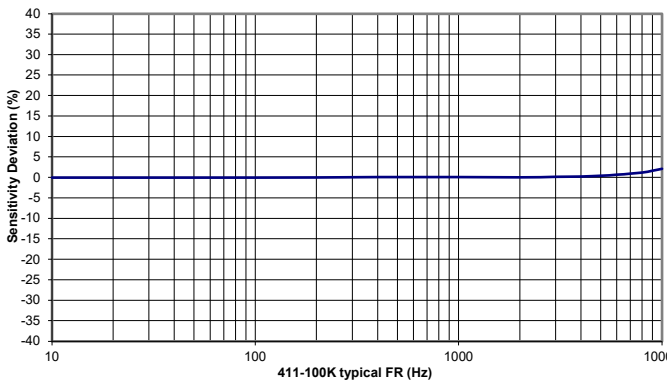
Application

- Blast test
- Shock/impact test
- Explosive research
- Ballistic measurement









SENTHER TECHNOLOGY Co., Ltd. • Skyworth innovation valley 5B-8F, Baoan, Shenzhen, 518108, China • Tel: 0755-85273639 • http://www.senther.com

Specification

All values are typical at +24°C (+75°F), 100Hz, and 10Vdc excitation unless otherwise stated.

Dash No.	-100K	-200K	
Dynamic Range	±100000	±200000	g
Sensitivity	0.5	0.5	μV/g
Frequency Response ±5%	0-10000	0-10000	Hz
Frequency Response ±3dB	0-50000	0-50000	Hz
Resonant Frequency	250000	300000	Hz
Shock Limit	200000	250000	g
Non-Linearity	±1.5	±2	%

Parameters	Value	Units
Zero Acceleration Output	<±100	mV
Transverse Sensitivity	<5	%
Thermal Zero Shift, 0-50°C (32-122°F)	±0.04 (±0.02)	%FSO/°C (%FSO/°F)
Thermal Sensitivity Shift, 0-50°C (32-122°F)	±0.1 (±0.06)	%/°C (%/°F)
Excitation Voltage	2 to 10	Vdc
Insulation Resistance (@100Vdc)	>100	MΩ
Input Impedance	3000 to 6000	Ω
Output Impedance	3000 to 6000	Ω
Operating Temperature	-40 to +121 (-40 to +250)	°C (°F)
Humidity	Hermetic Sealed	
Case Material	Titanium alloy	
Weight (Cable Not Included)	2	Grams
Mounting Torque	3 (0.3)	lb-in (Nm)

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0508	M2x10 socket head cap screws	2pcs included
PJ0048	LEMO FGG-1B-307 connector	Optional
IN-01	Bridge piezo-resistive signal amplifier	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration

Sensor	LEMO connector	Data acquisition	Computer
			

Ordering information

411	-	200K	-	8
Model	-	Range	-	Cable length
411	-	100K=100Kg 200K=200Kg	-	6=6 meters 8=8 meters