

MODEL 3801 Accelerometer

Gas Damped, DC Response

Hermetically Sealed

mV Output

10,000g Over-Range Protection

DESCRIPTION

The Model 3801 is a mV output piezoresistive accelerometer in a rugged hermetic package. The accelerometer incorporates mechanical stops for over-range protection up to 10,000g. The model 3801 is offered in ranges from ± 20 to ± 2000 g and is gas damped to provide a wide frequency response. The accelerometer is temperature compensated to provide a stable output over the operating environment.

FEATURES

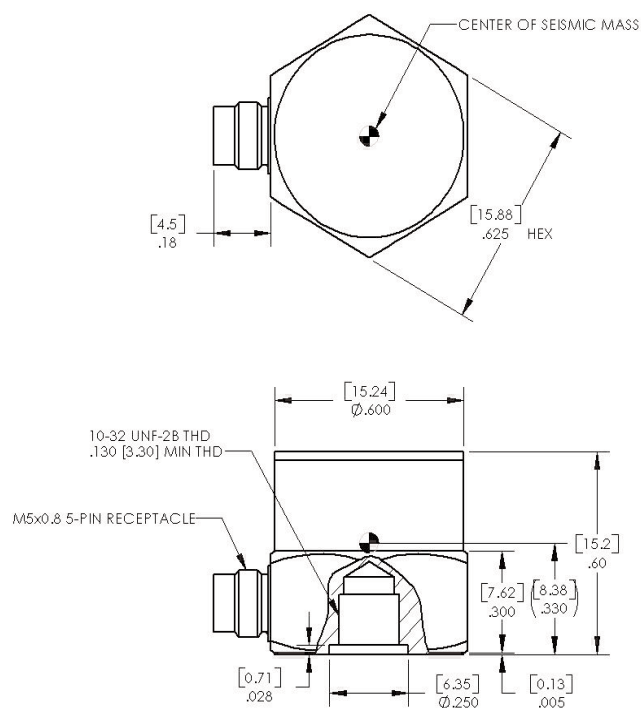
- ◆ $\pm 20\text{g}$ to $\pm 2000\text{g}$ Dynamic Range
- ◆ 10,000 Shock Protection
- ◆ Hermetically Sealed Sensor
- ◆ Gas Damping
- ◆ mV Output
- ◆ Optional Self-Test Feature
- ◆ Stud Mounting

APPLICATIONS

- ◆ Impact Testing
- ◆ Structural Testing
- ◆ Test & Instrumentation
- ◆ Environmental Testing
- ◆ Mil-aero Applications

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dimensions



measurement
SPECIALTIES

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Model 3801 Accelerometer

performance specifications

All values are typical at 25°C, 100Hz and 10Vdc excitation unless otherwise stated.

Measurement Specialties reserves the right to update and change these specifications without notice.

PARAMETERS

DYNAMIC

Range	+/-20	+/-50	+/-100	UNITS	NOTES
Sensitivity	3.2	1.5	0.8	mV/g	Typical
Frequency Response	0-400	0-800	0-1300	Hz	+/- 5%

Range	+/-200	+/-500	+/-2000	UNITS	NOTES
Sensitivity	0.6	0.3	0.1	mV/g	Typical
Frequency Response	0-1500	0-2500	0-4000	Hz	+/- 5%

Non-Linearity		+/-1		% FSO	Maximum
Transverse Sensitivity (Max)		+/-3		%	+/-1 % Typical
Zero Acceleration Output		+/-25		mV	Maximum
Thermal Zero Shift (-20 to +85°C)		+/-0.04		% FSO/°C	Maximum
Thermal Sensitivity Shift (-20 to +85°C)		+/-0.05		%/°C	Maximum
Damping Ratio		0.70			Gas Damped

ELECTRICAL

Excitation Voltage		5 to 10		Vdc	Ratiometric Output
Input Resistance		6500 to 7800		Ohms	
Output Resistance		2700 to 4800		Ohms	
Insulation Resistance (@ 50Vdc)		100		MΩ	Minimum

PHYSICAL

Base and Lid Material		Stainless Steel			Passivated
Weight		20		grams	Maximum
Mounting		10-32 Stud			18 lb-in mounting torque

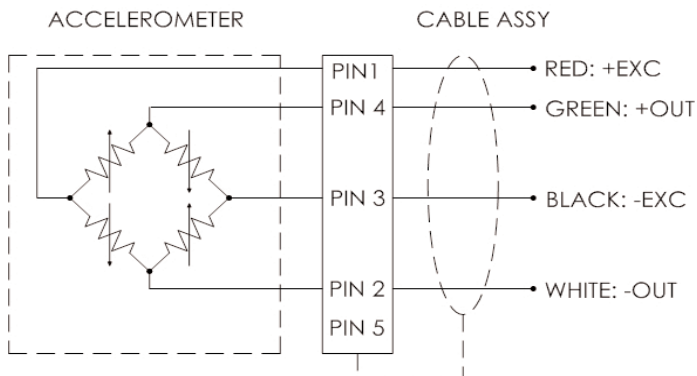
ENVIRONMENTAL

Shock Limit		10,000		g's	
Operating Temperature		-40 to +105		°C	
Humidity		Hermetically sealed			

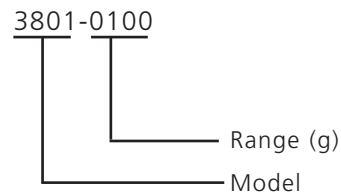
SUPPLIED ACCESSORIES

AC-D02298	10-32 to 10-32 mounting stud
AC-A02252-060	Cable Assembly, 5ft

electrical schematic



ordering information



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