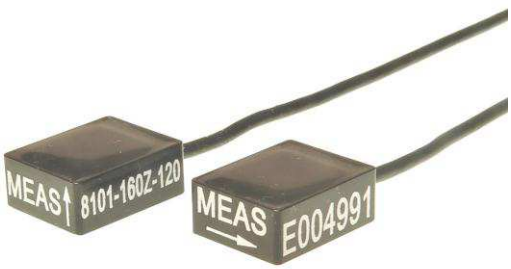
MODEL 8101 ACCELEROMETER



SPECIFICATIONS

- **Piezoelectric Linear Accelerometer**
- **±40g & ±160g Dynamic Ranges**
- **Wide Bandwidth to 6000Hz**
- **Great Value, Low Cost**

The Model 8101 is a low cost, plug & play accelerometer designed for general purpose vibration measurements. The accelerometer is available in ±40g or ±160g range and provides a flat frequency response up to >6kHz. Featuring stable piezo-ceramic crystals in shear mode, the accelerometer incorporates full power and signal conditioning and is offered in two measurement direction options (X or Z axis).

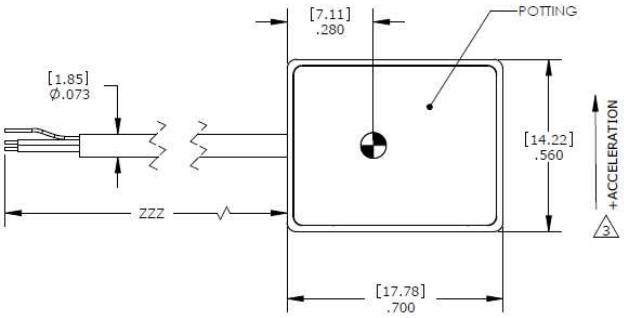
FEATURES

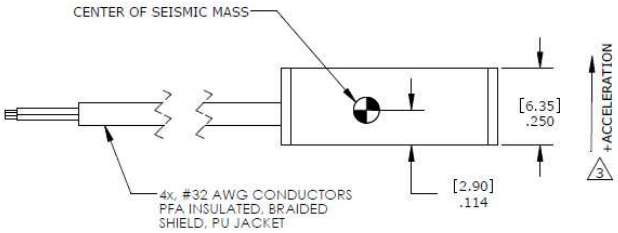
- Two Measurement Directions
- 7 to 36Vdc Excitation Voltage
- Potted Construction
- Piezo-Ceramic Shear Design
- -40° to +85°C Operating Range
- Integral Cable for Plug & Play

APPLICATIONS

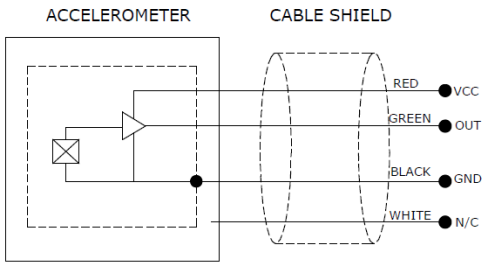
- Asset Monitoring
- Data Loggers
- Impact Monitoring
- Machine Health Monitoring
- System Wake-Up Switch
- Product R&D

DIMENSIONS





3 Direction of measurement must be specified at time of order. See Ordering Info on page 3.



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PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 7Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters			
DYNAMIC			Notes
Range (g)	±40	±160	
Sensitivity (mV/g)	50.0	12.5	±30%
Frequency Response (Hz)	2-6000	2-6000	±1dB
Resonant Frequency (Hz)	>30000	>30000	
Non-Linearity (%FSO)	±2	±2	
Transverse Sensitivity (%)	<8	<8	
Shock Limit (g)	2000	2000	
Residual Noise (g RMS)	0.008	0.008	2Hz to 10kHz
Spectral Noise, 10Hz (µg√Hz)	160	160	
Spectral Noise, 100Hz (µg√Hz)	40	40	
Spectral Noise, 1kHz (µg√Hz)	16	16	

ELECTRICAL		
Bias Voltage (Vdc)	2.5	
Full Scale Output Voltage (V)	±2	
Total Supply Current (µA)	800	
Excitation Voltage (Vdc)	7 to 36	
Output Impedance (Ω)	<100	
Insulation Resistance (MΩ)	>100	@100Vdc
Shielding	100%	
Ground Isolation	Isolated from Mounting Surface	
Warm-up Time (msec)	30	

ENVIRONMENTAL		
Temperature Response (%)	-20/+20 from -40°C to +85°C	
Operating Temperature (°C)	-40 to +85	
Storage Temperature (°C)	-40 to +85	
Humidity (Active Element & Electronics)	Hermetically Sealed	
Humidity (Case)	Epoxy Sealed, IP65	

PHYSICAL		
Case Material	Anodized Aluminum	
Cable	4x #32 AWG Conductors PFA Insulated, Braided Shield, PU Jacket	
Weight (grams)	3.6	Cable not included
Mounting	Epoxy or Double-sided tape	

Calibration supplied: CS-SENS-0100 NIST Traceable Amplitude Calibration at 80Hz

Optional accessories: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit

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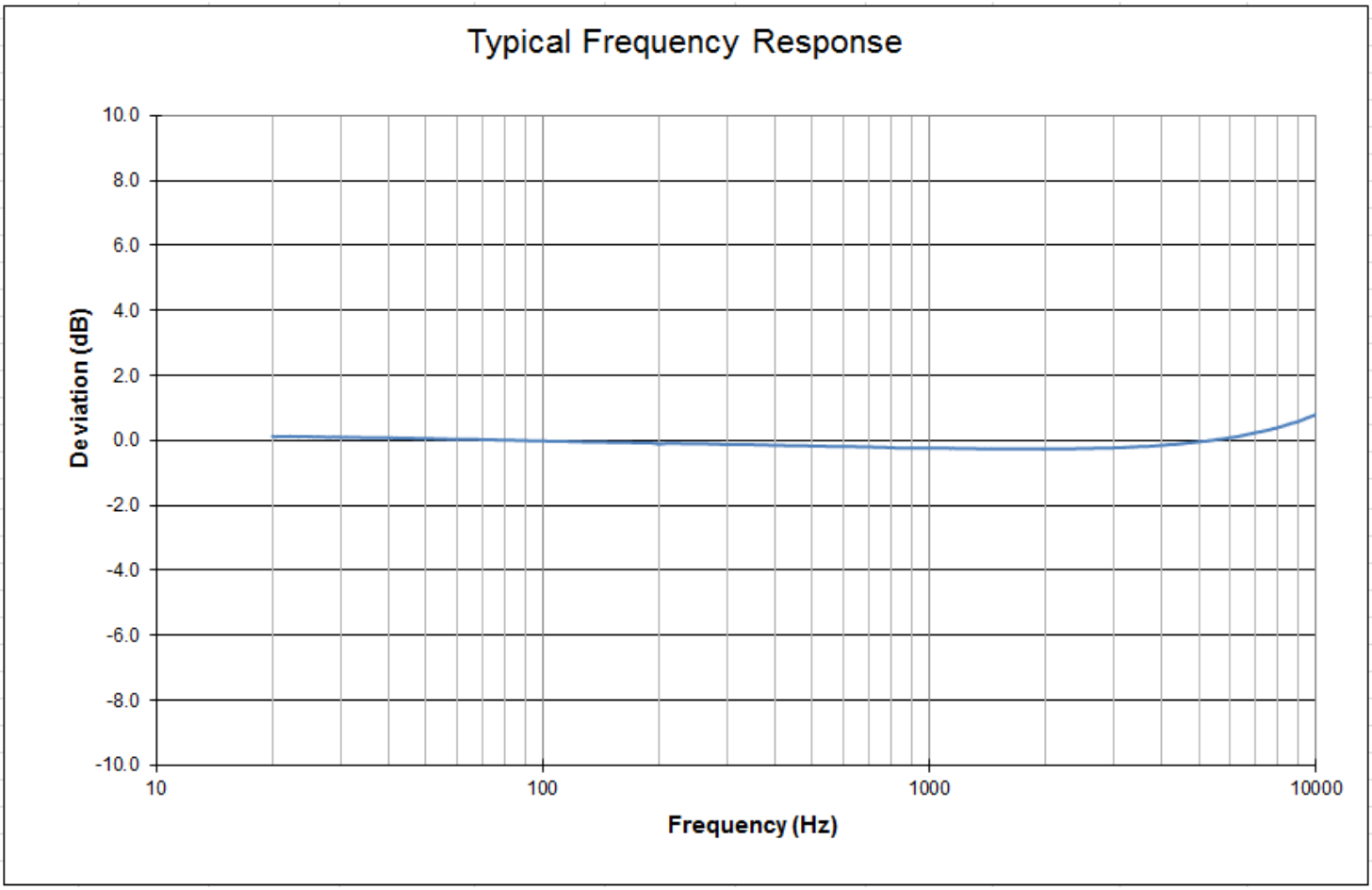

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ORDERING INFORMATION

PART NUMBERING Model Number+Measurement Direction+Range+Cable Length

8101-GGGGX-ZZZ
l l l_____ Cable (120 is 120inches)
l l_____ Measurement Direction (X is X-axis, Z is Z-axis)
l_____ Range (0040 is 40g)

Example: 8101-0040X-120
Model 8101, X-axis Measurement, 40g, 120inches (10ft) Cable

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