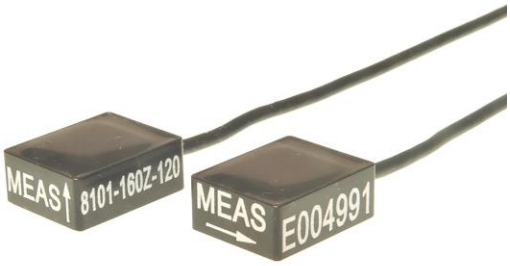
Model 8101 Accelerometer

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).

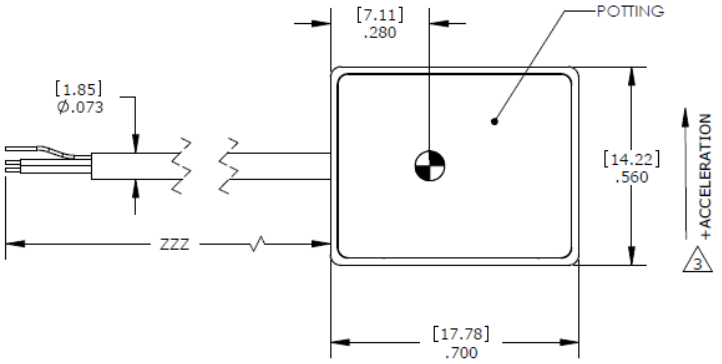
FEATURES

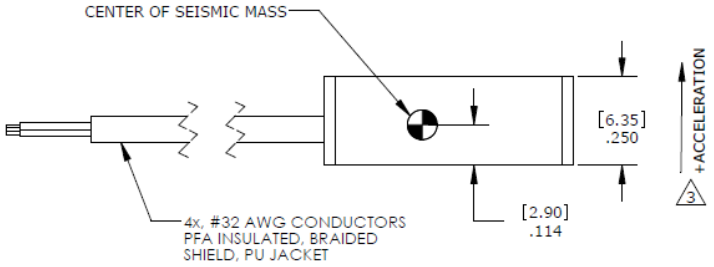
- Two Measurement Directions
- 7 to 36Vdc Excitation Voltage
- Potted Construction
- Piezo-Ceramic Shear Design
- -40° to +85°C Operating Range
- Integral Cable for Plug & Play

APPLICATIONS

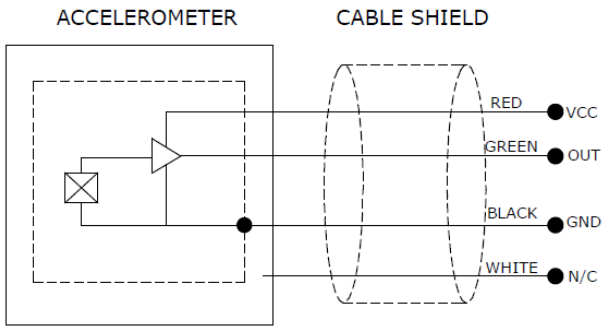
- Asset Monitoring
- Data Loggers
- Impact Monitoring
- Machine Health Monitoring
- System Wake-Up Switch
- Product R&D

dimensions





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



32 Journey Ste. 150 Aliso Viejo, CA 92656 949-716-5377 t&m@meas-spec.com

Model 8101 Accelerometer

performance specifications

All values are typical at +24°C, 100Hz and 7Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1003 for Plug & Play AC Accelerometers.

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 100Hz

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

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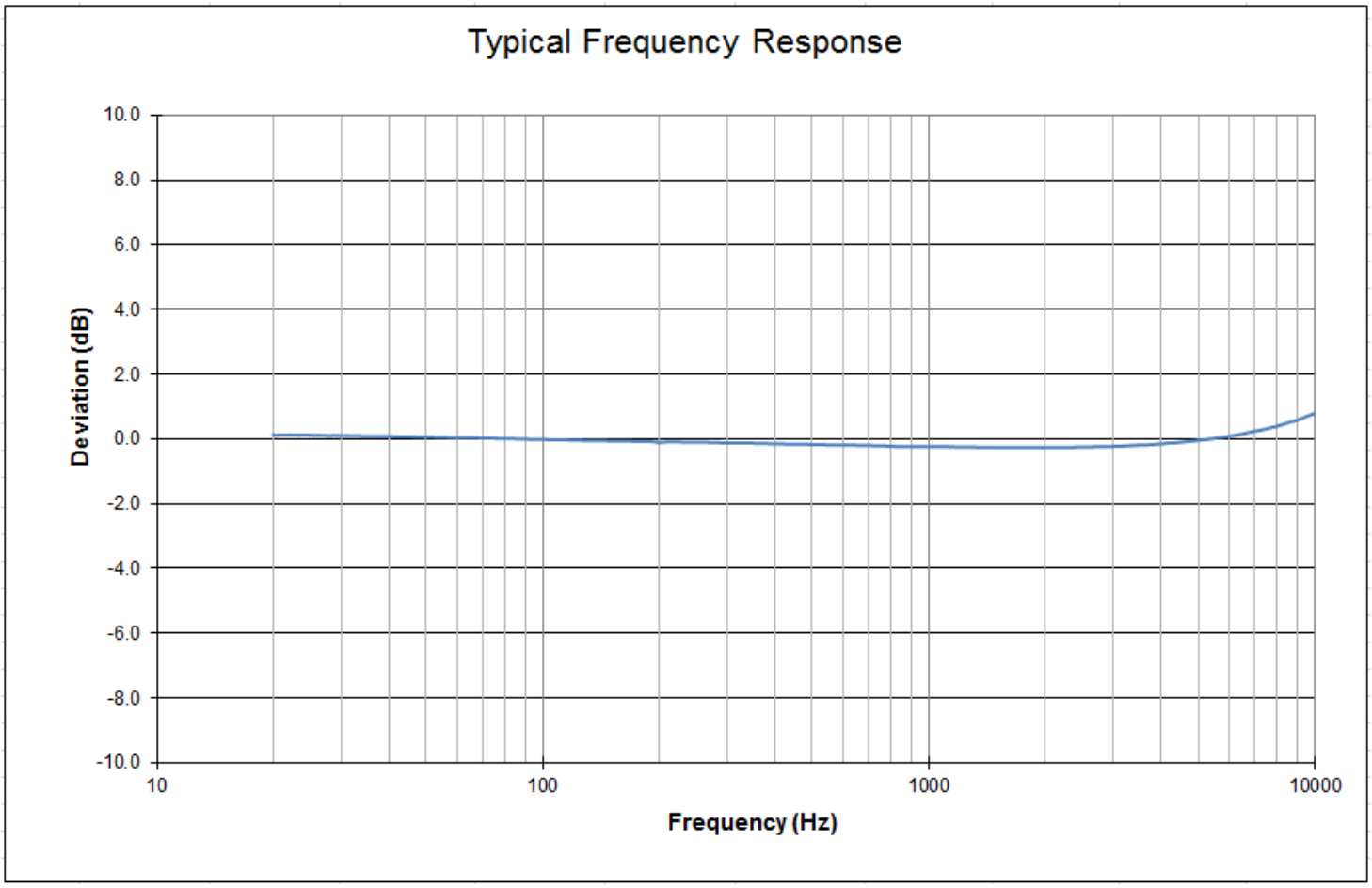

ordering info

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

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

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

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