Model 620 Angular Rate Sensor



±500 to ±50,000°/sec Range Silicon MEMS, DC Response Insensitive to Shock Small, Lightweight Package

The Model 620 Angular Rate Sensor

is a small analog gyroscope designed specifically for automotive safety testing and other system designs requiring accurate measurement of angular velocity. The Model 620 series utilizes silicon MEMS sensing elements with custom electronics and packaging to produce an angular rate sensor that is highly reliable even under excessive shock and vibration environments. A wide selection of ranges is available for your specific applications.

FEATURES

- ±500 to ±50,000°/sec Ranges
- 7-16Vdc Excitation (5Vdc option)
- -40 to +105°C Temperature Range
- Shock Resistant Package
- Low Cross-Axis Sensitivity

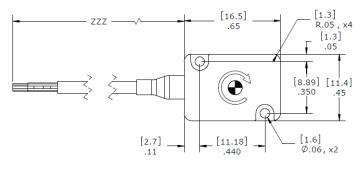
APPLICATIONS

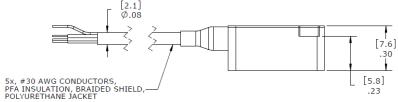
- Auto Safety Crash Testing
- Dummy Instrumentation
- Pedestrian Impact
- Rollover Testing
- Motorsports
- Biomechanics Testing
- Robotic System Design
- Weapons Design

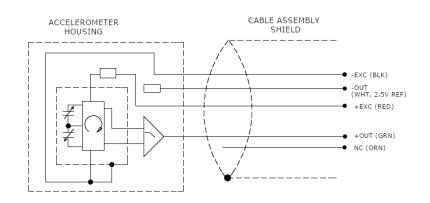




dimensions









Model 620 Angular Rate Sensor

performance specifications

All values are typical at +24°C and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters								Netoo
DYNAMIC Range (deg/sec)	±500	±1500	±6000	±12K	±18K	±24K	±50K	Notes
Sensitivity (mV/deg/sec)	4.00	1.33	0.333	0.167	0.111	0.083	0.040	Not ratiometric
Frequency Response (Hz)	0-1000	0-1000	0-1000	0-2000	0-2000	0-2000	0-3300	+1dB/-3dB
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	BFSL
Cross-Axis Sensitivity (%) Shock Limit (q)	<1 3000	<1 3000	<1 3000	<1 5000	<1 5000	<1 5000	<1 5000	
Residual Noise (mV RMS)	3.66	1.20	2.38	1.22	1.20	1.20	1.50	Passband
residual reise (iiiv reise)	0.00	1.20	2.00	1.22	1.20	1.20	1.00	radobana
ELECTRICAL								
Zero Acceleration Output (mV)	±100							Differential
Excitation Voltage (Vdc), Model 620	7 to 16							
Excitation Voltage (Vdc), Model 620M1 Excitation Current (mA)	5.0 ±0.25 <8							
Influence of Linear Acceleration (deg/sec/g)	0.1							
Common Mode Voltage (Vdc)	2.5							±5%
Full Scale Output Voltage (Vpk)	±2							±15%
Output Resistance (Ω)	400							
Insulation Resistance (MΩ)	>100							@100Vdc
Turn On Time (msec) Ground Isolation	<100 Isolated from Mounting Surface							
Ground isolation	isolateu III	om wounting	Juliace					
ENVIRONMENTAL								
Thermal Zero Shift (%FSO)	±2.5							-40 to +105°C
Thermal Sensitivity Shift (%)	±2.0	_						-40 to +105°C
Operating Temperature (°C)	-40 to +105							
Humidity (Active Element & Electronics) Humidity (Housing)	Hermetically Solder Seal Epoxy Sealed, IP65							
riumuity (riousing)	LPUXY 366	aleu, 11-05						

PHYSICAL

Case Material Anodized Aluminum

Cable 5x, #30 AWG Conductors, PFA Insulated, Braided Shield, PU Jacket

Weight (cable not included) 3 grams
Mounting 2x #0-80
Mounting Torque 4 lb-in (0.45 N-m)

Calibration supplied: CS-ARLIN NIST Traceable Linearity Calibration to FS Range

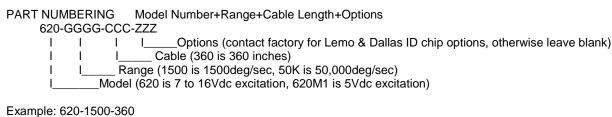
Supplied accessories: AC-A04531 2x #0-80 (3/8 length) Socket Head Cap Screw and Washer

Optional accessories: AC-A04532 Triaxial Mounting Block

121 3-Channel Precision Low Noise DC Amplifier

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ordering info



Model 620, 1500 deg/ees, 260

Model 620, 1500deg/sec, 360" (30ft) Cable, No Options