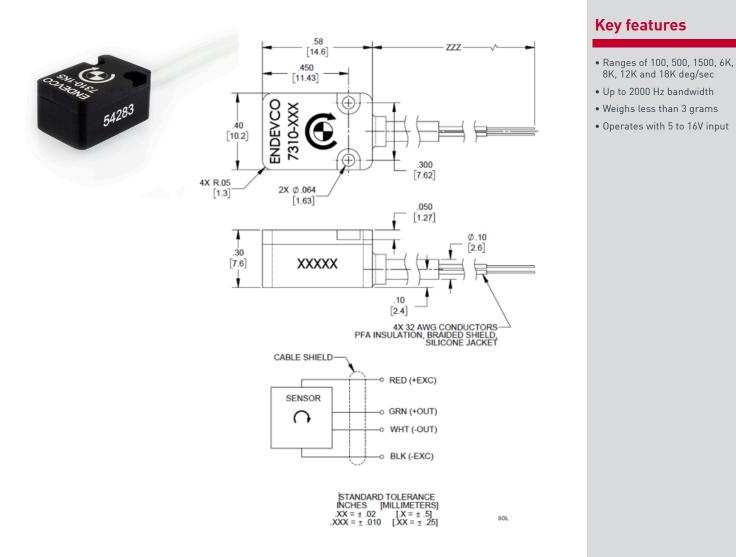


Angular Rate Sensor Model 7310



The ENDEVCO® Model 7310 is an angular rate sensor that provides reliable sensing performance even under excessive shock and vibration environments. This angular rate sensor is designed specifically for automotive safety testing and other system designs requiring accurate measurement of rotational velocity. The 7310 angular rate sensor features various full angular rate ranges including ±100, ±500, ±1500, ±6000, ±8000, ±12000 and ±18000 deg/sec, and provides full scale voltage output of ±2Vpk.

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Piezoelectric accelerometers | Piezoresistive accelerometers | IEPE accelerometers | Variable capacitance accelerometers | Piezoresistive pressure sensors | Piezoelectric pressure sensors | High intensity microphones | Inertial sensors | Signal conditioners and supportive instrumentation | Cable assemblies



Angular Rate Sensor

Model 7310

Specifications

All specifications assume +75°F (+24°C) unless otherwise stated.

Dynamic characteristics	Units	-100	-500	-1K5	-6K	-8K	-12K	-18K
Range	deg/sec	±100	±500	±1500	±6000	±8000	±12000	±18000
Sensitivity (±15%)	mV/deg/sec	20	4	1.333	0.333	0.25	0.167	0.111
Zero measurand output	mV	±100	±100	±100	±100	±100	±100	±100
Non-linearity (Maximum)	%FSO	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5
Frequency response (+1dB/-3dB, ref 100 Hz)	Hz	0-1000	0-1000	0-1000	0-1000	0-1000	0-2000	0-2000
Cross axis sensitivity	%	<1	<1	<1	<1	<1	<1	<1
Thermal zero shift (max) -40°C to +105°C (-40°F to +221°F)	%FS0	±2.5	±2.5	±2.5	±2.5	±2.5	±2.5	±2.5
Thermal sens shift (max) -40°C to +105°C (-40°F to +221°F)	%	±2.0	±2.0	±2.0	±2.0	±2.0	±2.0	±2.0
Residual noise (passband)	mV RMS	±3.4	±3.2	±2.5	±2.1	±2.1	±1.8	±1.8
Electrical								
Excitation voltage	5 to 16 Vdo	2						
Current drain	6 mA max							
Output impedance	200 ohms max							
Common mode voltage (±5%)	2.5 Vdc							
Full scale output voltage (±15%)	±2 Vpk							
Insulation resistance (@100Vdc)	>100 MΩ							
Warm-up time (to within 1% of final output value)	<100 ms							
Physical								
Weight	3 grams (v	vithout cable]					
Case material	Anodized aluminum alloy							
Cable type	Integral 4 conductor, # 32 AWG PFA insulated leads, shielded with silicone jacket							
Mounting/torque	#0-80 screws / 4lb-in (0.45N-m)							
Environmental			••••••					
Shock limit	5000g							
Influence of linear acceleration	0.1 deg/sec/g typical							
Operating temperature	-40°C to +105°C (-40°F to +221°F)							
Storage temperature	-40°C to +	105°C (-40°	F to +221°F)					
Humidity	IP67							
Calibration data	• • • • • • • • • • • • • • • • • • • •		••••••					
Sensitivity	Measured at +7 Vdc excitation and 100 deg/sec for -100, 500 deg/sec for -500, 1500 deg/sec for -1K5, and 3000 deg/sec for -6K, -8K, -12K and -18K							
Zero measurand output	Measured at +7 Vdc excitation and room temperature							
Non-linearity	Measured	at +7 Vdc exc	citation with	in range ±10	0 deg/sec for	-100, ±500 de	eg/sec for -5	00,
	±150	0 deg/sec for	1K5 and ±	:3000 deg/se	c for -6K, -8K,	-12K and -1	8K	



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Accessories

Product	Description	
EH863	#0-80 (3/8 Length) socket head cap screw, 2x	Included
EHW196	Washer, 2x	Included
EHM2156	Hex wrench	Included
7930	Triaxial Mounting Block	Optional

Contact

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Notes

1. Model number definition:

7310 - XXX - ZZZ	Cable length in inches (300 inches is standard) Angular rate range -100 is ±100deg/sec, -500 is ±500deg/sec, -1K5 is ±1500deg/sec, -6K is ±6000deg/sec, -8K is ±8000deg/sec, -12K is ±12000deg/sec, -18K is ±18000deg/sec
	Basic model number

1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.



Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability. 092619