

ENDEVCO
MODEL
7703A-50
-100

Piezoelectric Accelerometer

SPECIFICATIONS

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

DYNAMIC CHARACTERISTICS	Units	-50	-100
CHARGE SENSITIVITY			
TYPICAL	pC/g	50	100
FREQUENCY RESPONSE		See Typical Amplitude Response	
RESONANCE FREQUENCY	kHz	26	20
AMPLITUDE RESPONSE [1]			
±5%	Hz	1 to 6000	1 to 5000
±1dB	Hz	.5 to 8000	.5 to 7000
TEMPERATURE RESPONSE		See Typical Curve	
TRANSVERSE SENSITIVITY	%	≤ 3	
AMPLITUDE LINEARITY [2]	%	1/250 g	1/125 g
Up to vibration limit			

ELECTRICAL CHARACTERISTICS

OUTPUT POLARITY		Acceleration directed into base of unit produces positive output at center socket of receptacle
RESISTANCE	GΩ	≥ 10
ISOLATION	GΩ	≥ 1
CAPACITANCE	pF	2800
GROUNDING		Signal return isolated from case

ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE RANGE [3]	-67°F to +550°F (-55°C to +288°C)		
HUMIDITY	Hermetically sealed		
SINUSOIDAL VIBRATION LIMIT	g	2000	1000
SHOCK LIMIT	g	10 000	5000
BASE STRAIN SENSITIVITY	equiv. g pk/μstrain	0.0016	0.0008
ELECTROMAGNETIC SENSITIVITY	equiv. g rms/gauss	0.0002	0.0002
THERMAL TRANSIENT SENSITIVITY	equiv. g pk/°F (°C)	0.004 (0.007)	0.003 (0.005)
RADIATION			
INTEGRATED GAMMA FLUX	rad	Up to 10 ⁸	
INTEGRATED NEUTRON FLUX	N/cm ²	Up to 10 ¹⁰	

PHYSICAL CHARACTERISTICS

DIMENSIONS	See Outline Drawing		
WEIGHT	gm (oz)	25 (0.9)	29 (1.0)
CASE MATERIAL	Stainless Steel		
CONNECTOR	Coaxial receptacle with 10-32 UNF threads designed to mate with Endevco Model 3000 Series Cables		
MOUNTING TORQUE	lbf-in (Nm)	18 (2)	

CALIBRATION

SUPPLIED:			
CHARGE FREQUENCY RESPONSE	%	20 to 6 kHz	20 to 5 kHz
	dB	6 kHz thru resonance	5 kHz thru resonance
CHARGE SENSITIVITY	pC/g		
MAXIMUM TRANSVERSE SENSITIVITY	%		
CAPACITANCE	pF		

ACCESSORIES

Model 3090C-120 (10 ft)	CABLE ASSEMBLY for use to +550°F (+288°C)
Model 2981-12	MOUNTING STUD, 10-32 to 10-32
EHM464	HEX KEY WRENCH

OPTIONAL ACCESSORIES

Model 3075M6-120 (10 ft)	CABLE ASSEMBLY for use above +500°F (+260°C)
Model 2981-4	MOUNTING STUD, 10-32 to M5
Model 2771AM3	IN-LINE CHARGE CONVERTOR FOR USE WITH CONSTANT CURRENT SOURCE
Model 2950	TRIAXIAL MOUNTING BLOCK

NOTES

1. Low-end response of the transducer is a function of its associated electronics.
2. Short duration shock pulses, such as those generated by metal-to-metal impacts, may excite transducer resonance and cause linearity errors. Send for TP290 for more details.
3. Charge output is temperature compensated.
4. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 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.

ENDEVCO CORPORATION, 30700 RANCHO VIEJO ROAD, SAN JUAN CAPISTRANO, CA 92675 USA (800) 982-6732 (949) 493-8181 fax (949) 661-7231