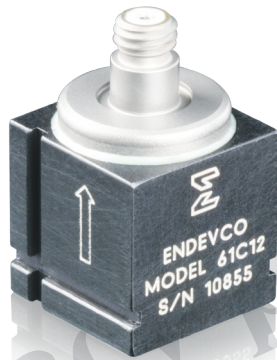




Model 61C12 / 61C13 i-TEDS accelerometer

Features

- Built-in IEEE P1451.4 TEDS
- Light weight, rugged
- Exceptional resolution
- Wide bandwidth
- Innovative z-mount quick release
- General purpose vibration & modal studies

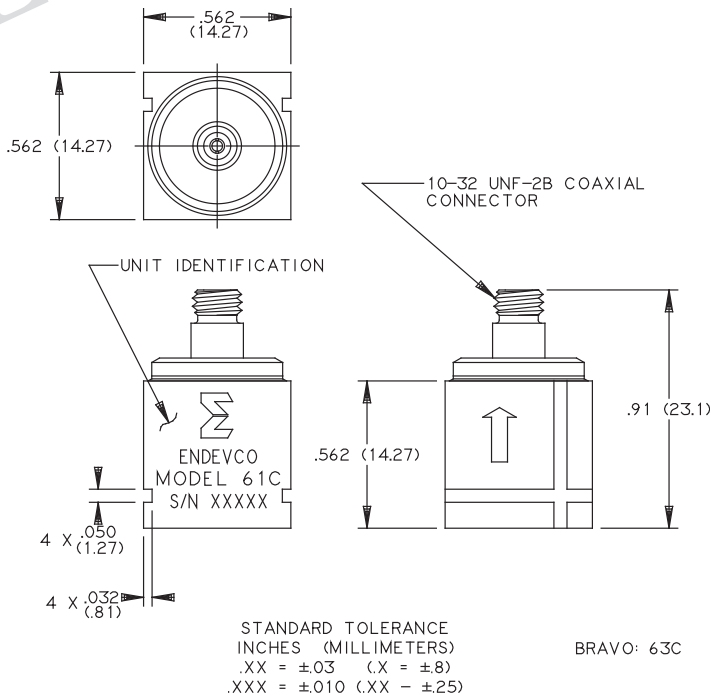


Description

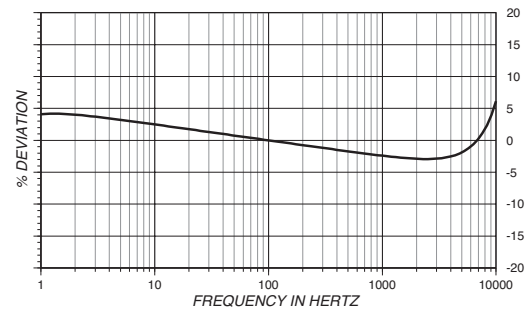
The Endeveco® brand model 61C is a lightweight piezoelectric accelerometer with integral electronics, which features IEEE P1451.4 Transducer Electronic Data Sheet (TEDS) capabilities. This accelerometer offers exemplary dynamic range and frequency response, and maintains excellent phase characteristics over its entire operating frequency range. Model 61C also demonstrates outstanding shock survivability. This unit is designed to withstand most rough handling in laboratory environments without sustaining internal damage. In addition to adhesive mounting, model 61C comes with the option of using the Endeveco brand z-mount, a convenient mounting scheme that reduces set-up time during installation and calibration. The model 61C can be powered by any signal analyzer that features a 2 to 10 mA constant current supply.

The model 61C features Endeveco's Piezite® Type P-8 crystal element. The design utilizes annular shear, an advanced shear mode crystal technology. One of the key design characteristics is the low unit-to-unit phase deviation at low frequency, ideal for modal analysis of large rigid bodies.

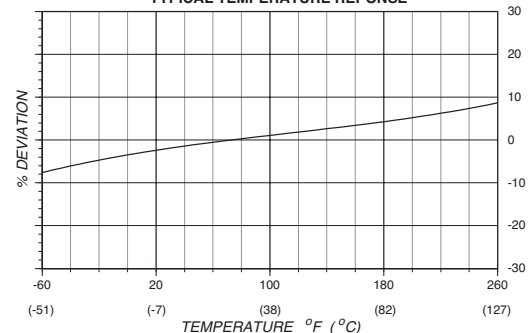
Endeveco brand signal conditioner models 133, 2792B, 2793, 4416B or Oasis 482A, 433, 428 are recommended for use with this accelerometer.



TYPICAL AMPLITUDE RESPONSE



TYPICAL TEMPERATURE RESPONSE



Model 61C12 / 61C13 i-TEDS accelerometer

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Specifications

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C), 4 mA and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	61C12	61C13
Range	g	±50	±5
Voltage sensitivity, typical	mV/g	100	1000
Frequency response		See typical curve	
Amplitude response			
±5% [epoxy mount]	Hz		1 to 5000
1dB	Hz		1 to 8000
±5% [z mount]	Hz		1 to 1000
Phase response <5°[1]	Hz	@ 1	@ 2
<10° nominal	Hz	@ 0.2	@ 1
Resonance frequency	kHz		25
Transverse sensitivity	%		≤ 5
Temperature response			See typical curve
Sensitivity deviation, ±5%	°F (°C)		+32 to +104 (0 to +40)
Sensitivity deviation, ±10%	°F (°C)		-10 to +185 (-20 to +85)
Bias voltage	Vdc		+7 to +14
Amplitude non-linearity	%		≤ 1
Output characteristics			
Output polarity		Acceleration applied in the direction of arrow provides positive output	
DC output bias voltage	Vdc		+12 ±1
Room temperature 75°F (24°C)	Vdc		+11.0 to +13.0
-67°F to +257°F (-55°C to 150°C)	Vdc		+7.0 to +14.0
Output impedance			
from 2 to 3 mA	Ω		≤ 300
>3 to 10 mA	Ω		≤ 100
Full scale output voltage	Vpk		±5
Residual noise			
broadband, 1 Hz to 10 kHz bandwidth	equiv. µg rms	150	50
Grounding		Signal ground is connected to the case and isolated from the mounting surface	
PE characteristics			
Sensitivity	pC/g		25 (nominal)
Capacitance	pf		850 (nominal)
Charge amplifier characteristics			
High pass (3dB)	Hz	0.2	0.15
Low pass (3dB)	pf	19.7k	20.0k
Power requirement			
Supply voltage [2]	Vdc		+20 to +30
Supply current	mA		+2 to +10
Warm-up time (to reach 10% of final bias)	sec		< 5
Environmental characteristics			
Temperature range	°F (°C)		-10 to +185 (-20 to +85)
Humidity			Hermetically sealed
Sinusoidal vibration limit	g		±300
Shock limit [3]	g pk		5000
Base strain sensitivity @ 250 µstrain	eq. g/µstrain		<0.001
Thermal transient sensitivity	eq. g/°F(°C)		0.025 (0.045)
Physical characteristics			
Dimensions		See outline drawing	
Weight	oz (gm)		0.45 (13)
Case material		Aluminum alloy, anodized, titanium alloy inner case	
Connector [4]		Coaxial receptacle w/10-32 UNF thread designed to mate with Endevco brand model 3000 series cable	
Mounting		Adhesive or EZ mount	
Calibration			
Supplied:			
Voltage sensitivity	V/g		10 Hz
Transverse sensitivity	%		7 g pk, 12 Hz
Frequency response	%		20 Hz to 8 kHz

Model 61C12 / 61C13 i-TEDS accelerometer

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Accessories

Product	Description	87
3061A-120	Cable assembly, 10 ft	Included
30908	EZ mounts, X3	Included
32279	Mounting wax	Included

Other Endeveco brand products for modal measurement

Product	Description	87
OASIS accessories		
36004	Smart hand held programmer	
36018	TEDS editor kit	

Notes:

1. Maintain high levels of precision and accuracy using Meggitt's factory calibration services. Call Meggitt'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.

Legacy product not for sale



Continued product improvement necessitates that Meggitt reserve the right to modify these specifications without notice. Meggitt 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 Meggitt synonymous with reliability.

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