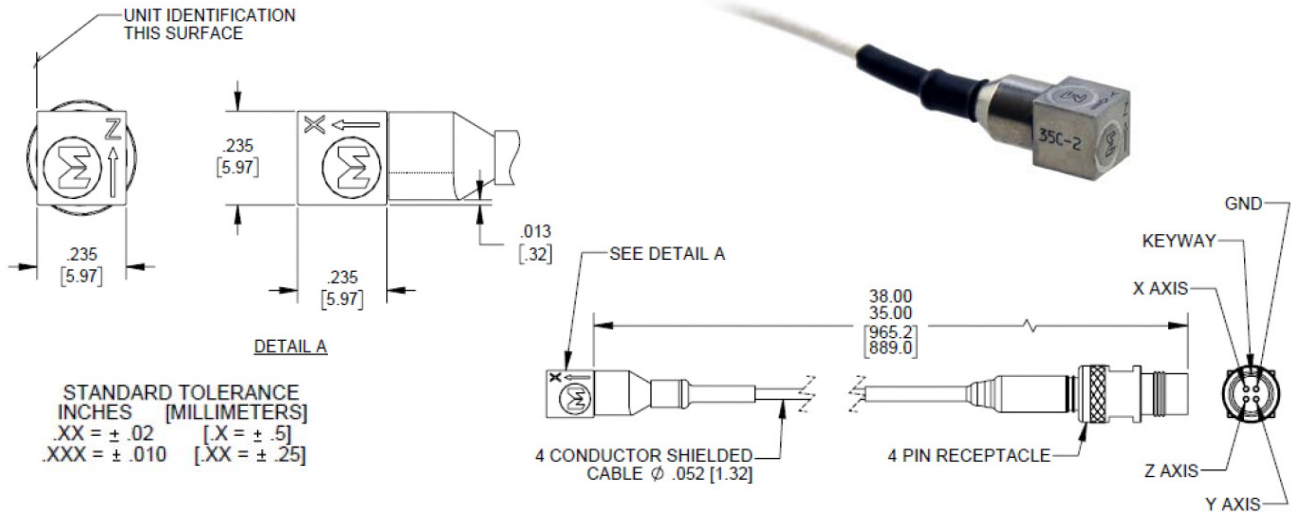


# Miniature Triaxial IEPE Accelerometer

## Model 35C



### Key features

- Hermetically sealed titanium case
- Miniature, 0.235 inch cube
- Lightweight, 0.76 grams
- Three sensitivity options available – 2.5, 5 and 10 mV/g
- Three-foot integral cable terminating to 4-pin connector
- Low noise floor
- Rated to IP68 standard

### Description

Endevco model 35C is an ultra-miniature, adhesive mounted triaxial piezoelectric accelerometer with integral electronics. Its tiny size, 0.235 inch cube, and light weight, 0.76 grams (sensor only), make it ideal for measuring vibration on very small objects. It is hermetically sealed for use in humid and dirty environments. The 35C has an integral three-foot cable that terminates to a single threaded ¼-28 4-pin connector. The 35C is available in three sensitivities: 2.5 mV/g, 5 mV/g and 10 mV/g.

The 35C operates in annular shear mode which exhibits excellent output sensitivity stability over time. It is also designed with a very low noise floor that results in an outstanding signal to noise ratio for more accurate measurements. The accelerometer incorporates an internal hybrid signal conditioner in a two-wire system, which transmits its low impedance voltage output through the same cable that supplies the required constant current power. The accelerometer is case grounded. A removal tool is included with the accelerometer to ensure proper removal in the field.

# Miniature Triaxial IEPE Accelerometer | Model 35C

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.

Specifications				
Dynamic characteristics	Units	35C-2	35C-5	35C-10
<b>Dynamic characteristics</b>				
Range [1]				
Nominal	g pk	±2800	±1400	±700
Minimum	gpk	±1800	±900	±450
Voltage sensitivity				
Nominal	mV/g	2.5	5	10
Tolerance	%		+40/-20	
Frequency response				
Resonance frequency				
Typical	kHz		40	
Minimum	kHz		30	
Amplitude response				
±5%, z- and y-axis	Hz	2 to 8000	2 to 8000	2 to 6000
±5%, x-axis	Hz	2 to 6000	2 to 5000	2 to 4000
Typical frequency response		See typical frequency response curve		
Transverse sensitivity	%		≤5	
Amplitude linearity	%		<2	
<b>Electrical characteristics</b>				
Output polarity		Acceleration in the direction of the arrow produces positive output		
DC output bias voltage				
Room temperature, +75°F (+24°C)	Vdc		+7.5 to +13.5	
-67°F to +257°F (-55°C to +125°C)	Vdc		+7.0 to +16.0	
Output impedance	Ω		≤700	
Noise floor				
Broadband				
1 Hz to 10000 Hz	µg rms	2000	16000	2700
Spectral				
1 Hz	µg / √Hz	1600	1200	1100
10 Hz	µg / √Hz	300	160	300
100 Hz	µg / √Hz	70	40	80
1000 Hz	µg / √Hz	20	12	30
Grounding method		Signal ground connected to case		
Power requirements				
Supply voltage	Vdc	+24 to +28		
Supply current [2]	mA	+3.5 to +4.5		
Warm-up time [3]	sec	<3		
Recovery time [4]	sec	<10		
Full scale output voltage	V	±7.0		
Base strain sensitivity	g pk/µ strain	0.002		
<b>Environmental characteristics</b>				
Temperature range	°F (°C)	-67 to +257 (-55 to +125)		
Humidity		Hermetic, IP68 [5]		
Shock limit [6]	g pk	5000		
Electromagnetic sensitivity	equiv g rms/gauss	0.03		
<b>Physical characteristics</b>				
Dimensions		See outline drawing		
Weight, without strain relief and cable	grams (oz)	0.76 (0.027)		
Case material		Titanium		
Connector		4-pin Microtech style		
Mounting [7]		Adhesive		
Cable				
Type		4 conductor, shielded		
Conductor gauge	AWG	38		
Conductor insulation		PFA Teflon®		
Jacket		White, PFA Teflon®		

# Miniature Triaxial IEPE Accelerometer | Model 35C

## Calibration data supplied

Sensitivity, each axis	mV/g			
Bias, each axis	Vdc			
Frequency response, each axis	%	20 Hz to 8 kHz	20 Hz to 8 kHz	20 Hz to 6 kHz
	dB	8 kHz to 10 kHz	8 kHz to 10 kHz	6 kHz to 8 kHz

## Accessories

Options	Description	35C
42952	Removal tool	Included
3027AM3-ZZZ [8]	Cable assembly 4-pin to 3 BNC	Optional

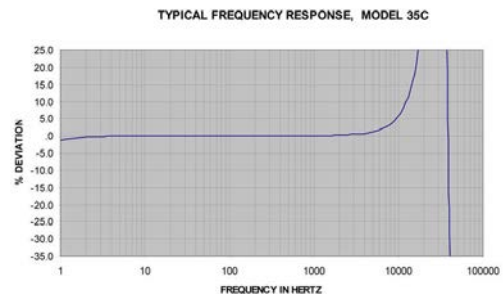
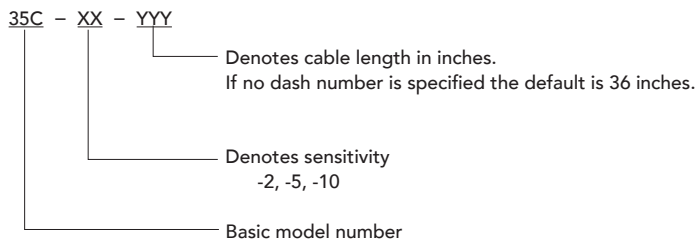
## Notes

- Specified limit of sensor at the entire operating temperature range
- Excessive current supply may cause permanent damage to accelerometer
- DC bias within 10% of final value
- Time interval between the moment the sensor is saturated and the moment bias returns within 10% of final value.
- The 35C has an IP68 waterproof rating (100m depth, 48 hour duration), except the output connector. The output connector mate may be protected with a sealant such as Silicone.
- Destructive limit. Shock is a one-time event. Shock pulses of short duration may excite transducer resonance. Shock level above the sinusoidal vibration limit may produce temporary zero shift that will result in erroneous velocity or displacement data after integration.
- Cyanoacrylate adhesives are recommended for temporary mounting applications. To remove the accelerometer, soften the adhesive with the appropriate solvent and use the removal tool supplied with each accelerometer. Striking or applying excessive torque to break the glue bond will cause permanent damage to the transducer.
- All materials used have less than or equal to 1% TML (Total Mass Loss) and a CVC (Collected Volatile Condensed Mass) less than or equal to 0.1%, verified by NASA documentation.
- ZZZ designates cable assembly length in inches.

## Ordering information:

- 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.

- Model number definition:



10869 NC Highway 903, Halifax, NC 27839 USA

endevco.com | sales@endevco.com | 866 363 3826

© 2021 PCB Piezotronics - all rights reserved. PCB Piezotronics is a wholly-owned subsidiary of Amphenol Corporation. Endevco is an assumed name of PCB Piezotronics of North Carolina, Inc., which is a wholly-owned subsidiary of PCB Piezotronics, Inc. Accumetrics, Inc. and The Modal Shop, Inc. are wholly-owned subsidiaries of PCB Piezotronics, Inc. IMI Sensors and Larson Davis are Divisions of PCB Piezotronics, Inc. Except for any third party marks for which attribution is provided herein, the company names and product names used in this document may be the registered trademarks or unregistered trademarks of PCB Piezotronics, Inc., PCB Piezotronics of North Carolina, Inc. (d/b/a Endevco), The Modal Shop, Inc. or Accumetrics, Inc. Detailed trademark ownership information is available at [www.pcb.com/trademarkownership](http://www.pcb.com/trademarkownership).