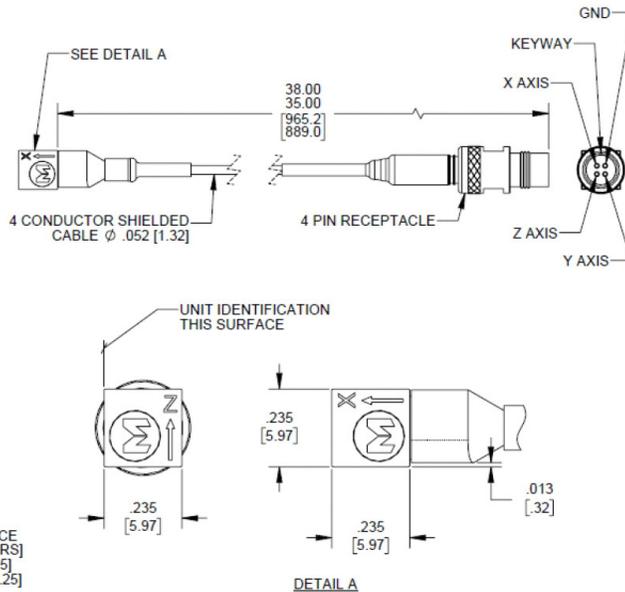


Endevco®

# Isotron® accelerometer Model 35C



## Key features

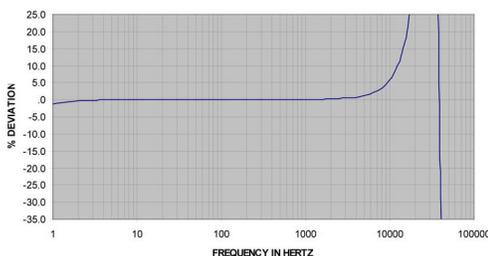
- World's smallest triaxial IEPE accelerometer
- Hermetically sealed titanium case
- Miniature, 0.235 inch cube
- Lightweight, 0.76 grams
- Three sensitivity options available – 2.5, 5 and 10 mV/g
- Three-foot integral cable terminating to 4-pin connector
- Low noise floor
- Rated to IP68 standard

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.

This product is fully compliant to the European Union's Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU, RoHS Directive 2011/65/EU and is eligible to bear the CE Mark.

TYPICAL FREQUENCY RESPONSE, MODEL 35C



## Meggitt Sensing Systems

Our measurement product competencies:

Piezoelectric accelerometers | Piezoresistive accelerometers | Isotron accelerometers | Variable capacitance accelerometers | Pressure transducers | Acoustic sensors | Electronic instruments | Calibration systems | Shakers | Modal hammers | Cable assemblies

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smart engineering for  
extreme environments

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# Isotron® accelerometer

## Model 35C

### 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	35C-2	35C-5	35C-10
<b>Range [1]</b>				
Nominal	g pk	±2800	±1400	±700
Minimum	g pk	±1800	±900	±450
<b>Voltage sensitivity</b>				
Nominal	mV/g	2.5	5	10
Tolerance	%		+40/-20	
<b>Frequency response</b>				
<b>Resonance frequency</b>				
Typical	kHz		40	
Minimum	kHz		30	
<b>Amplitude response</b>				
±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		
<b>DC output bias voltage</b>				
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	
<b>Noise floor</b>				
<b>Broadband</b>				
1 Hz to 10000 Hz	µg rms	2000	1600	2700
<b>Spectral</b>				
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		
<b>Power requirements</b>				
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/µε		0.002	
<b>Environmental characteristics</b>				
Temperature range	°F [°C]		-67 to +257 [-55 to +125]	
Humidity [5]			Hermetic, IP68	
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		
<b>Calibration data supplied</b>				
Sensitivity, each axis	mV/g			
Bias, each axis	Vdc			
Frequency response, each axis	dB	20 Hz to 8 kHz 8 kHz to 10 kHz	20 Hz to 8 kHz 8 kHz to 10 kHz	20 Hz to 6 kHz 6 kHz to 8 kHz

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## Accessories

Product	Description	35C
42952	Removal tool	Included
C-003-CA-005-ZZZZ [8]	Cable assembly 4-pin to 3 BNC	Optional
3027AM3-ZZZ [8]	Cable assembly 4-pin to 3 BNC	Optional
123	Signal conditioner	Optional
133	Signal conditioner	Optional

## Notes

1. Specified limit of sensor at the entire operating temperature range
2. Excessive current supply may cause permanent damage to accelerometer
3. DC bias within 10% of final value
4. Time interval between the moment the sensor is saturated and the moment bias returns within 10% of final value.
5. 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.
6. 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.
7. 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.
8. ZZZ or ZZZZ designates cable assembly length in inches
9. Maintain high levels of precision and accuracy using Meggitt's factory calibration services. Call Meggitt'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.
10. Model number definition:

35C - XX - YYY

Denotes cable length in inches.  
If no dash number is specified the default is 36 inches.

Denotes sensitivity  
-2, -5, -10

Basic model number

## Contact

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[www.meggitt.com](http://www.meggitt.com)



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 Endevco synonymous with reliability. 110818

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