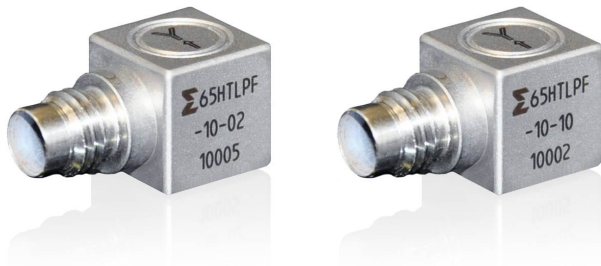




## Model 65HTLPF Isotron® accelerometer

### Features

- Triaxial, low-impedance output with 2-pole low pass filter
- Rated for continuous use up to +175°C (347°F)
- Small size (10-mm cube, 5 gram)
- 65HTLPF-10-02-R and 65HTLPF-10-10-R available as replacement sensors

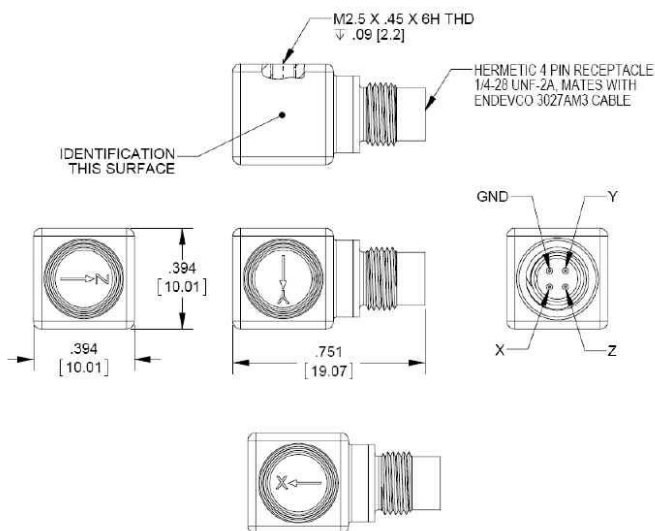


### Description

The Endevco® model 65HTLPF is a miniature IEPE high temperature (up to 175°C) triaxial accelerometer with 2-pole low-pass filter. The sensor is designed for use in test and measurement applications requiring both high temperature operation and effective attenuation of high-frequency, high-g signals that can obscure the required low-frequency information and also can cause saturation of electronics. Additionally, the low-pass filter provides resonance suppression. The model 65HTLPF is packaged in a 10 mm cube of welded titanium construction. Interface to the model 65HTLPF triaxial accelerometer is made via a side connector Microtech style 4-pin receptacle. Power to the sensor, in the form of a constant current, travels through the same pins as the low impedance output signals.

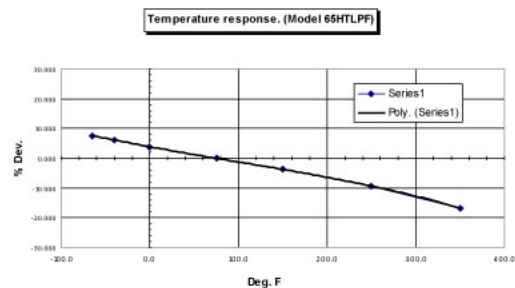
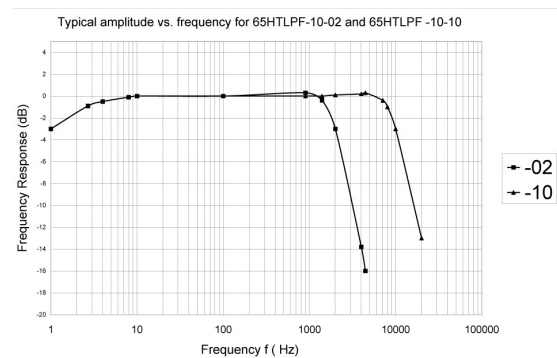
The model 65HTLPF-10 features a sensitivity of 10 mV/g. The model number's second suffix indicates the low-pass filter corner frequency at level - 3dB. Two options are currently available, the model 65HTLPF-10-02 featuring a corner frequency of 2 kHz and the 65HTLPF-10-10 featuring a corner frequency of 10 kHz. Other corner frequencies are available upon request.

This product is fully compliant to the European Union's Low Voltage Directive, 2006/95/EC and EMC Directive 2004/108/EC and is eligible to bear the CE Mark.



STANDARD TOLERANCE  
INCHES [MILLIMETERS]  
.XX = ± .03 [X = ± .8]  
.XXX = ± .010 [XX = ± .25]

SOL



# Model 65HTLPF Isotron® 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) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	-10-02	-10-10
Range	g		±500
Voltage sensitivity			
Typical	mV/g		10
Tolerance	%		10
Frequency response		See typical amplitude response	
Amplitude response			
±5%	Hz	5 to 1000	5 to 5000
±1 dB	Hz	3 to 1400	3 to 7000
Resonance frequency	Hz		40 000
Low-pass filter corner frequency (-3 dB)	kHz	2 ±0.2	10 ±1
Low-pass filter roll-off	dB/Octave		10-12.5
Temperature response		See typical curve	
Sensitivity deviation		Positive absolute value <15% at -67°F [-55°C] [ref 77°F [25°C]]	
Sensitivity deviation		Negative absolute value <30% at +347°F [+175°C] [ref 77°C [25°C]]	
Transverse sensitivity	%		< 5
Amplitude linearity	%		< 1
<b>Output characteristics</b>			
Output polarity		See arrows on outline drawing	
DC output bias voltage [1]	Vdc	+9.5 to +13.5 at room temperature +8 to +16 over temperature range	
Output connection		See connection diagram	
Output impedance			
1 mA to 2 mA	Ω		< 300
3 mA to 4 mA	Ω		< 100
Full scale output	Vpk		±5
Saturation level at 5Vpk output			
100 Hz	gpk	500	500
1 kHz	gpk	500	500
2 kHz	gpk	≥ 700	500
5 kHz	gpk	≥ 5000	500
10 kHz	gpk	≥ 5000	≥ 700
40 kHz (resonance frequency)	gpk	≥ 350	≥ 800
Noise floor			
Broadband (0.1 Hz to 10 kHz)	μg rms		≤ 4000
Spectral:			
1 Hz	μg / √ Hz		≤ 1000
10 Hz	μg / √ Hz		≤ 170
100 Hz	μg / √ Hz	≤ 70	≤ 40
1 kHz	μg / √ Hz	≤ 70	≤ 40
Grounding		Signal ground connected to the case	
<b>Power requirement</b>			
Current requirement	mA		+1 to +4
Voltage supply	Vdc		+23 to +30
Warm-up time (time to reach 90% of final bias)	sec		< 2
<b>Environmental characteristics</b>			
Temperature range		-67°F to +347°F [-55°C to +175°C]	
Humidity		Welded construction	
Sinusoidal vibration limit (without damage)	g pk		±5000
Shock limit (without damage) [2]	g pk		10 000
Base strain sensitivity at 250μ strain	eq. g/μstrain		< 0.001
Thermal transient sensitivity	eq. g/°F		0.02
<b>Physical characteristics</b>			
Dimensions		See outline drawing	
Weight	oz (gram)		0.17 (5)
Case material		Titanium, commercially pure Cp4	
Connector [3]		4-pin Microtech-style, side mounted	
Mounting [4]		Adhesive or M2.5 thread	
Mounting torque	in-lbf		8
<b>Calibration</b>			
Supplied, each axis:			
Sensitivity	mV/g		
Transverse sensitivity	%		
Frequency response	Hz	20 to 2200	20 to 11 000
Bias	Vdc		

# Model 65HTLPF Isotron<sup>®</sup> accelerometer

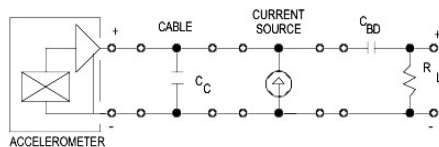
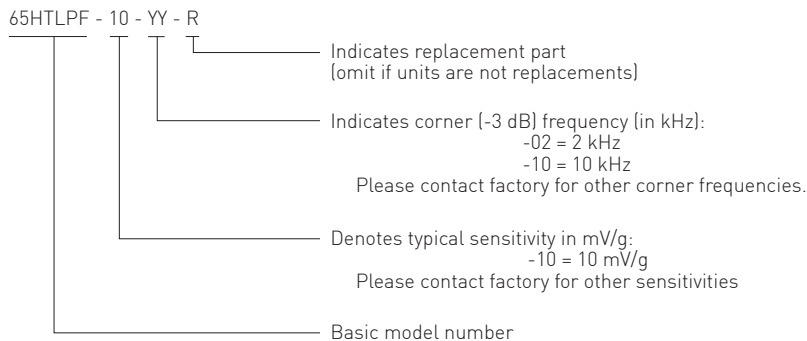
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## Accessories

Product	Description	65HTLPF	65HTLPF-R
3027AM3-36	Triaxial cable, 85° C, 3 BNC's at instrumentation end [5]	Included	Optional
3027AVM13-84	Extension cable rated to +200°C (mates with 3027AM3) [5]	Included	Optional
3027AVM13-XXX	Extension cable rated to +200°C (mates with 3027AM3) [5]	Optional	Optional
32279	Mounting wax	Included	Optional
EHX431	+260°C rated adhesive	Optional	Optional
EH755	Screw, cap	Included	Included
EH761	Screw, set	Included	Included
40965	Mounting block, adhesive mount	Optional	Optional
EH769	Screw for 40965 mounting block	Optional	Optional
41013	Mounting clip	Optional	Optional
133	Signal conditioner	Optional	Optional
2793	Isotron signal conditioner	Optional	Optional
4990A-1	OASIS 2000 computer-controlled system	Optional	Optional

## Notes:

- 2.2 Vdc minimum must be available to each axis of the accelerometer to ensure full scale operation at the temperature extremes.
- Shock pulses of short duration may excite transducer resonance. Shock level above the sinusoidal vibration limit may produce temporary zeroshift which will result in erroneous velocity or displacement data after integration.
- Microtech DR-4S-4 receptacle mates with Endevco brand model 3027AM3 and 3027AVM13.
- Be careful not to apply abusive forces when removing the accelerometer from a structure. Hammer taps and wrench 'snaps' often impart permanent damage to the case and internal sensors.
- The 3027AVM13 cable assembly should be used in applications where the accelerometer is used near its upper temperature extreme, 347°F (175°C). The supplied cable assembly, the 3027AVM13, is rated for use up to only 347°F (175°C).
- The 3027AM3 cable assembly should be used as a 185°F (85°C) extension cable for model 3027AVM13.
- 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.
- Model number definition:



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.

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