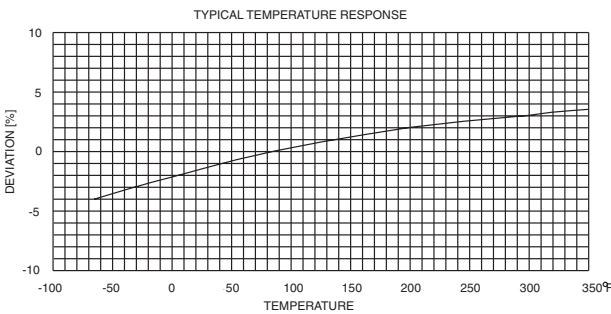
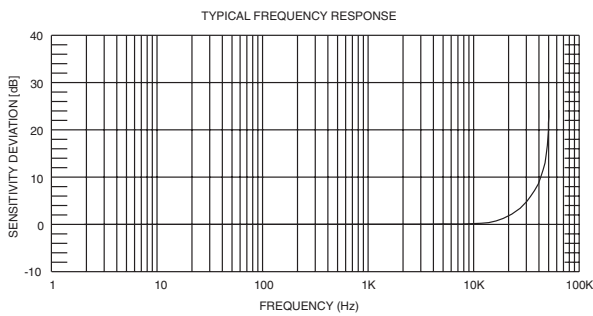
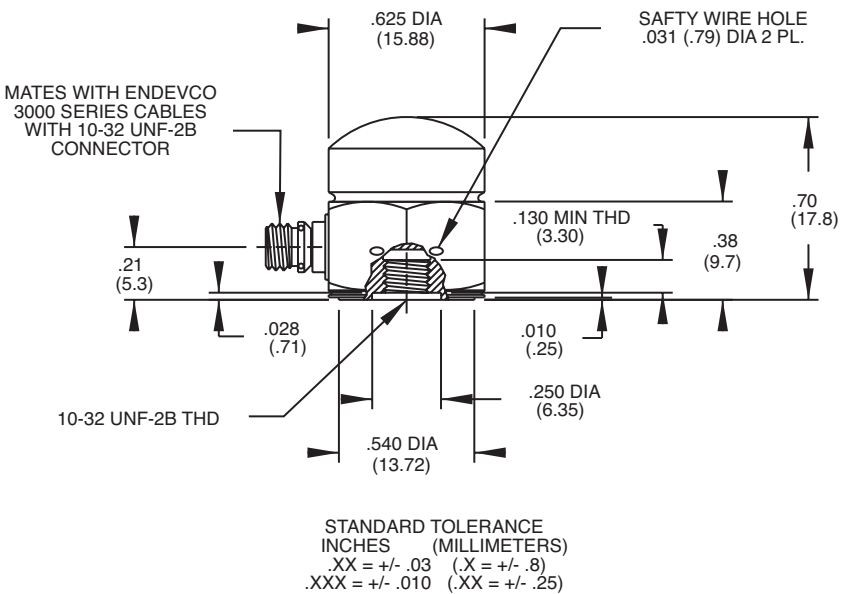
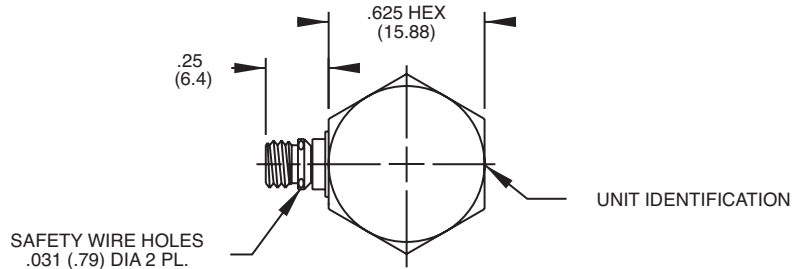


# Transfer standard accelerometer

## Model 2270M8



### Key features

- Transfer standard accelerometer for calibration of back-to-back working standards and reference standards built into shakers
- Stable P-10 crystal material
- High (55 kHz) resonance frequency
- Electrical isolation
- Supplied with reciprocity calibration at 100 Hz

### Description

The Endevco® model 2270M8 transfer standard accelerometer is designed for the calibration of back-to-back working standards used in comparison calibrations. It is used extensively in calibrating standard accelerometers built into the armatures of vibration exciters, such as the Endevco model 2911, or comparison standard accelerometers, such as the Endevco model 2270. The model 2270M8 is particularly valuable as a calibration source when the working standard is to be used at frequencies up to 20 000 Hz.

The model 2270M8 is supplied with an absolute reciprocity calibration at 100 Hz. In addition, a comparison calibration from 20 Hz to 10 000 Hz, including a graph of sensitivity versus frequency, is supplied with all results given in a comprehensive report showing traceability to the NIST. Optional calibrations to extend the frequency response down to 2 Hz or up to 20 000 Hz are also available.

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### Specifications

All specifications are typical at 75°F (24°C), referenced at 100 Hz and conform to ISA-RP 37.2 (1-64) unless otherwise indicated.

#### Dynamic characteristics

Charge sensitivity	2.2 pC/g $\pm$ 20% (0.22 pC/ms <sup>2</sup> )						
Charge frequency response [1]							
Frequency	2 Hz	100 Hz	1k Hz	2k Hz	5k Hz	10k Hz	20k Hz
Deviation	0%	REF	0%	0%	+2%	+5%	+20%
Mounted resonance frequency	55 kHz typical, with a case resonance of ~3 dB at ~35 kHz						
Transverse sensitivity	3% maximum in any direction						
Amplitude linearity	$\pm$ 4% typical -65°F to 350°F (-54°C to 177°C) reference to room temperature						

#### Electrical characteristics

Capacitance	1700 pF $\pm$ 20%
Resistance	20 G $\Omega$ minimum at 75°F (24°C), 100 M $\Omega$ minimum at 350°F (177°C)
Isolation	10 M $\Omega$ minimum between signal ground and housing
Polarity	Positive output for acceleration into the base

#### Environmental characteristics

Temperature range	-65°F to 350°F (-54°C to 177°C)
Humidity	Hermetically sealed by welding and by glass/metal seal in receptacle
Acceleration limit	15 000 g peak shock, 1000 g peak sinusoidal in any direction
Base strain sensitivity	1.1 equivalent g peak per 250 $\mu$ strain peak
Electromagnetic sensitivity	0.06 equivalent g rms at 100 gauss rms, 60 Hz

#### Physical characteristics

Weight	0.6 oz. (16.5 gm) typical
Case material	Stainless steel
Sensor	Endevco piezite type P-10 in the single-ended compression mode
Output receptacle	10-32 UNF threaded coax socket type side connector mates with Endevco Model 3090C cable assembly
Mounting	Detachable 10-32 stud 18 lbf-in (2 Nm) mounting torque

#### Calibration data

Standard	
CS120	Reciprocity Calibration includes an absolute reciprocity sensitivity at 100 Hz and 2 g peak, and a comparison frequency response from 20 to 10 000 Hz. Test results are furnished in a formal report that includes transverse sensitivity, resistance, capacitance, and frequency response plots.

#### Optional

CS120L	Extends the frequency response calibration down to 2 Hz.
CS120H	Extends the frequency response calibration up to 20 000 kHz
CS310	Temperature Response Calibration, -65°F to 350°F (-54°C to 177°C)
CS110	Shock Calibration
CS210	Sinusoidal Linearity CalibrationContinued

# Transfer standard accelerometer

## Model 2270M8

### Accessories

Product	Description	2270M8
3090C-120	Cable assembly	Included
2981-12	Mounting stud, 10-32 UNF	Included
15071	Adapter stud, 1/4-28 UNF to 10-32 UNF	Included
2984-1	Stud, Adaptor 10-32 to 14-28	Included
EHM464	Wrench, Hex Key	Included
2981-4	Mounting stud, M5x0.8	Optional

### Notes

1. Low frequency response will be determined by the roll-off characteristics of the charge amplifier used with the 2270M8 standard accelerometer.

### Ordering information

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