

# PRODUCT DATA

## Piezoelectric Accelerometer Seismic DeltaTron<sup>®</sup> Accelerometer — Type 8340

### USES AND FEATURES

- Seismic measurements
- High sensitivity,  $1 \text{ V/ms}^{-2}$  (10 V/g)
- Low noise
- Low-impedance output
- Hermetically sealed stainless steel housing for outdoor environments
- Insulated base

### Description

Type 8340 is a piezoelectric annular shear design accelerometer with integral electronics. The transducer features a MIL-C-5015, 2-pin top connector, case isolation and a hermetically sealed stainless steel housing to resist outdoor or humid environments. Type 8340 is mounted by means of a 1/4"-28 UNF tapped hole. A steel stud is supplied with the accelerometer.

### Characteristics

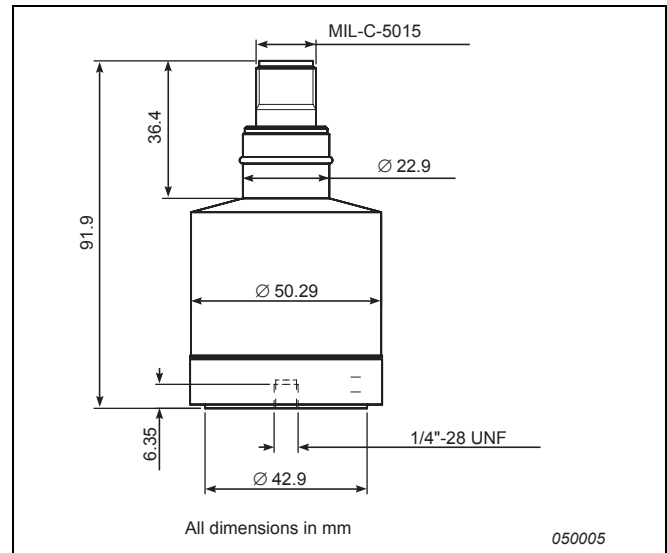
The transducer has been specifically designed with a high sensitivity and excellent signal-to-noise ratio for measurements on large structures at very low frequencies and measuring low-level seismic activity.

### Calibration

Type 8340 is individually calibrated using state-of-the art random FFT technology, providing an 800-point, high-resolution calibration (magnitude and phase), ultimately giving a unique characterisation and securing the integrity of the vibration measurement.

The sensitivity given on the calibration chart has been measured at 159.2 Hz with a 95% confidence level, using a coverage factor  $k = 2$ .

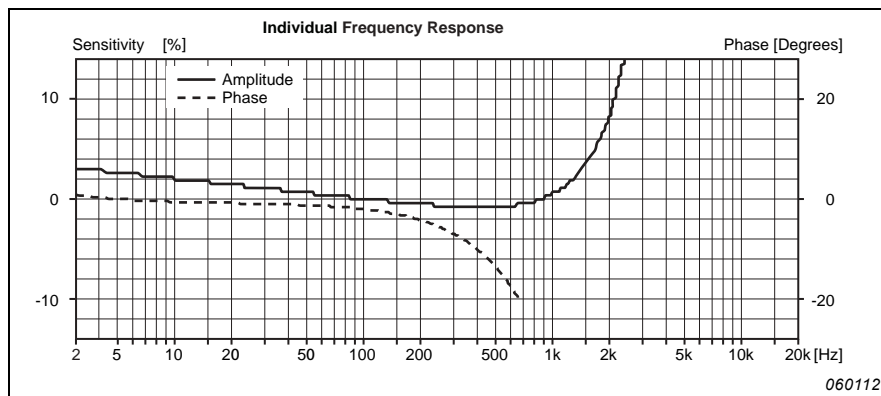
Type 8340 is calibrated in the frequency range from 5 Hz to 1500 Hz.



## Specifications – Seismic DeltaTron Accelerometer Type 8340

	Units	8340
<b>Dynamic Characteristics</b>		
Voltage Sensitivity (@ 159.2Hz)	V/ms <sup>-2</sup> (V/g)	1 +12/-8% (10 ±10%)
Measuring Range	ms <sup>-2</sup> (g)	± 4.9 (±0.5)
Frequency Response (typical)		See amplitude and phase response
Mounted Resonance Frequency	kHz	7
Amplitude Response ±10%	Hz	0.1 to 1500
Residual Noise, Broadband	µg	25
Residual Noise, Spectral @ 0.1 Hz	µg/√Hz	1.5
Residual Noise, Spectral @ 55 Hz	µg/√Hz	1.5
Residual Noise, Spectral @ 300 Hz	µg/√Hz	0.05
Residual Noise, Spectral @ 1000 Hz	µg/√Hz	0.05
Transverse Sensitivity	%	<1
<b>Electrical Characteristics</b>		
Output Impedance	Ω	<200
DC Output At room temperature	V	12 ±1
Bias Voltage In full temperature range	V	10 to 14
Power Supply	mA	2 to 20
Start-up Time	s	~8
Grounding		Case Insulated
<b>Environmental Characteristics</b>		
Temperature Range	°C (°F)	-51 to +74 (-60 to +165)
Humidity		Hermetic
Max. Operational Sinusoidal Vibration (peak)	ms <sup>-2</sup> (g) pk	± 4.9 (±0.5)
Max. Shock (peak)	ms <sup>-2</sup> (g) pk	980 (100)
Base Strain Sensitivity	Equiv. ms <sup>-2</sup> /µ strain	0.0002
Coefficient of Thermal Sensitivity	Equiv. %/°C (%/°F)	0.25 (0.14)
Magnetic Sensitivity (50 Hz – 0.03 Tesla)	ms <sup>-2</sup> /T (g/T)	0.7 (0.07)
<b>Physical Characteristics</b>		
Dimensions		See outline drawing
Weight	gram (oz.)	775 (22.3)
Case Material		Stainless steel
Connector		2-pin MIL-C-5015
Mounting		¼" – 28 UNF threaded hole
Max. Mounting Torque	Nm (lb. in.)	5 (44)

All values are typical at 25°C (77°F) unless measurement uncertainty is specified



### TRADEMARKS

Tefzel is a registered trademark of E.I. du Pont de Nemours and Company

Brüel & Kjær reserves the right to change specifications and accessories without notice

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### COMPLIANCE WITH STANDARDS



Compliance with EMC Directive and Low Voltage Directive of the EU  
Compliance with the EMC requirements of Australia and New Zealand

### Ordering Information

Type 8340 includes the following accessories:

- Carrying box
- Calibration chart
- ¼" – 28 UNF Mounting Stud

### OPTIONAL ACCESSORIES\*

- AO-0608-D-050: Industrial grade cable, Tefzel® jacket, 2-pin MIL-C-5015 connector to BNC connector, 5 m, -40°C to +125°C
- AO-0612-D-050: Industrial grade cable, Tefzel jacket, 2-pin MIL-C-5015 to Open End, 5 m, -40°C to +125°C
- UA-2056: Set of 10 1/4" – 28 UNF threaded mounting stud with flange, length 8.7 mm
- UA-2052: Set of 10 stud adaptors 1/4" – 28 UNF to 10 – 32 UNF thread, length 7.4 mm
- UA-2054: Set of 20 bushing adaptors 1/4" – 28 UNF to 10 – 32 UNF internal thread

### SERVICE

- 8340-CAF: Seismic DeltaTron Accelerometer, Accredited Calibration
- 8340-CAI: Seismic DeltaTron Accelerometer, Accredited Calibration Performed as initial
- 8340-CTF: Seismic DeltaTron Accelerometer, Traceable Calibration
- 8340-CTI: Seismic DeltaTron Accelerometer, Traceable Calibration Performed as initial
- 8340-EW1: Seismic DeltaTron Accelerometer, Extended Warranty, one year extension

\* Additional accessories and cables are available (see www.bksv.com)

