

PRODUCT DATA

Piezoelectric Accelerometer Seismic DeltaTron[®] Accelerometer — Type 8340

USES AND FEATURES

- Seismic measurements
- High sensitivity, 1 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

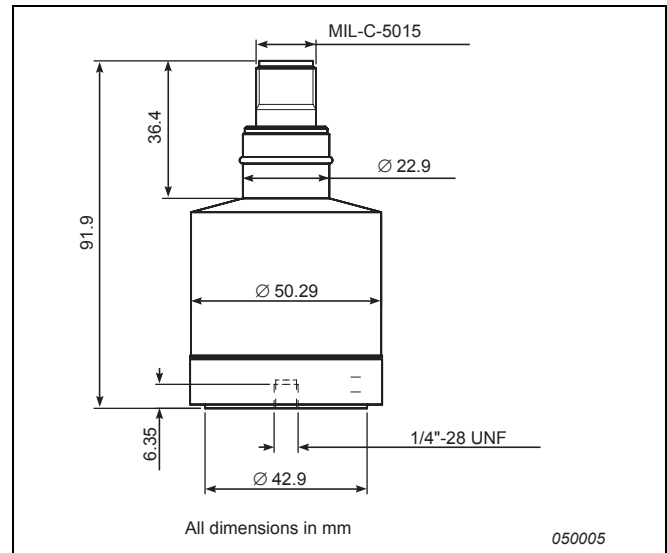
The transducer has been specifically designed with a high sensitivity and excellent signal-to-noise ratio for measurements on large structures at very low frequencies and measuring low-level seismic activity.

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 $k = 2$.

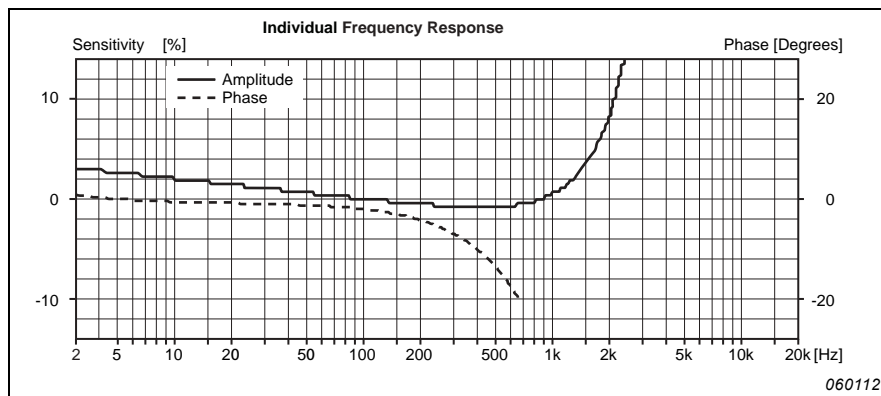
Type 8340 is calibrated in the frequency range from 5 Hz to 1500 Hz.



Specifications – Seismic DeltaTron Accelerometer Type 8340

	Units	8340
Dynamic Characteristics		
Voltage Sensitivity (@ 159.2Hz)	V/ms ⁻² (V/g)	1 +12/-8% (10 ±10%)
Measuring Range	ms ⁻² (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
Electrical Characteristics		
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
Environmental Characteristics		
Temperature Range	°C (°F)	-51 to +74 (-60 to +165)
Humidity		Hermetic
Max. Operational Sinusoidal Vibration (peak)	ms ⁻² (g) pk	± 4.9 (±0.5)
Max. Shock (peak)	ms ⁻² (g) pk	980 (100)
Base Strain Sensitivity	Equiv. ms ⁻² /µ strain	0.0002
Coefficient of Thermal Sensitivity	Equiv. %/°C (%/°F)	0.25 (0.14)
Magnetic Sensitivity (50 Hz – 0.03 Tesla)	ms ⁻² /T (g/T)	0.7 (0.07)
Physical Characteristics		
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

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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)

