AT2030

Portable Vibration Calibrator

Overview

AT2030 portable calibration shaker table is designed for simple accelerometer and vibration transducer calibration without the need for advanced features.

AT2030 is a variable frequency, variable amplitude, battery operated portable shaker capable of calibrating accelerometers, transducers, and proximity probes. Applications are producing a known vibration signal in g's, mils, or ips for sensor, wiring, instrumentation, and system checkout in vibration condition monitoring applications.

The superior accuracy of the AT2030 is ensured using a laser-calibrated primary reference, a precision quartz reference accelerometer, and closed-loop control employing distortion compensation algorithms. Calibration of the AT2030 and its accuracy has been accredited to ISO 17025 by a 3rd party, A2LA.

Functionality

- Create calibration certificates for vibration instruments.
- Test all types of vibration sensors and transducers from a variety of accelerometer and eddy current probe manufacturers.

Applications

- Troubleshoot cabling and wiring
- Calibrate:
  - Accelerometers
  - Proximity probes and drivers
  - Monitoring systems
  - Avionics equipment

Advanced Features

- Digital closed-loop control
- Long battery life
- Class-leading frequency and amplitude range
- High-resolution color touch screen

Specifications

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Performance		
Frequency Range (operating)[1]	5 Hz to 10,000 Hz	300 to 600,000 RPM
Maximum Amplitude (100 Hz, with no payload)	20 g pk 15 in/s pk 50 mils p-p	196 m/s² pk 380 mm/s pk 1270 µm p-p
Maximum Payload [2]	800 grams	

Vibration Signal Accuracy	
Acceleration (5 Hz to 9 Hz)	±5 %
Acceleration (10 Hz to 10 kHz)	±3%
Displacement (30 Hz to 150 Hz)	±3 %
Amplitude Linearity (100 gram payload, 100 Hz)	< 1 % up to 10 g pk
Waveform Distortion (100 gram payload, 30 Hz to 2 kHz)	< 5 % THD (typical) up to 5 g pk

Physical		
Sensor Connectors	N/A	
Display	4.3" TFT LCD with 480×272 resolution	
Controls	2 dials with touch screen	
Dimensions (H × W × D)	10.6 × 9.7 × 6.9 in	27 × 24.6 × 17.4 cm
Weight	16.4 lb	7.0 kg
Sensor Mounting Platform Thread Size	¼-28	
Operating Temperature	32–122 °F	0–50 °C
Agency Requirements and Certifications[4]	A2LA Accredited NIST Traceable EMC:EN61326-1 LVD:EN61010-1 ISO/IEC17025:2017 RoHS	

Readout		
Acceleration	g pk m/s² pk	g RMS m/s² RMS
Velocity	mm/s pk in/s pk	mm/s RMS in/s RMS
Displacement (peak to peak)	mils p-p	µm p-p
Frequency	Hz	RPM

Power		
Internal Battery (sealed solid gel lead acid)	100–240 V, 50–60 Hz, internal, standard plug	
AC Power (for recharging battery)	100–240 V	50–60 Hz
Operating Battery Life 100 gram payload, 100 Hz 1 g pk 100 gram payload, 100 Hz 10 g pk	 10 hours 1 hours	
Charger Type	Internal / Built-in	
Plug Type	Standard PC Wall Plug	
Accessory Power	USB 500 mA	

Accessories		
Included Accessories	• Power cable • 2-56 adapter • ¼-28 stud • 2-56 UNC adapter • Universal Velocity Adapter Disc • Universal Accelerometer Adapter Disc	• Short-handle wrench • 10-32 UNF stud • 6-32 UNC adapter • 10-32 UNF adapter • USB drive:
Optional Accessories [3]	• Proximity Probe Adapter Kit (digital or manual micrometer) • Chadwick-Helmuth Velocimeter Cable • Triaxial Accelerometer Adapter	
Warranty	2 years (includes drift/accuracy)	
Tech Support	Training webinars, email support	

[1] 100 gram payload.

[2] Maximum weight recommendations:

Frequency	0-100 Grams	100–250 Grams	250–500 Grams	500–800 Grams
10–100 Hz	10 g	4 g	2 g	1 g
100–1000 Hz	7 g	4 g	2 g	1 g
1000–10000 Hz	3 g	1.5 g	0	0

[3] For comprehensive list, please consult the Product Spec Sheet or contact sales.

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