

OVERVIEW

The unit is a compact, battery powered, and completely self-contained vibration reference source which can be conveniently used to calibrate individual sensors, vibration switches and data collectors, as well as to validate the entire measurement channel of a condition monitoring or recording system.

Additional features include an ICP^{®1} or voltage test sensor input for direct connection and readout of the most common types of accelerometers and velocity transducers. The test sensor sensitivity is calculated and displayed on the screen in real time. The unit's internal memory capability can store up to 500 calibration records and data can be easily transferred to a computer through a USB flash drive.



FEATURES AND BENEFITS

- Field validation of vibration sensors, proximity probes and related vibration monitoring equipment
- Packaged in a rugged Pelican[®] Storm case², the HI-903 is always ready for travel to test sites bringing laboratory accuracy to the field
- Wide frequency range: 7 Hz to 10 kHz (420 to 600000 CPM)
- Internal memory to store calibration data and USB flash drive output
- Easy certificate of calibration with supplied Excel template
- Complete turnkey system

SPECIFICATIONS

General
Frequency Range (operating, 100 gram payload):
7 Hz to 10 kHz 420 to 600000 CPM
Maximum Amplitude (100 Hz, with no payload):
20 g pk (196 m/s ² pk) 15 in/s pk (380 mm/s pk) 50 mils p-p (1270 μm p-p)
Maximum Payload ³ : 800 grams
Units of Readout
Acceleration: g pk, g RMS, m/s ² pk, m/s ² RMS
Velocity: mm/s pk, mm/s RMS, in/s pk, in/s RMS
Displacement: mils p-p, μm p-p
Frequency: Hz, CPM

Accuracy of Readout
Acceleration (30 Hz to 2 kHz): ±3%
Acceleration (7 Hz to 10 kHz): ±1 dB
Velocity (10 Hz to 1000 Hz): ±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
Input/Output
Test Sensor In: Voltage or ICP [®]
Bias Fault Indication (ICP [®] Sensors): Yes
External Source In (Max): 1V AC RMS
Monitor Reference Out: 10 mV/g (nominal), buffered internal reference

SPECIFICATIONS (Continued)


Power Requirements
Internal Battery (sealed solid gel lead acid):
12V DC, 4 amp hours
AC Power (for recharging battery): 110-240V, 50-60 Hz
Operating Battery Life ⁴
100 gram payload, 100 Hz, 1 g pk: 18 hours
100 gram payload, 100 Hz, 10 g pk: 1 hour
Memory
Size: Up to 500 calibration records
Points Per Record: 30 calibration data points
Sensor Information: Model number, serial number,
sensitivity direction (x, y, z), user notes
USB Port: Export to flash drive (FAT32)
Export File Format: CSV (comma-separated values)

Physical
Dimensions (H x W x D):
22 cm x 30.5 cm x 28 cm (8.5 in x 12 in x 10 in)
Weight: 8.2 kg (18 lb)
Sensor Mounting Platform Thread Size: 1/4-28
Operating Temperature: 0°C-50°C (32°F-122°F)

Notes:

1. Registered Trademark of PCB Piezotronics.
2. Registered Trademark of Pelican Storm Cases
3. Operating range reduced at higher payloads. Reference manual for full details.
4. As shipped from factory in new condition.

HOW TO ORDER

MODEL	DESCRIPTION	CERTIFICATIONS
HI-903	Portable Shaker, variable frequency and amplitude control for accelerometers, velocity sensors and proximity probes, internal memory, USB flash drive output, easy certificate of calibration with supplied Excel template, rugged Pelican® Storm case, standard accessories and operates on rechargeable batteries.	

STANDARD ACCESSORIES

PART NO.	DESCRIPTION
	Power Cord and Plug Adapters (110-260 VAC, 50-60 Hz)
	Mounting Wrench
3719-002	Stud, 1/4-28 to 1/4-28 UNF
0228-0070-05	Bushing, 1/4-28 to 10-32 UNC
100942	USB flash drive with Report Generation

NON STANDARD ACCESSORIES

PART NO.	DESCRIPTION
8841-0101	Adapter, 1/4-28 UNF (M) TO 1/4" NPT (F)
8841-0100	Adapter, 1/4-28 UNF (M) TO 1/2" NPT (F)
8841-0106	Adapter, 1/4-28 UNF (M) TO 3/8-24 UNF (F)
8841-0113	Adapter, 1/4-28 UNF (M) TO M8 x 1.0 (F)
8841-0114	Adapter, 1/4-28 UNF (M) TO M10 x 1.25 (F)

NON STANDARD ACCESSORIES (Continued)

PART NO.	DESCRIPTION
HI-223-9M (Metric Units) HI-223-9E (English Units)	Eddy Current Probe Test Kit with Micrometer- fits HI 903 or HI 913 only
0205-0049	Mounting Spacer
0228-0136-01	Mounting Plate, Magnetic 2" Dia, 1/4" thick
0228-0141-01	Stud, 1/4-28 to M8 (Metric)
0228-0137-01	Adapter stud. 1/4-28 UNF to 3/8-24 (HI 5701VT)
0228-0075-01	4140 Steel Target (incl w/ 223/224 kits)
0228-0071-02	Velocity/Universal Transducer Adapter, w/ screw
0228-0070-03	Bushing, 1/4-28 to 2-56 UNC
0228-0070-04	Bushing, 1/4-28 to 6-32 UNC

Note: Metrix is continuously improving our products. Please refer to our website to download the latest version of this document.

© 2025, Metrix Instrument Company, L.P. All rights reserved.