

Model Number

9100D

## PORTABLE SHAKER TABLE

Revision: J

ECN#:

## GENERAL

Frequency Range (operating) <sup>[1]</sup>	5 Hz–10 kHz	300–600 k CPM
Maximum Amplitude (50 Hz, 10-gram payload)	20 g pk 20 in/s pk 150 mils pk-pk	196 m/s <sup>2</sup> pk 500 mm/s pk 3.8 mm pk-pk
Maximum Amplitude (50 Hz, 500-gram payload)	2.5 g pk 3.5 in/s pk	24.5 m/s <sup>2</sup> pk 90 mm/s pk
Maximum Payload <sup>[2]</sup>	800 grams	
Test Operation	Manual (Closed Loop) or Semi-Automatic	
Auto-Payload Calculation	Controlled via Reference Accelerometer, No User Entry Required	
Memory	Stores Semi-Automated Test Routine	
Non-Volatile Memory	Storage of Calibration Settings for Accuracy	
Programmability	Up to 30 Test Points per Routine	

ACCURACY OF READOUT <sup>[3]</sup>

Acceleration (10 Hz to 10 kHz)	± 3% <sup>[4]</sup>
Acceleration (5 Hz to 10 Hz)	± 5% <sup>[4]</sup>
Velocity (10 Hz to 1000 Hz)	± 3%
Displacement (30 Hz to 150 Hz)	± 3%
Amplitude Linearity (100 Hz) <sup>[1]</sup>	< 1% up to 10 g pk
Waveform Distortion (30 Hz to 2 kHz) <sup>[1]</sup>	< 5% THD (typical) up to 5 g pk
Accuracy Verification Test	Field Drift Test Procedure Provided <sup>[5]</sup>

## UNITS OF READOUT

Acceleration (pk and RMS)	g	m/s <sup>2</sup>
Velocity (pk and RMS)	in/s	mm/s
Displacement (pk to pk)	mils	µm
Frequency	Hz	CPM
Internal Battery (sealed solid gel lead acid)	12 VDC, 4 amp-hours	
AC Power (for recharging battery)	110–240 VAC, 50–60 Hz	
Input Power Rating from charger	18 VDC, 1 A	
Operating Battery Life <sup>[6]</sup>		
100 Hz 1 g pk <sup>[1]</sup>	18 hours	
100 Hz 10 g pk <sup>[1]</sup>	1 hour	

## INPUT/OUTPUT

External Source In (Max)	1 VAC RMS
Monitor Reference Out	10 mV/g (nominal) Quartz Reference Accelerometer, BNC Jack Output
USB Port	Used for Loading Semi-Automated Test Routines (Model CALROUTE) <sup>[7]</sup>

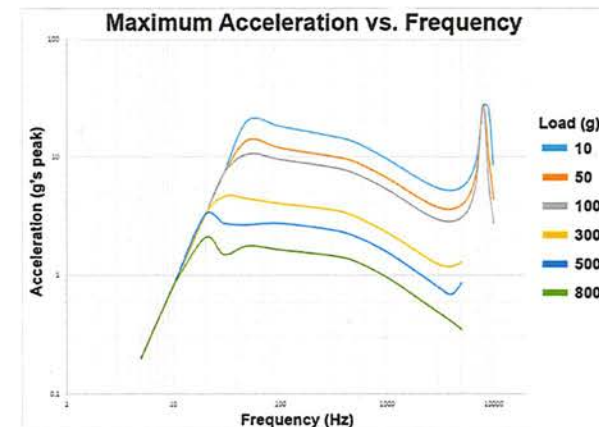
## PHYSICAL

Dimensions (H x W x D)	8.5 x 12 x 10 in	22 x 30.5 x 28 cm
Weight	18 lb	8.2 kg
Operating Temperature	32 °F–122 °F	0 °C–50 °C
Sensor Mounting Platform	¼-28 Thread Size	

## NOTES:

- [1] 100-gram payload  
 [2] Operating range reduced at higher payloads. Reference manual for full details.  
 [3] Measured with 10-gram quartz reference accelerometer  
 [4] Calculated by measuring the % difference between the known sensitivity of a reference accelerometer as calibrated by laser primary system per ISO 16063-11 and the measured sensitivity of same reference accelerometer when tested at the same points  
 [5] Test is conducted independently of product firmware with calibrated voltmeter.  
 [6] As shipped from factory in new condition.  
 [7] & provides power for optional external power supplies

Meets API 670 requirements for all required test points in acceleration or velocity from 10 Hz to 1000 Hz & payloads to 800 grams



All specifications are at room temperature unless otherwise specified.  
 ICP is a registered trademark of PCB Piezotronics, Inc. Excel is a registered trademark of Microsoft Corporation in the United States and/or other countries.  
 In the interest of constant product improvement, specifications may change without notice.



Project Engineer:

LJB

Product Manager:

MRS

SAM Team Leader:

MJD

Spec Number:

PS-0093

Date: 09/19/18

Date: 9/19/18

Date: 9/19/18

Page 1 of 2

**THE MODAL SHOP**  
 MTS SYSTEMS CORPORATION

3149 E Kemper Road  
 Cincinnati, OH 45241, USA

info@modalshop.com  
 +1 513.351.9919

+1 800.860.4867  
 Fax: +1 513.458.2172

SAM-F020 revB 05/17/18

Model Number

9100D

# PORTABLE SHAKER TABLE

Revision: J

ECN#:

## SUPPLIED ACCESSORIES

- Mounting Wrench Model PD-1320-01
- Power Supply and Plug Adaptors Model 9100-PS01
- ¼-28 to ¼-28 Adaptor Model 081B20
- 10-32 to ¼-28 Adaptor Model 081A08
- NIST Traceable Certificate of Calibration, Metric & English Units, Accredited to ISO 17025 by A2LA, 18-point Certificate of Calibration, Published Uncertainties on www.a2la.org, Reference Accelerometer Calibrated via ISO 16063-11 Laser Primary Method Model 9100-CAL01
- Technical Support: Training Webinars<sup>[9]</sup>, 24/7 Video Library
- USB Flash Memory Drive: Loaded with CALROUTE Microsoft Excel® Macro-Enabled Programming Workbook
- Accessory Pouch
- Quick Start Guide: Available in English, Chinese, Polish, Japanese, Russian Languages
- Warranty: 2 Years, Inclusive of Drift/Accuracy

### NOTES:

- [8] Mounting plate supports sensors listed below. Contact TMS if you do not see your sensor listed.  
 B&K: 8324  
 Bently Nevada: 330450, 330750, 350900  
 CEC: 4-123, 4-125, 4-126, 4-128, 4-130, 4-137, 4-138, 4-170, 4-171  
 Dytran: 3085C and 3235 series  
 Endevco: 6233C, 6222M, 6222S and 6240 Series  
 Metrix: 5485C, SA6350  
 PCB Piezotronics: 357 & EX600B series, EX615A42 and EX619A11  
 Vibro-Meter: CA 134, CE 134, CA 202, CA 280, CE 281, CA 303, CA 306, CE 311
- [9] Available upon request

Meets API 670 requirements for all required test points in acceleration or velocity from 10 Hz to 1000 Hz & payloads to 800 grams

## OPTIONAL ACCESSORIES

### PROXIMITY PROBE CALIBRATION

- Proximity probe adaptor kit for probes with 5 mm or 8 mm tip diameter. Includes Mitutoyo micrometer scaled in mils and 4140 steel calibration target. Model 9100-PPA01
- Proximity probe adaptor kit for probes with 5 mm or 8 mm tip diameter. Includes Mitutoyo micrometer scaled in microns and 4140 steel calibration target. Model 9100-MPPA01
- Proximity probe adaptor kit for probes with 11 mm tip diameter. Model 9100-PPA05
- Proximity probe adaptor kit for testing probes mounted inside a probe holder. Includes digital micrometer scaled in mils or microns. Fine adjustment via positional micrometer. Model 9100-PPASH

### MOUNTING

- ½-20 F to ¼-28 F Mounting Pad Model 9155-MNT93
- ¼" NPT F Mounting Adaptor to ¼-28 M Model 9155-MNT43
- 3/8-24 M to ¼-28 M Mounting Stud Model 9155-MNT73
- Universal Mounting Plate for 3- and 4-Hole High-Temp Vibration Sensors<sup>[8]</sup> Model 9100-HTMNT
- M8 x 1.25 F Mounting Pad Model 080M376
- M8 x 1.25 M to ¼-28 M Mounting Stud Model 081M84
- M8 x 1 F Mounting Pad Model 080M458
- M8 x 1 M to ¼-28 M Mounting Stud Model 081M165

### POWER

- 24 VDC Power Supply for testing 4-20 mA Loop-Powered Vibration Transmitters, Non-ICP 24 VDC Velocity Sensors & Modulated Current Output Vibration Sensors and Charge Amplifiers. USB Powered. Model 9100-PS02
- 3-socket MIL cable used with 9100-PS02 for testing GE/Bently Nevada® 3-pin MIL case mounted vibration sensors. Spade Lug terminations & BNC output for signal. Model 9100-PS02-CBL01
- 5 VDC Power Supply for testing GE/Bently Nevada® Trendmaster® Vibration Sensors. USB powered. Integral 5-pin Mating Cable. Plug & Play. BNC Output. Model 9100-PS04-TM
- 15 VDC Power Supply for Testing Pruftechnik CLD Vibration Sensors & Other Modulated Current Sensors with Same Power Scheme. USB Powered. TNC Input. Plug & play. BNC Output. Model 9100-PS07-PT

### TRAINING

On-Site Seminars Available Upon Request Model 9100-TRAINING

All specifications are at room temperature unless otherwise specified. ICP is a registered trademark of PCB Piezotronics, Inc. Excel is a registered trademark of Microsoft Corporation in the United States and/or other countries. Bently Nevada, Velomitor, and Trendmaster are trademarks of Bently Nevada Inc. In the interest of constant product improvement, specifications may change without notice.



Project Engineer: LJB	Product Manager: MRS	SAM Team Leader: MJD	Spec Number: PS-0093
Date: 09/19/18	Date: 9/19/18	Date: 9/19/18	Page 2 of 2