

Model Number
K394B30C

CALIBRATION SHAKER SYSTEM – AIR BEARING SHAKER

Revision: NR
ECN #:

PERFORMANCE

	<u>English</u>	<u>SI</u>
Stroke	0.4 in pk-pk	10 mm pk-pk
Frequency Range, frequency response testing	2 to 15000 Hz	2 to 15000 Hz
Frequency Range, resonant search testing	Up to 50 kHz	Up to 50 kHz
Acceleration Level (sinusoidal)		
Continuous (25 to 10000 Hz)	8.5 g pk	83 m/s ² pk
Intermittent (35 to 10000 Hz)	40 g pk	392 m/s ² pk
Maximum Payload	17.6 oz	500 gm
Lifting Spring	Lorentz – force coil	Lorentz – force coil
Air Supply Specifications		
Pressure	30 to 60 psi	2 to 4 bar
Recommended flow supply to regulator	1.5 ft ³ /min	0.7 L/s
Air-bearing flow rate (typical)	0.15-0.20 ft ³ /min	0.07-0.09 L/s
ISO 8573.1 Quality	Class 3	Class 3
Armature	Aluminum	Aluminum
Insert	Ceramic	Ceramic
Total mass	4.3 oz	121 gm
Sensor mounting thread size	1/4-28 UNF	1/4-28 UNF
Transverse Motion		
<921 Hz	5%	5%
<10000 Hz	10%	10%
<15000 Hz	30%	30%
Shaker Dimensions	6.5 x 5.25 inch	165 x 133 mm
Shaker Weight	22.5 lbs	10.2 kg
ELECTRICAL		
Drive-Coil Resistance	1.0 Ohm (nominal)	1.0 Ohm (nominal)
Lorentz-Coil Resistance	2.8 Ohm (nominal)	2.8 Ohm (nominal)
INTERNAL REFERENCE ACCELEROMETER		
Type	Quartz Shear ICP®	Quartz Shear ICP®
Sensitivity	10 mV/g	1.02 mV/m/s ²
Frequency Range (+/- 3dB)	0.35 to 30000 Hz	0.35 to 30000 Hz
Resonant Frequency	>70 kHz	>70 kHz
POWER AMPLIFIER		
Output Voltage, max	38 V rms	38 V rms
Current Limit	18 A peak	18 A peak
Output Power	400 W	400 W
DC Current Supply	1.75 Amp	1.75 Amp

[1]
[2]
[3]
[4]
[4]
[4]
[5]
[6]
[7]

System Components

- 396C10: Air bearing shaker
- 080A200C: Ceramic insert (1/4-28 mount) with internal reference accelerometer [2]
- 482A21: ICP® sensor signal conditioner
- 2100E21-C: SmartAmp™ AC power amplifier with integrated DC supply and air regulator
- 003C10: Reference accelerometer sensor cable
- 012A03: Signal conditioner output cable
- 012A01 (Qty 2): Shaker cable

Included Accessories

- Output air filter assembly, includes filter, and appropriate couplings
- Input air quality (and associated filters and dessicants) must be provided by end user per ISO 8573.1 Class 3
- Sensor mounting adapter kit, includes typical mounting adapter studs and plates
- Primary calibration of internal reference accelerometer via laser interferometer for ultra low certainty of 0.2% at 100 Hz and 159 Hz
- Rack mount brackets for 2100E21 SmartAmp
- Power Cables
- Spare Fuses

NOTES

- [1] DC coil payload limit. See manual for dynamic frequency response limits.
- [2] 080A200C is standard armature insert supplied. Other unit available is 080A199C (10-32 thread).
- [3] Typical, tested to ISO 16063-21:2003 recommendations.
- [4] These are typical values. TMS performs 100% acceptance testing to the suggested specifications of ISO 16063-21-2003.
- [5] at 4 Ω load impedance, 1 kHz, THD 0.1%.
- [6] Typical, over-current protection limited.
- [7] At 4 Ω load impedance, 1 kHz, THD 0.6%.

All specifications are at room temperature unless otherwise specified.

ICP® is a registered trademark of PCB Piezotronics, Inc.



Project Engineer: <i>[Signature]</i>	Product Manager: <i>[Signature]</i>	Mkt Team Leader: <i>[Signature]</i>	Spec Number: PS-0166
Date: <i>9/23/21</i>	Date: <i>9/23/21</i>	Date: <i>9/23/21</i>	

In the interest of constant product improvement, specifications may change without notice.

THE MODAL SHOP
AN AMPHENOL COMPANY

10310 Aerohub Boulevard
Cincinnati, OH 45215

800-860-4867 Fax (513) 458-2172
513-351-9919

info@modalshop.com
SAM-F020 revNR 04/04/03