

Model Number
9210D

LOW FREQUENCY PORTABLE VIBRATION CALIBRATOR

Revision: A
ECN #:

GENERAL

Frequency Range (operating, 100 gram payload)
Max Acceleration Amplitude (100 Hz, no payload)

0.7 Hz – 2 kHz	42 – 120k CPM
2 g pk	19.6 m/s ² pk
12 in/s pk	305 mm/s pk
200 mils pk – pk	5 mm pk – pk
800 grams	

Maximum Payload^[1]

ACCURACY OF READOUT

Acceleration and Velocity (2 Hz to 2 kHz)^{[2][7]}
Acceleration and Velocity (0.7 Hz to 2 kHz)^{[2][7]}
Displacement (3 Hz to 15 Hz)^[3]
Displacement (1 Hz to 150 Hz)^[3]
Displacement (0.7 Hz to 150 Hz)^[3]
Amplitude Linearity (100 gram payload, 100 Hz)
Waveform Distortion (1 Hz to 5 Hz)
Waveform Distortion (>5 Hz to 20 Hz)
Waveform Distortion (>20 Hz to 2 kHz)

±3%
±10%
±3%
±10%
±2 dB
< 1% up to 2 g pk
Typically < 15%
Typically < 10%
Typically < 7%

UNITS OF READOUT

Acceleration (peak and RMS)
Velocity (peak and RMS)
Displacement (peak to peak)
Frequency
Test Sensor Sensitivity

g	m/s ²
in/s	mm/s
mils	µm
Hz	CPM
	mV/EU ^[4]

POWER REQUIREMENTS

Internal Battery (sealed solid gel lead acid)
AC Power (for recharging battery)
Operating Battery Life^[5]
100 gram payload, 100 Hz 1 g pk
100 gram payload, 1 Hz 0.02 g pk

12 VDC, 4 amp hours
110 – 240 Volts, 50 – 60 Hz
14 hours
7 hours

INPUT/OUTPUT

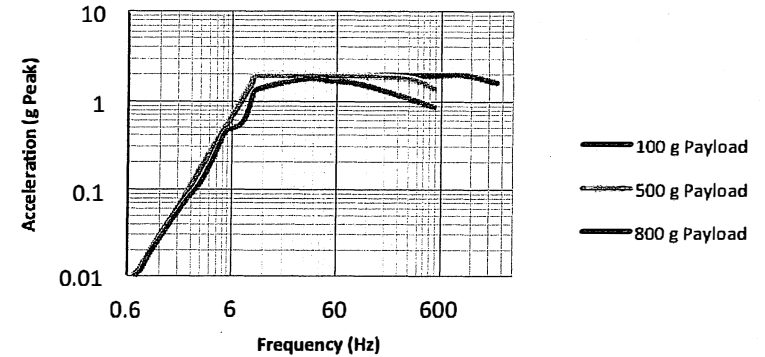
Test Sensor In
Test Sensor Input Voltage Range
Bias Fault Indication (ICP[®] Sensors)
External Source In (Max)
Monitor Reference Out

Voltage or ICP[®]
20 mV – 10 V AC pk-pk

NOTES

- [1] Operating range reduced at higher payloads. Reference manual for full details.
[2] Measured with 30 gram quartz reference accelerometer.
[3] Measured with laser displacement interferometer.
[4] EU can be [g], [m/s²], [in/s], [mm/s], [mils] or [µm].
[5] As shipped from factory in new condition.
[6] 5mA constant current excitation to ICP[®] (IEPE) sensor.
[7] Depending upon payload at higher frequencies transverse motion may cause localized increased measurement uncertainty.

Maximum Acceleration vs. Frequency



PHYSICAL

Dimensions (H x W x D) 8.5 x 12 x 10 in 22 x 30.5 x 28 cm
Weight 18 lbs 8.2 kg
Thread Size 1/4-28 Supplied
Integral Armature Lock
Operating Temperature 32° - 122° F 0° - 50° C

SUPPLIED ACCESSORIES

Accessory Pouch
Shipping Lock
9100-PS01: Power Supply and Plug Adaptors
081B20: 1/4-28 to 1/4-28 Mounting Stud
081A08: 10-32 to 1/4-28 Mounting Stud
9110-USB: USB Flash Drive with Calibration Report Generation Worksheet

(OPTIONAL): Proximity probe adaptor kit, supports probes with common case threads ranging from M6 to 3/8 in. Includes Mitutoyo micrometer and nickel-plated 4140 steel target.

All specifications are at room temperature unless otherwise specified.

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



Project Engineer: JSM	Product Manager: MRS	Mkt Team Leader: [Signature]	Spec Number: PS-0124
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