S2-D40D200

S2 Shock & Vibration Sensor

Aluminum
Digital Capacitive Accelerometer: ± 40g
Digital Capacitive Accelerometer: ± 200g
Battery: 200 mAh
Storage: 4 GB

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The new S2 ("mini") vibration & shock sensor comes equipped with two accelerometers in addition to the standard embedded sensor suite of a gyroscope, magnetometer, pressure, temperature, humidity, and light.

The primary accelerometer has a ±40g range which provides the greatest utility between measuring vibration events as well as typical small impacts. Its secondary ±200g accelerometer is useful for low power triggering and to help capture even higher shock levels. This model is ideal for general purpose vibration and shock testing, especially when you don t have a great understanding of the acceleration levels in your environment.

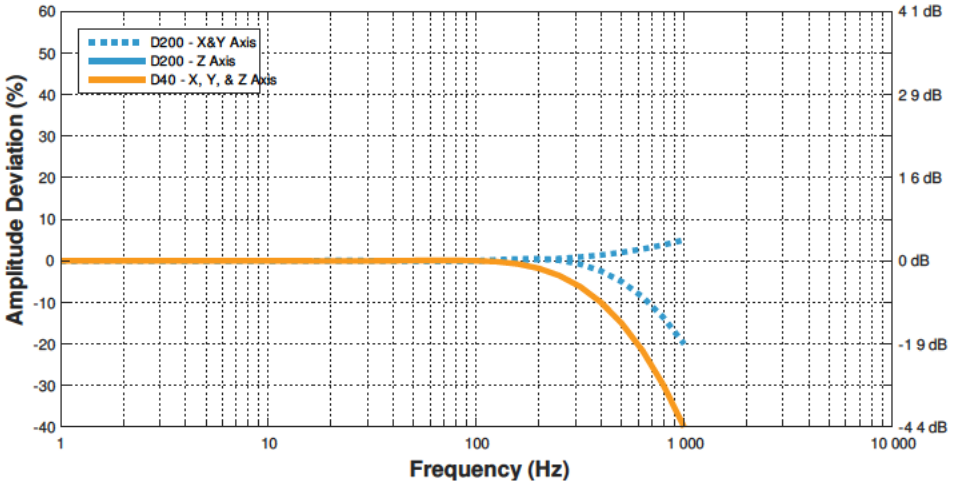
Product Features

- **Convenient, Configurable, and Reliable**
- **Standalone Measurement System**
  Embedded sensors, storage & power
- **Selectable High-Performance Accelerometers**
  Var ab e capac tance, p ezoe ectr c & p ezores st ve
  Se ectab e measurement range from 16g to 2,000g
  Se ectab e samp ng rate up to 20,000 samp es per second
- **Up to 4 Billion Data Points of Memory**
- **Embedded Sensor Suite**
  Gyroscope, magnetometer, pressure, temperature, hum d ty & ght
- **Triggering from Sensors and/or Time-Based**
- **Rechargeable Battery Life of Over 4 Hours Continuous**
  Can operate w th externa power
- **Simple USB Interface for Download & Charging**
- **NIST Traceable Calibration**
- **Trusted by Over 1,500 Different Commercial Customers**

Accelerometer Specifications

Accelerometer Type	Range	Sampling Rate	Bandwidth	Noise	Resolution
D g ta Capac t ve	± 40g	4,000 Hz	0 to 300 Hz	< 0.01 gRMS	0.00008 g
D g ta Capac t ve	± 200g	3,200 Hz	0 to 500 Hz	< 0.2 gRMS	0.05 g

Frequency Response Plot

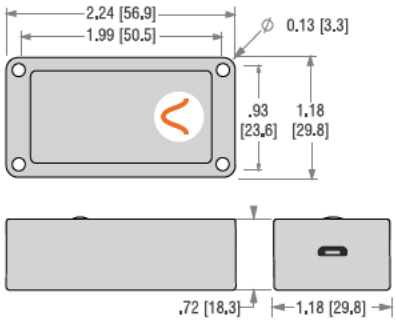


Battery & Storage Performance

Battery performance is heavily dependent upon the device configuration (sensor sample rates and triggers), battery age (including charging cycles), and temperature. The following table provides the battery life and storage capacity of this device assuming it has a relatively new battery and it is at room temperature. When showing performance it assumes all sensors are on at the default sample rate with the main accelerometer sample rate driving performance. With triggers, it assumes the device is in trigger mode 99% of the time. Here are some additional resources: Setting Sensor Configuration, Battery Specifications, Battery Life Estimator Tool.

Sample Rate	Storage Capacity	Continuous Recording	Main Accel. Trigger	2nd Accel. Trigger	Periodic/Time Trigger
63 Hz	11 days	26 hours	18 days	24 days	62 days
250 Hz	9 days	26 hours	18 days	24 days	60 days
1,000 Hz	5 days	23 hours	18 days	23 days	57 days
4,000 Hz	39 hours	14 hours	16 days	20 days	41 days

Dimensions



Mechanical Specifications

Mass	40 grams
Case Mater a	A um num
Mount ng - Screw	4-40 Bo ts (70 n-oz)
Mount ng - Tape (Doub e S ded)	3M 950 Tape
Length	56.9 mm (2.24")
W dth	29.8 mm (1.18")
Th ckness	15.0 mm (0.59")
Ingress Protect on	IP 50 (Dust Protected)

Free Software Features

- **Free Standalone Software Packages** Lab - Configuration, Quick Snapshot, Batch File Conversion Analyzer - Analysis of enDAQ Sensor Data in MATLAB
- **Configure Sensors for Measurement**
- **Export/Convert Data to CSV or MATLAB**
- **Analysis** FFT PSD Spectogram Digital Filtering