S3-D16

S3 Vibration Sensor

Polycarbonate
Digital Capacitive Accelerometer: ± 16g
Battery: 250 mAh
Storage: 1 GB

S3-D16

The S3-D16 is a vibration recorder with additional environmental sensors. This model s low cost makes it ideal for general purpose vibration testing.
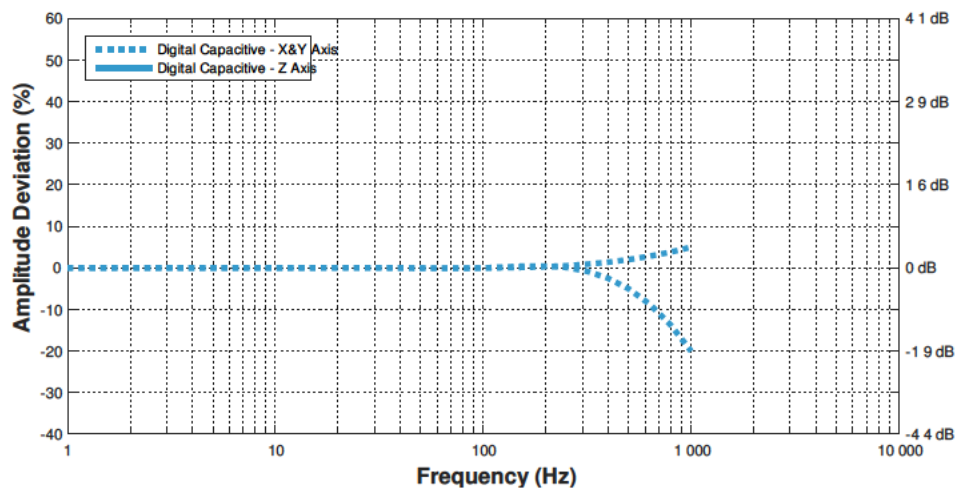
Product Features

- **Convenient, Configurable, and Reliable** Learn More

- **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

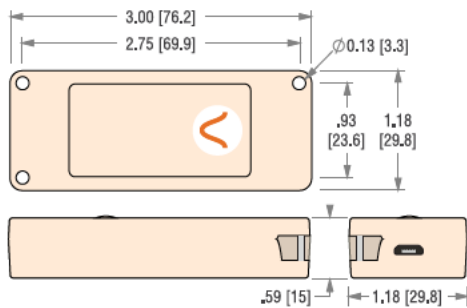| Accelerometer Type	Range	Sampling Rate	Bandwidth	Noise	Resolution
D g ta Capac t ve	± 16g	3,200 Hz	0 to 300 Hz	< 0.01 gRMS	0.004 g

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
50 Hz	8 days	17 hours	53 hours		64 days
200 Hz	5 days	17 hours	53 hours		64 days
800 Hz	45 hours	16 hours	53 hours		60 days
3,200 Hz	13 hours	13 hours	52 hours		52 days

Dimensions

Mechanical Specifications

Mass	40 grams
Case Mater a	Po ycarbonate
Mount ng - Screw	4-40 Bo ts (70 n-oz)
Mount ng - Tape (Doub e S ded)	3M 950 Tape
Length	76.2 mm (3.00")
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