

HIGH G SURVIVABILITY

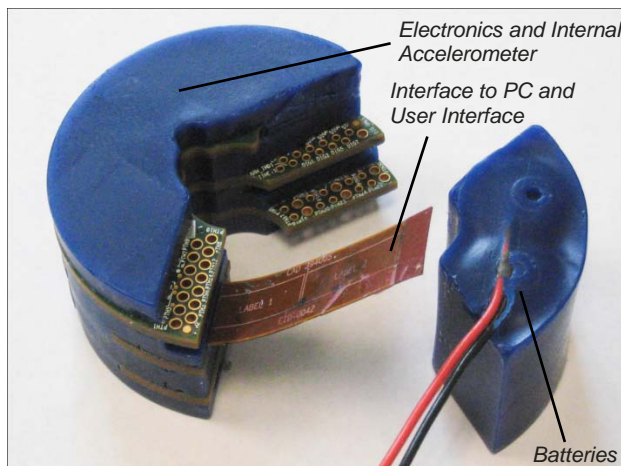
OmniShock™ is uniquely suited for missile, projectile, and explosive ordnance experiments when recovering instrumentation data after a very high G impact event is needed to evaluate the test.

DATA ACQUISITION AND RECORDING

OmniShock™ was developed for extremely high G test experiments to sample data with excellent fidelity, store the data in non volatile memory, and easily recover the data after the experiment.

OmniShock™

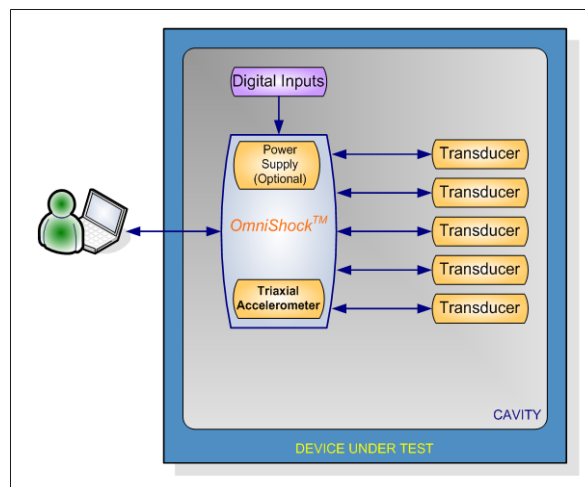
The Answer for Extremely High Impact Event Data Recovery



- High Dynamic Range, High Bandwidth, Data Capture
- Multiple Simultaneous Channel Sampling
- Large Data Storage Capacity
- Small Size and Weight
- 100k G Survivability
- Integrated 3 Axis Accelerometer
- Integrated Backup Power Source

McQ is a leader in sensor systems designed for challenging information requirements.

McQ develops and manufactures advanced sensor systems. The McQ engineering and scientific staff has designed many sophisticated sensor systems that are successfully providing data for our customers. The products are developed from concept, through formal hardware and software design; are thoroughly tested for design verification and manufacturing performance; and are provided with user documentation. McQ products meet demanding environmental requirements. McQ manufactures the products using state of the art computer based functional performance test fixtures to ensure every product delivered to a customer meets the requirements. McQ is an ISO-9001/2008 Quality System company dedicated to defect free products.



OmniShock™ Specifications

OmniShock™ DESIGN

OmniShock™ has been developed to provide high fidelity data after being subjected to very high impact events.

OmniShock™ is designed to provide the flexibility to digitally sample external analog and digital data simultaneously.

OmniShock™ has the optional capability to use an integrated triaxial accelerometer to measure impact events linearly up to 60 kG. A user interface connects to OmniShock™ that configures the unit prior to an event and retrieves the event data.

The data is stored in OmniShock™ in a solid state non volatile memory. OmniShock™ has been tested to survive very high impact events and reliably retrieve the critical data.

For more information on any of our products or services please visit us on the Web at:
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Data Capture:

- 8 Differential Analog Channels – Adjustable Gain and Offset
 - 5 Externally Accessible Channels to Connect External Transducers
 - Recorder Provides Power to External Transducers
 - 3 Internal Channels Dedicated to Integrated Triaxial Accelerometer
- 6 Digital Data Inputs
- Simultaneous Data Capture on all Analog and Digital Channels
- 144 kHz Maximum Sample Rate for Each Channel (Sampling Rate is Adjustable)
- >12 Effective Number of Bits (ENOB) per Sample
- Internal Accelerometer with a Linear Response up to either 20kG or 60kG

Event Triggering:

- OmniShock™ Remains in Power-Off State Until Armed by External Signal
- Can be Triggered via USB Interface to Begin Recording on Power Up
- Can be Triggered by Impact Event –
 - Trigger Signal 1 Initiates Data Capture and Non Volatile Memory Storage
 - Trigger Signal 2 Timestamps Events for Analysis in the Stored Data
 - Reset Trigger or Memory “Full” Stops the Data Capture and Storage after Trigger 1 Initiates Storage, Memory is Overwritten Until a Trigger 2 Signal is Detected

Power:

- Companion Battery Pack Optionally Provided
- External Power Input Also Provided – 6 to 11 VDC

Size and Weight:

- Cylindrical Form Factor – Outer Diameter <3 Inches, Height <2 Inches
- Weight – <3 Ounces without Batteries, <4 Ounces with Batteries

User Interface:

- Allows User to Configure and Control OmniShock™ Units
- Enables Post Mission Data Retrieval
- Displays Recorder Data for Analysis

OmniShock™ Interface:

- USB Interface for Configuration and Data Download
- Plated Through Hole (PTH) Interface for All Signals (Analog/Digital Inputs, Power, Triggers, etc.)

Non Volatile Memory:

- > 3.5 Gbytes

Minimum Survivability:

- 40 kG for 1 ms, 100 kG for 20 μ s



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