

# IMPACT & ENVIRONMENTAL RECORDERS



ShockWatch Impact and Environmental Recorders provide ongoing monitoring of the intensity and duration of shock and vibration to large stationary or moving equipment, structures, and storage environments. Tri-axial piezo-electric accelerometer technology is used to record impact direction, amplitude, and duration. Onboard sensors also record changes in temperature, humidity, and atmospheric pressure.

**ShockLog:** This device records the date and time of up to 400 events. Optional accessories include an environmental indicator, and a remote accelerometer to record shock and vibration in areas away from where the device is mounted.

**Micro ShockLog:** This device records the date and time of up to 128 events, in addition to peak values of impacts at user-specified intervals. Optional accessories include a humidity sensor.



Use Impact and Environmental Recorders in and on:  
Offshore oil platforms and equipment  
Building structures and foundations  
Warehouses and storage facilities  
Lasers, missiles, and satellites  
Power transformers  
Lasers and missiles  
Nuclear materials  
Biomedical supplies  
Wind turbines  
And much more

## ■ Benefits

- Decreases costs related to damage incurred during operation, shipping, handling, and storage
- Encourages adherence to product storage and handling guidelines
- Provides a visible deterrent to improper operation and handling
- Allows for corrective action in cases of potential impact, vibration, temperature, humidity, and pressure extremes
- Pinpoints potential areas for improvement in operational, shipping, and handling processes
- Isolates when and where unacceptable conditions occur and identifies accountable parties
- Confirms acceptable conditions during equipment operation, shipping, handling, and storage
- Identifies potential product design issues resulting from operation, shipping, and handling
- Characterizes operational or transportation route conditions
- Alerts recipient to inspect goods or equipment for damage

**SHOCKWATCH®**  
DAMAGE PREVENTION. WE'RE ON IT.

# IMPACT & ENVIRONMENTAL RECORDERS

## Features

Shared Features: (ShockLog & Micro ShockLog)

- Tri-axial piezo-electric accelerometers
- Self contained unit — no cables or wires
- User-programmable impact scale ranges (ShockLog: 1G, 3G, 10G, 30G, and 100G; Micro ShockLog 10G and 100G)
- Date and time stamping (ShockLog: up to 400 events/512 days; Micro ShockLog: up to 128 events)
- LED lights provide visual notification of alarm or warning conditions
- Password-protected software
- IP67 rated RF screened

ShockLog-Specific Features:

- Definable data collection frequencies
- Warning alarm levels correlated to user-definable impact scale ranges
- Programmable specific wake-up values maximize battery life
- Detailed Certificate of Calibration included — recalibration services provided by ShockWatch
- Uses C alkaline or lithium battery
- Optional external sensors record temperature, humidity, and pressure

Micro ShockLog-Specific Features:

- Detailed event recording for up to the 10 highest G events
- Time slot recording for complete shock and vibration history
- User-definable data collection frequencies and warning alarm levels
- iButton user interface
- Uses AA alkaline or lithium batteries
- Optional humidity sensor
- Set-up and data collection are independent of a computer

## ShockLog Specifications

Operating Temperature Range  
Standard -4°F/-20°C to +158°F/+70°C  
Extended -40°F/-40°C to +185°F/+85°C

Size  
7.1" x 3.3" x 1.7"

Weight  
1.5 lbs (without battery)

Battery  
1 x 3.6V lithium size C  
1 x 1.5V alkaline size C

Case Material  
Aluminum IP67 rating

Scale Factor Accuracy at 5G  
+/- 2%

Acceleration Range  
+/- 0.001 to +/-100G

Cut-off Frequency Options  
10Hz, 50Hz, 90Hz, 250Hz

Wake-Up Threshold (% of Range)  
5 – 95%

Warning and Alarm Threshold (% of Range)  
6 – 95%

Wake-Up Time  
1.5 ms

External Power Source Option  
4.8V min/18V max

## Optional External Temperature, Humidity, and Pressure Sensor Specifications

Temperature Measuring Range  
-40°F/-40°C to +185°F/+85°C

Humidity Measuring Range  
0 – 100% RH

Pressure Measuring Range  
0 – 1.1 bar (standard)

## Micro ShockLog Specifications

Operating Temperature Range  
-40°F/-40°C to +185°F/+85°C

Size  
3.3" x 3.3" x 2.0"

Weight  
0.7 lbs (without battery)

Battery  
1 x 3.6V lithium size AA  
1 x 1.5V alkaline size AA

Case Material  
Aluminum and steel — IP67 rating with connector and cap fitted

Operating Range Options  
10G and 100G

Wake-Up Threshold (% of Range)  
10 – 95%

Alarm Threshold (% of Range)  
11 – 95%

Wake-Up Time  
1.5 ms

## Software

The ShockLog and Micro ShockLog are offered with a comprehensive Windows-based software program that allows you to program your own wake-up, warning, alarm levels, and frequency of data collection. When a pre-programmed impact level is exceeded, an LED will alert you and store the data for future analysis. With the software, you can also configure the devices directly or via iButtons to extract data and generate reports and charts. Six standard reports are available: Summary Data, Events Summary, Events Details, Time Slot Data, Mission Report, and Log Data.