IMPACT & ENVIRONMENTAL RECORDERS

ShockWatch® ShockLog Impact & Environmental Recorders continually monitor and report in real time the shock, vibration, and environmental conditions experienced by structures, facilities, and equipment during transit, storage, and operation. These products record the direction, amplitude, and duration of impact force. Optional sensors record changes in temperature, humidity, atmospheric pressure, tilt and roll. A GPS/GPRS tracking module is available to pinpoint the location of mishandling or exposure to unfavorable conditions. The ShockLog recorders help deter, monitor, and minimize damage.

ShockLog 298 records the date and time of up to 870 shock and vibration events, time slots, and summary data.

ShockLog 248 records the date and time of up to 15 shock events, time slots, and summary data.

ShockLog 208 offers an entry-level impact monitoring solution of time slots only.

Use Impact & Environmental Recorders with:
Offshore oil platforms and equipment
Building structures and foundations
Warehouses and storage facilities
Packaging and vehicles in supply chain
Lasers, missiles, and satellites
Power transformers
Nuclear materials
Biomedical supplies
Wind turbines
…and much more

■ Benefits

- Decreases costs related to damage incurred during operation, shipping, handling, and storage
- Helps identify optimal modes of transportation, routes, packaging, storage options, and operational conditions through full-journey profiling
- Deters improper handling and operation
- Allows sender to respond to mishandling of shipments before customer delivery
- Alerts recipients and operators to inspect goods and equipment for potential damage
- Isolates when and where unacceptable conditions occur and aids in the identification of accountable parties
- Allows for immediate corrective action in cases of potential impact, vibration, temperature, humidity, and pressure extremes
- Pinpoints potential areas for improvement in operational or shipping and handling processes
- Confirms acceptable conditions during equipment operation, shipping and handling, and storage

SHOCKWATCH®
DAMAGE PREVENTION. WE'RE ON IT.

■ Shared Features

- ■ Field-proven triaxial piezoelectric accelerometer technology
- ■ Self-contained unit design, free of cables and wires
- ■ User-definable alarm levels
- ■ LED lights for visual notification of alarms and warnings
- ■ Programmable wake-up values for maximizing battery life
- ■ IP67-rated, RF-screened

■ Individual Product Feature Comparison

	ShockLog 298	ShockLog 248	ShockLog 208
Recorded Data	Impact events Max peaks X, Y, Z gRMS Internal temperature	Impact events Max peaks X, Y, Z Internal temperature	Max peaks X, Y, Z Internal temperature
Impact Scale Range/ Filter Frequency	1, 3, 10, 30, 100, 200G/ 10Hz, 40Hz, 90Hz, 120Hz, 250Hz software selectable	10G/40Hz 30G/90Hz 100G/250Hz	10G/40Hz 30G/90Hz 100G/250Hz
Events	870 events Up to 262k time slots	First plus the 14 most severe events (detailed curves) Notification of up to 128 events (event summary log) Up to 262k time slots	Up to 262k time slots
Data Transfer Method	USB iButtons	USB iButtons	USB iButtons (optional)
Additional Options	Temperature/humidity sensor (built into unit) Temperature, pressure, humidity sensor (stand-alone) Tilt & Roll sensor eTrak GPS module Remote monitoring system	Temperature/humidity sensor (built into unit)	Temperature/humidity sensor (built into unit)

■ Software

Comprehensive Windows-based software provides a simple user interface for communicating with the ShockLog device. Robust procedures for setup and data download allow for quick deployment and easy data analysis.

ShockLog 298 or RD298 Accessories

eTrak

The eTrak tracking module works with ShockLog 298 or RD298 to deliver real-time event messages and prescheduled status updates, both via e-mail. The companion software stores messages in a searchable database for analysis and reporting. Solar-powered with battery backup, the module incorporates GPS and quad-band GSM/GPRS technologies. Reports include the date, time, and number of events since the last report, along with GPS coordinates and Google Maps hyperlinks for seamless viewing of message locations.

Tilt & Roll Accelerometer

The Tilt & Roll Accelerometer extends the monitoring capability of ShockLog 298 or RD298 to include tilt (front-to-back movement) and sway (left-to-right movement). The accelerometer uses an RS232 cable to connect directly into the ShockLog and utilizes its own power supply and the ShockLog's memory to store tilt and sway data. To ensure maximum resolution, the data is recorded in quadrants and is displayed in a range of +/-90°.

Remote Indicators

Remote Indicators allow users to collect impact and environmental data from areas that are not easily accessible — and then view the current ShockLog status and any alarm conditions from a more convenient location. Remote Indicators are often selected when it is necessary to embed the ShockLog device into the product or package.

HPT Environmental Sensor

The Environmental Sensor measures temperature, humidity, and pressure. Data are recorded in time slots for easy analysis.

ShockLog Software
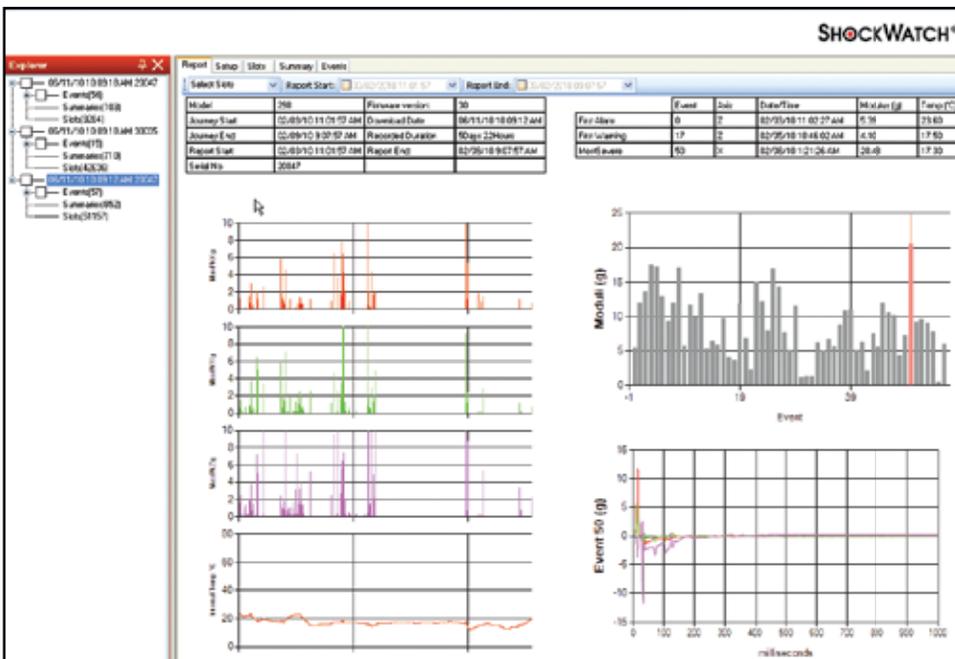
Full Journey Report

The ShockLog Report View provides an overview of the entire journey in both text and graphic formats. Information delivered includes an event summary, detailed event information, and time slot information. It is possible to zoom in on data of particular interest in order to analyze the information. Data can be exported into packages such as Excel and MatLab for more detailed analysis.

ShockLog 298

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

Size
4.8"/123mm x 3.1"/78mm x 2.2"/55mm

Weight
1.1lbs/515g (without battery)

Battery
2 x 3.6V Lithium Thiorxyl Chloride
2 x 1.5V Alkaline Size AA

Case Material
Aluminum

Scale Factor Accuracy at 5G
+/- 2%

Additional Error Other Ranges
+/- 2%

Acceleration Range
+/- 1 to +/- 200G

Cut-off Frequency Options (Programmable)
10Hz, 40Hz, 90Hz, 120Hz, and 250Hz

Wake-Up Threshold (% of Range)
5–95%

Warning and Alarm Threshold (% of Range)
5–95%

Wake-Up Time
0.25mS

External Power Source Option
4.5V min/30V max

ShockLog 248

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

Size
3.3"/84mm x 3.3"/84mm x 2.2"/55mm

Weight
1.1lbs/445g (without battery)

Battery
1 x 3.6V Lithium Thiorxyl Chloride
1 x 1.5V Alkaline Size AA

Case Material
Aluminum

Scale Factor Accuracy at 5G
+/- 5%

Acceleration Range
+/- 10G, +/- 30G, +/- 100G

Cut-off Frequency Options (Factory Set)
40Hz, 90Hz, and 250Hz

Wake-Up Threshold (% of Range)
5–95%

Warning and Alarm Threshold (% of Range)
5–95%

Wake-Up Time
0.25mS

ShockLog 208

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

Size
3.3″/84mm x 3.3″/84mm x 2.2″/55mm

Weight
1.1lbs/445g (without battery)

Battery
1 x 3.6V Lithium Thiorxyl Chloride
1 x 1.5V Alkaline Size AA

Case Material
Aluminum

Acceleration Range
+/- 10G, +/- 30G, +/- 100G

Cut-off Frequency Options (Factory Set)
40Hz, 90Hz, and 250Hz

Humidity / Temperature Factory Fit Option

Humidity
0–100% RH

Temperature
-40°F/-40°C to 185°F/85°C

Dew Point
-40°F/-40°C to 185°F/85°C
0–100% RH

Accessories

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)
0–2.1 bar (optional)

Accessories, continued

eTrak GPS Module Specification

Operating Temperature Range
-40°C to 85°C

Size
6.3"/160mm x 9.8"/250mm x 1.6"/40mm

Weight
1.53lbs/696g

Power Supply
Solar panel, trickle charge to 680mA hour LiOn battery

Case Material
ABS

Regions
Global provided GSM network coverage available

Tilt & Roll Accelerometer Specifications

Operating Temperature Range
Standard -40 to 85°C

Size
3.3"/84mm x 3.3"/84mm x 1.9"/47mm

Weight
0.7lbs/317.51g (without battery)

Battery
2 x 3.6V Lithium Thionyl Chloride

Case Material
Aluminium, IP67 Rating

Tilt Range Monitored
+/- 90°

Resolution
0.3°

Transverse Sensitivity
5%

Noise (rms)
DC -30

Your Authorized Representative