

# SHOCKLOG 298



ShockWatch® ShockLog 298 monitors and records shock, vibration, and environmental conditions experienced by any type of structure or equipment, whether in use, in transit, or in storage. With the capacity to record data for **870 events and 262,000 time slots**, the device alerts you whenever damage may have occurred so you can respond promptly. Optional sensors extend the value of your ShockLog by providing more intelligence about your environmental journey.

**ShockLog 298TR** includes a record of tilt and roll data.

**ShockLog 298GPS** records GPS positioning for every event and summary interval.

**ShockLog 298RF** allows you to transmit and receive information to an RF Base Station module attached to your PC.



Use ShockLog 298 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 damage-related costs
- Deters improper handling and operation
- Helps identify opportunities for improvement through full-journey profiling
- Allows sender to respond to mishandling before customer delivery / installation
- Alerts recipients and operators to inspect goods and equipment for potential damage
- Helps determine when and where unacceptable conditions occur
- Ensures accountability throughout journey
- Allows for immediate corrective action
- Allows for range and frequency to be programmed for each journey, with total flexibility
- Provides more intelligence with operational sensors

## ■ Features

- Records impact events; max peaks X, Y, and Z; gRMS; and internal temperature
- Sensors record direction, amplitude, and duration of impact force
- Option to build temperature/humidity sensor into unit, or add a temperature/pressure/humidity accessory sensor
- Field-proven triaxial piezoelectric accelerometer technology
- USB and iButton® data transfer options
- Self-contained unit design, free of cables and wires
- Programmable wake-up values for maximizing battery life
- User-definable warning and alarm levels
- LED lights for visual notification of alarms and warnings
- IP67-rated, RF-screened
- Up to 18 months of battery life
- Captures coordinates when event occurs at summary intervals with GPS (optional)
- GPS allows users, through hyperlinks, to pinpoint the exact location of an event and summary with the use of Google Maps (optional)

## ■ Services

- Online or on-site training classes are available to speed ROI
- Consulting services are available when a turnkey solution is desired

## ■ Software



Interface with your ShockLog device through a simple Windows®-based software program. Clear instructions allow for quick deployment and easy data analysis. The ShockLog Report View provides an overview of the entire journey. Zoom in for a closer view, or export data into programs such as Excel and MatLab for more detailed analysis.

## ■ Accessories



### eTrak

The eTrak tracking module emails real-time event messages and prescheduled status updates. The companion software allows for analysis, reporting, and seamless viewing of message locations through Google Maps. eTrak is solar-powered with battery backup.



### RF Base

Benefit from ShockLog data even when monitoring hard-to-reach locations. ShockLog RF Base allows users to transmit data from up to a mile away. Ideal for monitoring stationary structures or equipment.



### HPT Environmental Sensor

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

## Specifications

**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  
2 x 1.5V alkaline size AA

**Scale Factor Accuracy at 5G**  
+/- 2%

**Additional Error Other Ranges**  
+/- 2%

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

**Cut-off Frequency Options (Programmable)**  
10Hz, 40Hz, 50Hz, 90Hz, 120Hz,  
and 250Hz

**Wake-up, Warning, and Alarm Threshold  
(% of Range)**  
5-95%

**Wake-up Time**  
0.25mS

**External Power Source Option**  
4.5V min / 30V max

## Factory Fit Specifications

### Humidity / Temperature

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

**Temperature Accuracy**  
-2/2°C

**Humidity Measuring Range**  
0-100% RH

**Humidity Accuracy**  
-3/3% RH

**Dew Point Measuring Range**  
-40°F/-40°C to 185°F/85°C  
0-100% RH

**Dew Point Accuracy**  
-2/2°C

## RF

**Operating Frequency**  
2.4GHz

**Max Output Power**  
up to +10dBm

**Receiver Sensitivity (PER 1%)**  
up to -100dBm

**RF Data Rate**  
250,000bps

**Packet Data Rate**  
up to 125kbaud

## RF Base

**Radio**  
ZigBee Module

**Transmission Frequency**  
2.4GHz

**Transmission Distance**  
Up to one mile

**Power Levels**  
10mW (10dB)

**Data Transmission Rates**  
115,200 baud

## GPS

**Sensitivity**  
157dBm re-acquisition  
148dBm cold starting

**Fast TTFF**  
1s / 29s (Hot/Cold start)

**Channels**  
65

**Hypothesis testing per second**  
8,000,000 time-frequency

**High Accuracy Position**  
2.5m CEP  
Velocity 0.1m/sec

## Tilt & Roll (Internal)

**Tilt Range Monitored**  
+/- 180°

**Resolution**  
0.1°

**Transverse Sensitivity**  
5%

## Accessory Specifications

### External Temperature, Humidity, and Pressure Sensor

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

**Temperature Accuracy**  
-2/2°C (1 bar unit)  
-4/4°C (2 bar unit)

**Humidity Measuring Range**  
0-100% RH

**Humidity Accuracy**  
-3/3% RH (1 bar unit)  
-6/6% RH (2 bar unit)

**Pressure Measuring Range**  
0-1.1 bar (standard)  
0-2.1 bar (optional)

**Pressure Accuracy**  
-10/10 Mbar (1 bar unit)  
-60/60 Mbar (2 bar unit)

### eTrak GPS Module

**Operating Temperature Range**  
-40°C to 85°C

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

**Weight**  
1.53lbs / 696g

**Regions**  
Global provided GSM network  
coverage available

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# SHOCKWATCH®

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