

ANNEXURE 'A'

Shocklog 298W Temp & Humidity with Shocklog Cellular & Shocklog 298/248 Accessories Kit

ShockLog Cellular

The ShockLog Cellular Impact Recording and Tracking System shall have advanced tri-axial piezoelectric accelerometer technology with sophisticated electronics and software to offer an advanced shock and vibration data logger with real-time tracking. When a programmed impact level is exceeded, a detailed event curve to be recorded, and the Shock Log Cellular module shall send a real-time alert letting you know when and where a potentially damaging impact has occurred. Benefit from knowing the asset is with location messages sent on a user programmable interval of 1 hour to 24 hours is required.

Shall have

Real-time reporting and tracking of incidents

- Alarms with location, time, and out of tolerance condition
- Impacts-over-time visualization of each asset
- Histogram of the total impacts to an asset
- Time-temperature, humidity, tilt/roll graphs

ShockLog Analysis Software

The full data set to be downloaded into the Shock Log software for a more detailed view of the recorded data. The Shock Log Report View to provide an overview of the entire journey: peak acceleration values for all three axes, detailed impact curves, and temperature.

Additional parameters to be evaluated if the ShockLog has additional sensors installed: humidity, pressure, tilt & roll.

System Specification

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

Dimensions : 123 mm x 78 mm x 55 mm

Batteries : 3.6V lithium or 1.5V alkaline AA
 Battery Life Up to : 18 months
 Case Material : Aluminum
 Case Rating : IP67
 Web Hosted Application Supported on Chrome, IE & Firefox
 Shock Log Desktop Software Functions on Windows XP, Vista, 7, 8, 10
 Communications / Interfaces : Cellular USB 2, iButton
 A-D Converter Resolution : 12 bits
 Flash Memory for Data : 4096 kbytes
 Data Collection
 Event Processor Wake-up Delay : 0.25 ms
 Timeslot Interval : 600 to 3600 seconds
 Samples per Channel per Event : 512 to 4096 (user defined)
 Maximum Number of Events (detailed) : 108 to 870 (user defined)
 Event Duration : 1 to 128 seconds (user defined)

Accelerometers

Low Frequency Cutoff (-3dB 10g – 100g) : 0.1 - 0.5 Hz
 High Frequency Cutoff (-3dB) 250 – : 300 Hz
 Hardware Filters (Programmable) : 10 Hz, 40 Hz, 50 Hz, 90 Hz, 120 Hz and 250 Hz
 Resolution (% of full scale) 1% for Peaks : 0.1%
 Scale Factor Accuracy at 5G (event record) : $\pm 2\%$
 Additional Error Other Ranges : $\pm 2\%$
 Additional Error Peak Capture : $\pm 5\%$
 Change of Scale Factor over Temperature : $\pm 4\%$
 Acceleration Ranges : $\pm 1\%$ to ± 200 G

Wake-up Threshold (% of range) :5 to 95%
Warning and Alarm Thresholds (% of range) :7 to 95%

Humidity/Temperature Specifications

Temperature Measuring Range : -40 to 85° C / -40 to 185° F
Temperature Accuracy : $\pm 2^{\circ}$ C / $\pm 4^{\circ}$ F
Temperature Resolution : 0.1° C
Humidity Measuring Range : 0 - 100% RH
Humidity Accuracy : $\pm 3\%$ RH
Humidity Resolution : 0.1% RH
Dew Point Measuring Range : -40°C to 85° C / -40° F to 185° F 0 - 100% RH
Dew Point Relative Accuracy : (-20 to 70°C, 25 to 75% RH) $\pm 2^{\circ}$ C / $\pm 4^{\circ}$ F
Dew Point Resolution : 0.1° C

Tilt & Roll Specifications

Tilt Range Monitored : $\pm 180^{\circ}$
Resolution : 0.1°
Transverse Sensitivity : 5%
Operating Temperature Range : -40°C to 85°C / -40°F to 185°F
Case Rating : IP 67
Battery Type : 1.5V AA Batteries
Battery Life Up to 190 days (1 message per day)
Up to 75 days (1 message per hour)
Connectivity Global 3G/2G cellular connectivity, Internal SIM
Message Buffer (when no cellular network available) 30 messages

Bands UMTS 800/850/900/AWS/1900/2100 GSM 850/900/1800/1900

Global Approvals FCC, CEUS, EU, Canada

Note to bidders

1. Bidder shall be the manufacturer or authorized representative of the manufacturer. Authorized representatives shall attach the valid authorization letter from the manufacturer.
2. Bidder shall provide PO copies of the similar systems supplied, commissioning report, list of customers with contact details etc.,
3. Detailed manuals shall be provided with the system descriptions including Instruction and maintenance manuals, trouble shooting and fault finding procedures and recovery methods.
4. Required Softwares to operate the system
5. Bidder shall provide a thorough on job training to at least 5 operation personnel at purchaser's site prior to system acceptance.
6. Guarantee Period: Bidder to guarantee the failure free operation of the system for a period of not less than **12** months from the date of acceptance of the system at purchaser's site.
7. Bidder shall furnish detailed compliance table w.r.t. all the specifications described above. Bidder shall furnish detailed deviation list, if any w.r.t. above specification. Bidder shall give detailed justification for proposed deviation.
8. Bidder shall furnish previous references where similar systems had been supplied by them in past with details like contact person & address.
9. Delivery required is approximately 4 weeks from Purchase Order.