RD298

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Tri-axial, shock, vibration, and environmental data recorder

The RD298 ShockLog™ recorder is a fully programmable, re-useable electronic, tri-axial shock, vibration and environmental data recorder, designed specifically to help organisations to reduce the cost of damage to goods whether in production, transit or storage. Its flexibility and stand alone operation, enable the RD298 to used for many applications where previously bespoke equipment would have been required.

The RD298 key features:

- 10 User selectable operating ranges.
- Detailed recording of up to 400 events.
- Up to 12 month battery life.
- Records in Velocity or acceleration modes.
- Battery removal detection.
- Flexible recording modes.
- Optional external sensors.
- External power interface.
- Date and time stamping.
- User-programmable Warning and alarm thresholds.
- Non-volatile memory.
- LED indicators for warning and alarm status.
- Tamper proof – factory and user passwords.
- Completely self contained (battery operated).
- Internal temperature sensor.
- Uses standard C size battery.

A battery life of up to 12 months allows you to understand the entire supply chain life of your product and the conditions it experiences. More importantly it tells you when incorrect physical handling, poor quality packaging or inappropriate temperature and humidity control will have damaged the quality of your product, your reputation and your cash flow. The comprehensive Windows™ based software program allows you to program your own wake up, warning and alarm levels and frequency of data collection. When a programmed impact level is exceeded a visual alarm will alert you as well as storing the data for future analysis.

The RD298 provides you with:

The when, where and how:
Real time date stamping identifies when a shock has occurred. When combined with the direction of impact, a clear understanding of the likely damaging event emerges allowing effective remedial action to be taken.

Detailed arbitration evidence:
The RD298 is vital for determining at what point during a journey damage may have occurred. The information provided is clear, accurate and measurable, making it invaluable as an arbitration tool for apportioning responsibility for damage.

A visible deterrent:
The sheer presence of the RD298 acts as a visual indication that your products are being monitored. By involving your staff, carriers and customers in the monitoring program, inappropriate handling or storage can be minimised.

A means to audit carrier and routing efficiency:
The RD298's sophisticated monitoring capability helps to analyse the cause of persistent damage in transit. Damage that could be avoided by a simple change of, route, handling procedure or even carrier.

An aid to intelligent packaging design:
Damage can be caused by many different factors according to the transportation method used. The RD298's detailed record of movement, vibration, temperature, humidity and pressure can identify how damage has occurred and help with the development of the most appropriate and cost effective packaging solution.

Reduced administration and field service costs:
Effective and timely identification of likely damage reduces the time spent on site by your service and installation teams thereby allowing them to concentrate on revenue generating activities and improving your cash flow.

Rapid identification of staff training needs:
Routine analysis of the data collected by the RD298, will identify potentially damaging handling or storage situations before they become critical, allowing you to act accordingly.

An extension to your quality image:
Your in house or ISO quality program can now extend beyond your despatch bay, whilst providing clear evidence to your customer of the care and commitment you have to them. Whether it's safe guarding temperature sensitive foodstuffs,

delicate electronics, priceless works of art or other valuable consignments, our range of shock and environmental monitoring products should be a vital part of your consignment.

shockLog Electronic Monitoring Systems

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Security:

The RD298 stores all data and status information in high performance sector erase FLASH memory. This memory requires no power to retain data and offers special hardware protection against accidental erasure. The instrument is configured by connecting it to a PC, and running the data analysis / set up software. During the configuration process the operator can set the levels for warnings and alarms, determine the sensor types to be used and set up user passwords for subsequent access to data.

Before the software will communicate with the RD298 the user must supply any user passwords, which may have been set to restrict access to data, resetting, calibration or other functions.

A special section of the flash memory is reserved for the security log – this records the timing of such actions as removal of the battery cover, re-setting the clock or clearing out data and can not be easily modified by the operator. It is intended that the security log last the operating life of the instrument and should only be cleared when the RD298 is re-calibrated by Lamerholm Electronics.

Software:

The ShockLog™ software works with all types of ShockLogs (RD298 and RD317). The software provides much more than just the basic functions of configuring, and extracting data.

After the data has been gathered, the real value of the this comprehensive software becomes apparent. The data is presented to the user in configurable reports, from the single page mission report to the raw data itself for post analysis. Any or all of these are exportable to other applications such as Microsoft Excel for further analysis.

Reports include:-

Mission -	Single page view of full mission.
Events Summary -	Top level view of all events.
Events Details -	Spreadsheet or graphical.
Time Slot -	Graphical view of the mission.
Security Log -	View of the all security data.

The software runs on a desktop or portable PC using either the Windows 98, 2000, NT4 (SP3), and XP operating systems.

RD298 Specifications

Size:		180 x 84 x 42mm
Weight:		0.7kg
Battery Options:	Lithium	1 x 3.6V lithium thionyl chloride
	Alkaline	1 x 1.5V size C MN 1400 or equivalent
Case Material:		Aluminium IP67 rating
Operating	Standard	-20 to +70 C
Temperature Range:	Extended Temp.	-40 to +85 C (Special Order)
User selectable operating ranges:	Acceleration	1, 3, 10, 30 & 100g
	Velocity	1, 3, 10, 30 & 100cm/s
Wake up threshold (%of range):		5 - 95%
Warning and alarm threshold (% of range):		5 - 95%
Wake up time		1.5 mS

Optional External Humidity,Pressure and Temperature Sensor

Humidity measuring range:		0 - 100 % RH
Pressure measuring range:		0 - 1.1 Bar
Temperature measuring range:		-40 to +85 C

RD298 Specifications

About Lamerholm Electronics Ltd.

Lamerholm Electronics, develop, manufacture and market a broad range of shock, environmental, temperature monitoring and damage prevention products. The companies' worldwide distribution network is coordinated from the UK base, at:

The Pixmore Centre
Pixmore Avenue
Letchworth
Herts, SG6 1JG

Tel: +44 (0) 1462 481396
Fax: +44 (0) 1462 473942
Email: sales@shocklog.com
Web: www.shocklog.com

Your ShockLog representative:

Lamerholm Electronics

Issse 1.0 B00010