

**Above:**  
**Detail of USB socket**

**Below:**  
**Optional wall mounting security bracket**

It is recognised that one of the major causes of damage to works of art, fine furniture, carpets, wall coverings and museum exhibits is light falling on the objects.

Hanwell provide a range of instruments that enable the conservator to measure the levels of Lux and the UV content of light.

The ml4701 Lux transmitter is part of the 4000 range of advanced radio transmitters, allowing wire-free monitoring of a site, with real time alarm notification and historical analysis of data.

These instruments provide the conservator with the necessary information to protect their valuable exhibits. Using proven Hanwell technology, measurements can be taken of the amount of visible light (Lux) falling on objects. Areas that would have previously required expensive and disruptive wiring can now be monitored by radio sensors.

The Hanwell Lux radio telemetry sensors measure Lux in the range 10 to 5000 Lux. This is generally sufficient for conservation environments where a Lux level of over 600 is not normally desired, but higher ranges can be supplied on request. The sensor is calibrated against a reference light meter.

The ml4701 is powered by a single battery, which can be replaced by the user without dismantling the unit.

Each 4000 series transmitter has enough internal memory to store up to 100000 readings and is in fact continually logging. When an object that is being monitored by a 4000 series transmitter goes out on loan the transmitter can travel with the object. When the object returns home the 4000 series unit can be downloaded via the high speed USB connection directly into the PC software (V8.3 or later only). The environmental data for the time that the object has been away will be added to the radio data, providing a continuous history for that object.

The moulded case allows easy access to the battery and USB socket, as well as having slots to fit onto secure wall brackets.

The ml4000 range has been designed to comply with the RoHS and WEEE EU directives, and carries the CE mark.



## Lux only

**Product Code** ML4701-434.075\*  
**Series** ml4000

### Typical Applications

**Monitoring in:**

- ° Showcases
- ° Museum stores
- ° Galleries
- ° Temporary exhibitions
- ° Archives
- ° Interface to building management systems for blind control

### Instrument

**Dimensions:** 110 x 80 x 35mm  
**Weight:** 200 grams  
**Power Supply:** 3.6 Volt AA Lithium battery  
**Battery Life:** 18 months  
**Case Materials:** ABS & PC  
**Operating Humidity Range:** 0...100% non-condensing  
**Operating Temp Range:** -20° to +60° C  
**Memory Capacity:** 100000 readings

### Sensor

**Type:** Photometric diode detector  
**Visible Wavelength:** 400 to 700nm  
**Visible Power:** 10 to 2000 lux  
**Colour Response:** Human eye (CIE curve matched)  
**Accuracy:** +/- 1%

### Radio

**\*Radio Frequency:** 434.075MHz  
433.920MHz (fixed)  
433.875 - 434.650MHz  
in 25KHz increments (synthesised)  
**Radio Power:** 10 mW  
**Radio Range:** 3 km over open ground

### Accessories

**Code:**  
Y119 Wall mounting security bracket  
Y055 Setup communications cable  
G129 Replacement 3.6V Lithium AA battery  
CAL-L 3 point calibration certificate



- Detailed arbitration evidence
- Visible deterrent
- Audits carrier and routing efficiency
- Intelligent packaging design

The RD298 ShockLog is a programmable, re usable electronic, tri-axial shock recorder designed specifically to help organisations to reduce the cost of damage to goods whether in production, transit or storage.

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 WindowsT based software programme allows you to programme 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.

ShockLog provides you with:

**The when, where and how**

Real time date stamping identifies when a shock has occurred. When combined with the axis of impact, a clear picture of the likely damaging event emerges

allowing effective remedial action to be taken.

**Detailed arbitration evidence**

ShockLog is vital for determining at what point during a journey damage may have occurred. As the information is clear, accurate and incontestable, it is invaluable in arbitration by avoiding unnecessary delays in apportioning responsibility.

**A visible deterrent**

The sheer presence of ShockLog acts as a clear indication that your products are being monitored. By involving your staff, carriers and customers in the monitoring programme, inappropriate handling or storage can be minimised.

**A means to audits carrier and routing efficiency**

ShockLog'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

## Shock Log

**Product Code** r18008-xxx.xxx\*  
**Series** rl-8000

**Typical Applications**

- ° Flood detection
- ° Condensation detection
- ° Fridge/freezer failure detection

**Instrument**

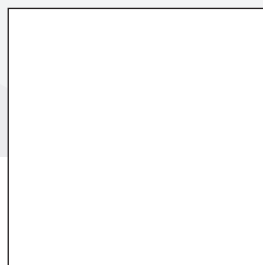
**Dimensions:** 216mm x 117mm x 48 mm  
**Weight:** 780 grams  
**Power Supply:** 2 volts DC  
**Case Materials:** Brushed stainless steel  
**Operating Humidity Range:** 0...90% RH, non-condensing  
**Operating Temp Range:** 10...30C (temperature compensated range)  
**Input Channels:** 8

**Radio**

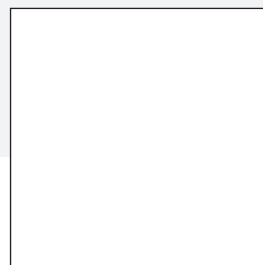
\*Radio Frequency: 434.075MHz  
433.920MHz  
433.875 - 434.650MHz  
in 25KHz increments  
**Radio Power:** 10 mW  
**Radio Range:** 2 miles over open ground

**Accessories**

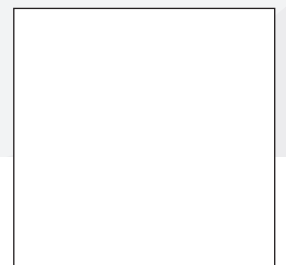
**Code** 5m length (standard)  
or as required  
Nominal 8mm diameter



A. Aerial



B. Sockets



cr-1 base station