

# User's Guide



Instruction Sheet

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## OM-EL-USB-1

### TEMPERATURE DATA LOGGER



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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

**WARNING:** These products are not designed for use in, and should not be used for, human applications.

# OM-EL-USB-1

## TEMPERATURE DATA LOGGER WITH USB INTERFACE

### INSTRUCTION SHEET

This data logger measures and stores up to 16,382 temperature readings over a -25 to +80°C (-13 to +176°F) range. The user can easily set up the logging rate and start-time, and download the stored data by plugging the module straight into a PC's USB port and running the purpose designed software under Windows 98, 2000 or XP. Data can then be graphed, printed and exported to other applications. The data logger is supplied complete with a long-life lithium battery, which will last for at least 1 year. Correct functioning of the unit is indicated by flashing red, green and orange LEDs. The data logger is protected against moisture to IP 67 standard when the protective cap is fitted.

- -25 to +80°C (-13 to +176°F) Measurement Range
- USB Interface for Set-up and Data Download
- 2 User-Programmable Alarm Thresholds
- Bright Red, Green and Orange LED Indication
- Replaceable Internal Lithium Battery
- IP 67 Protection

### Windows™ Control Software

#### Model No - OM-EL-USB-1

Easy to install and use, the control software runs under Windows 98, 2000 and XP (Home and Professional Editions). It allows the user to set up and download any OM-EL-USB-1. The latest version of the control software may be downloaded from [www.omega.com](http://www.omega.com).

### Data Logger Set-ups

- Logger Name
- °C, °F
- Logging Rate (10s, 1m, 5m, 30m, 1hr, 6hr, 12hr)
- High and Low Alarms
- Start Date and Start Time



### ORDERING INFORMATION

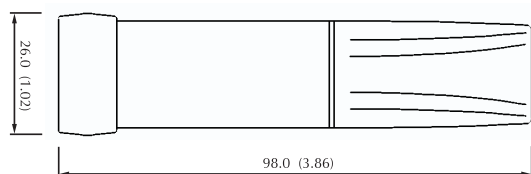
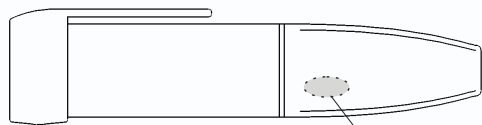
Standard Data Logger (Data Logger, Software on CD, Battery)	Stock Number OM-EL-USB-1
Replacement Battery	OM-EL-BATT

### SPECIFICATIONS

Specification	Min.	Typ.	Max.	Unit
Measurement range	-25 (-13)		+80 (176)	°C (°F)
Internal resolution		0.5 (1)		°C (°F)
Accuracy (overall error)		±1 (±2)		°C (°F)
Logging rate	every 10s		every 12hr	-
Operating temperature range	-25 (-13)		+80 (176)	°C (°F)
1/2AA 3.6V Lithium Battery Life	1*			Year

\* @ 25°C and 1m logging rate

### DIMENSIONS All dimensions in mm (inches)



## BATTERY REPLACEMENT

We recommend that you replace the battery every 12 months, or prior to logging critical data.

The OM-EL-USB-1 does not lose its stored readings when the battery is flat or when the battery is replaced; the data logging process will however be stopped and cannot be re-started until the battery has been replaced and the logged data has been downloaded to PC.

Use only Omega model no. OM-EL-BATT replacement battery. The battery is 'press fit' and is not fitted with solder tags.

Note:

Leaving the OM-EL-USB-1 plugged into the USB port for longer than necessary will cause some of the battery capacity to be lost.



**WARNING: Handle lithium batteries carefully, observe warnings on battery casing. Dispose of in accordance with local regulations.**



## LED FLASHING MODES

OM-EL-USB-1 features 2 LEDs.

- The first LED flashes orange (O) to indicate a problem condition on the OM-EL-USB-1.
- The second LED flashes green or red (G/R) to indicate alarm level status.

It will flash red when the logged temperature has exceeded a Low or High alarm level.

Default latching is enabled, so the red LED will continue to flash, even after the logged temperature has returned to normal. The red LED will effectively have latched into its alarm condition. This feature ensures that the user is notified that an alarm level has been exceeded, without the need to download the data from the logger.

Latching can be turned on via the control software. The red LED will then no longer continue to flash after the logged temperature has returned to normal. Instead, the green LED will then flash.

The LEDs on OM-EL-USB-1 will flash in one of the following ways, assuming latching is turned off.

O G/R



**Green LED flashes twice every 10 seconds**

- The data logger is not currently logging, but is primed to start at a later date and time.



**Green LED flashes once every 10 seconds**

- The most recently logged temperature is between the Low alarm and High alarm levels.



**Green and Orange LEDs flash once every 10 seconds**

- The most recently logged temperature is between the Low alarm and High alarm levels, but the data logger's memory is full, so no more readings are stored.

NB: If latching is enabled, then a flashing green LED indicates that no alarm condition has ever been logged.



**Red LED flashes once every 10 seconds**

- The most recently logged temperature is equal to or lower than the Low alarm level.  
(if latching is enabled, then the alarm condition may have been triggered a while ago)



**Red and Orange LEDs flash once every 10 seconds**

- The most recently logged temperature is equal to or lower than the Low alarm level  
(if latching is enabled, then the alarm condition may have been triggered a while ago),  
but the data logger's memory is full, so no more readings are stored.



**Red LED flashes twice every 10 seconds**

- The most recently logged temperature is equal to or higher than the High alarm level,  
(if latching is enabled, then the alarm condition may have been triggered a while ago).



**Red and Orange LEDs flash twice every 10 seconds**

- The most recently logged temperature is equal to or higher than the High alarm level  
(if latching is enabled, then the alarm condition may have been triggered a while ago),  
but the data logger's memory is full, so no more readings are stored.



**Orange LED flashes once every 60 seconds**

- The battery is reaching the end of its useful life, as its voltage has dropped below 3.3V.  
- Data logging continues until the battery voltage drops below 2.8V.



**No LEDs flash**

- The logger is not being used.

or

- The logger was logging, but has now shut down due to a flat battery (voltage has dropped below 2.8V).  
Plug the data logger into the PC and run the control software to find out which condition applies.

## WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

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2. Model and serial number of the product, and
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