EL-USB-1-LCD

Temperature Data Logger with LCD screen

- -35 to +80°C (-31 to +176°F) measurement range
- Stores over 16,000 readings
- EasyLog software available as a free download
- Logging rates between 10 seconds and 12 hours
- High contrast LCD, with two and a half digit temperature display function
- Immediate, delayed and push-to-start logging
- User-programmable alarm thresholds
- Status indication via red and green LEDs
- Environmental protection to IP67



This standalone data logger measures and stores more than 16,000 temperature readings over a -35 to +80°C (-31 to +176°F) range with a resolution of 0.5°C (0.5°F).

The user can easily set up the logger and view downloaded data by plugging the data logger into a PC's USB port and using the free EasyLog software. Data can then be graphed, printed and exported to other applications for detailed analysis.

The high contrast LCD can show a variety of temperature information. At the touch of a button, the user can cycle between the current, maximum and minimum stored values for temperature.

The data logger is supplied with a lithium metal battery which gives two year's logging life. The logger is protected against ingress from water and dust to IP67 standard when the cap is fitted.

SPECIFICATIONS

Measurement range	-35 to +80°C (-31 to +176°F)
Internal resolution	0.5°C (0.5°F)
Accuracy (overall error)	± 0.5°C typical (see graph on page 3)
Logging rate	User selectable between 10 seconds & 12 hours
Operating temperature range	-35 to +80°C (-31 to +176°F)
Battery Life	2 years (at 25°C and 1 minute logging rate, LCD on)
Readings	16,378
Dimensions	120 x 25 x 22mm (4.72 x 0.98 x 0.86")

ACCESSORIES

BAT 3V6 1/2AA	Replacement battery
EL-DataPad	Handheld data logger programmer & collector

INCLUDED IN THE BOX

BAT 3V6 1/2AA	Battery
EL-LCD WALL MOUNT	Mounting Bracket

CALIBRATION CERTIFICATES NOW AVAILABLE

Lascar now offers a Traceable Calibration Certificate Service on Temperature Data Loggers. Using reference equipment which has been calibrated by a UKAS/NIST accredited laboratory and using apparatus traceable to national or international standards. For more information, please see **www.lascarelectronics.com**.

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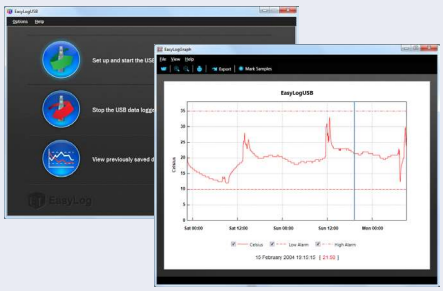
EasyLog

EL-WIN-USB

Lascar's EasyLog control software is available as a free download from www.lascarelectronics.com/software/easylog-usb. Easy to install and use, the control software is compatible with 32-bit and 64-bit versions of Windows 7, 8 & 10. The software is used to set up the logger, download, graph and annotate data or export in Excel, PDF and jpeg formats.

The software allows the following parameters to be configured:

- Logger name
- Measurement parameter (°C or °F)
- Logging rate (user selectable between 10 seconds and 12 hours)
- High and low alarms
- Immediate and delayed logging start

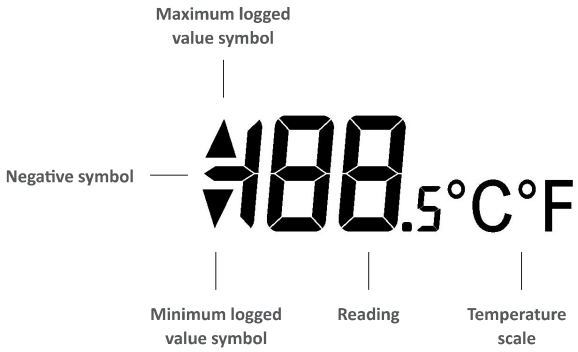


Download the latest version of the software free of charge from www.lascarelectronics.com/software/easylog-usb

DISPLAY STATUS INDICATION

The EL-USB-1-LCD features a high contrast LCD which shows logged temperature values using seven segment numbers, along with annunciators. The LCD can also show information regarding the logging status.

The LCD shows three different recorded readings, which can be cycled through using the built-in push button. The most recent logged temperature, maximum logged temperature and minimum logged temperature can be displayed.



Display	Logger Status	Explanation
dS	Delayed Start	This is shown when the logger is set to start at a specific date and time. If the logger is set to 'LCD off' or 'LCD on for 30 seconds' mode, then this will only be shown after the button is pressed. Otherwise the display will remain blank
PS	Push to Start	This is shown when the logger is set up for 'Push to Start' logging
log	Logging	This is shown when the logger is running in 'LCD off' mode, and the button is pressed. The display clears again after three seconds
- - -	Stopped	If the logger has not been set to log and the button is pressed, three dashes are displayed for a few seconds

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LED STATUS INDICATION

EL-USB-1-LCD features two LEDs:

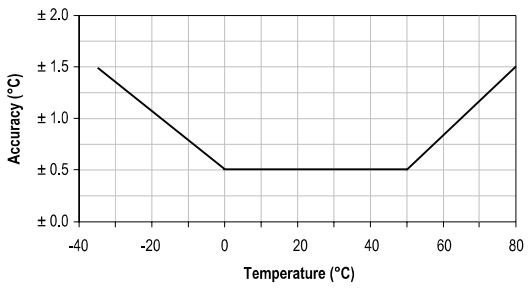
- The first LED flashes **red** to indicate that the EL-USB-1-LCD is in an alarm condition. It will flash when the logged temperature has exceeded a Low or High alarm level.
- The second LED flashes **green** to indicate that the EL-USB-1-LCD is not in an alarm condition.

Using EL-WIN-USB it is possible to set the alarm to remain active even if the reading has returned to normal, in which case the alarm LED will continue to flash red. This 'Hold' feature in the software ensures the user is notified that at some point an alarm level has been exceeded, without needing to download the data.

Hold is enabled by default, and can be turned off via the control software. The red LED will then only flash whilst the logger is in an alarm condition. When the temperature returns to normal, the green LED will flash.

	Green single flash (10 seconds) The data logger is currently logging. No alarm.
	Green single flash (20 seconds) The data logger is currently logging. No alarm. However, the battery is low and should be replaced before logging important data.
	Green single flash (30 seconds) The data logger is not currently logging, but is primed to start at a later date and time (delayed start).
	Green double flash (20 seconds) The data logger is full and has stopped logging. No alarm.
	Red single flash (10 seconds) The data logger is currently logging. Low alarm.
	Red single flash (20 seconds) The data logger is currently logging. Low alarm. However, the battery is low and should be replaced before logging important data.
	Red double flash (10 seconds) The data logger is currently logging. High alarm.
	Red double flash (20 seconds) The data logger is currently logging. High alarm. However, the battery is low and should be replaced before logging important data.
	Red/Green single flash (20 seconds) The data logger is full and has stopped logging. Alarm (high, low or both).
	No LEDs flash The data logger is stopped, the battery is empty or there is no battery fitted.

MEASUREMENT ACCURACY



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BATTERY INFORMATION

Replacement

We recommend that you replace the battery annually, or prior to logging critical data. Only use 3.6V ½AA lithium metal batteries. The data logger does not lose its stored readings when the battery is discharged or replaced; however, the data logging process will stop and will not resume until the battery is replaced and the logger restarted by EL-WIN-USB or an EL-DataPad.

Before replacing the battery, remove the data logger from the PC. Please note that leaving the data logger plugged into the USB port for extended periods will cause some of the battery capacity to be lost.

Passivation

If left unused for extended periods of time lithium metal batteries, including those used in the EasyLog range of data loggers, naturally form a non-conductive internal layer preventing them from self-discharge and effectively increasing their shelf life. When first installed in the data logger, this may cause a momentary drop in the battery voltage (the Transient Minimum Voltage) as the internal layer is broken down, resulting in the data logger resetting. Inserting the batteries in the data logger and leaving it connected to a PC for about 30 seconds will remove this layer. After this, remove and re-install the batteries to reset the data logger. Overall battery life will not be affected.

WARNING

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