EL-USB-1

Temperature Data Logger with USB Interface

ORDERING INFORMATION

Standard Data Logger (Data Logger, Software on CD, Battery)	EL-USB-1
Replacement Battery	BAT 3V6 1/2AA

FEATURES

- -35 to +80°C (-31 to +176°F) measurement range
- USB interface for set-up and data download
- User-programmable alarm thresholds
- Status indication via red, green and orange LEDs
- Supplied with replaceable internal lithium battery and Windows control software
- Environmental protection to IP67



This standalone data logger measures and stores up to 16,382 temperature readings over a -35 to +80°C (-31 to +176°F) range. The user can easily set up the logging rate and start-time, and download the stored data by plugging the data logger into a PC's USB port and running the purpose designed software under Windows 2000, XP and Vista (32-bit). Data can then be graphed, printed and exported to other applications. The data logger is supplied complete with a long-life lithium battery which can typically allow logging for 1 year. Correct functioning of the unit is indicated by flashing red, green and orange LEDs. The data logger is protected against moisture to IP67 standard when the protective cap is fitted.

Specifications	Minimum	Typical	Maximum	Unit
Measurement range	-35 (31)		+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	-35 (-31)		+80 (+176)	°C (°F)
1/2AA 3.6V Lithium Battery Life		1*		Year

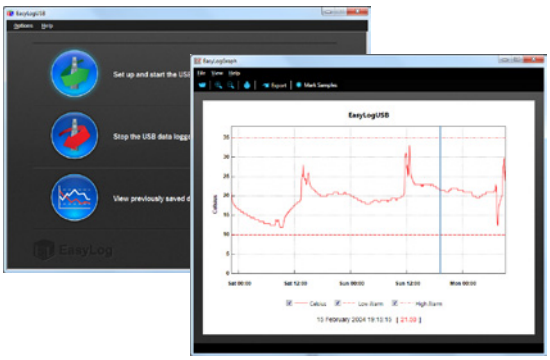
* At 25°C and 1 m logging rate.

EL-WIN-USB (CONTROL SOFTWARE)

Lascar's EasyLog USB control software is supplied free of charge with each data logger. Easy to install and use, the control software runs under Windows 2000, XP, Vista & 7. The software is used to set-up the data logger as well as download, graph and export data to Excel.

The software allows the following parameters to be configured:

- Logger name (up to 16 characters)
- °C or °F
- Logging Rate (10s, 1m, 5m, 30m, 1hr, 6hr, 12hr)
- High and low alarm levels
- Start date and time



The latest version of the control software may be downloaded free of charge from **www.lascarelectronics.com**

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LED FLASHING MODES

EL-USB-1 features 2 LEDs.

- The first LED flashes green or red to indicate alarm level status.
- The second LED flashes orange to indicate a problem condition on the EL-USB-1.

It will flash red when the logged temperature has exceeded a Low or High alarm level. By default hold is disabled. In this mode the red LED will no longer continue to flash after the logged temperature has returned to normal from an alarm condition.

Hold can be turned on via the control software. In this mode the red LED that indicates an alarm condition 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.



Green double flash	The data logger is not currently logging, but is primed to start at a later date and time (delayed start).
Green single flash	The data logger is currently logging. No alarm.
Green and Orange single flash	The data logger is full and has stopped logging. No alarm.
Red single flash	The data logger is currently logging. Low alarm.
Red and Orange single flash	The data logger is full and has stopped logging. Low alarm.
Red double flash	The data logger is currently logging. High alarm.
Red and Orange double flash	The data logger is full and has stopped logging. High alarm.
Orange single flash	The battery is running low as its voltage has dropped below 3.3V. Data logging will continue until the battery voltage drops below 2.8V.
No LEDs flash	The data logger is stopped, the battery is empty or there is no battery

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

Only use 3.6V 1/2AA lithium batteries. Check with your supplier that the battery you are ordering is 'press fit' and is not fitted with solder tags. Before replacing the battery, remove the EL-USB-1 from the PC.

Note:
Leaving the 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.

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THE EASYLOG USB RANGE

Each EL-USB data logger features the direct-to-USB connection and easy-to-use functionality that the range is known for. The range comprises of the following data loggers:

Part No	Function	Range	Accuracy (overall error)		Readings	Battery	Battery Life*
			Typ.	Max.			
EL-USB-1	Temperature	-35 to +80°C (-31 to +176°F)	±1°C (±2°F)		16,382	3.6V ½AA	1 Year
EL-USB-1-LCD	Temperature with LCD	-35 to +80°C (-31 to +176°F)	±0.5°C (±1°F)	±1.5°C (±3°F)	16,382	3.6V ½AA	1 Year
EL-USB-1-PRO	High Temperature	-40 to +125°C (-40 to +257°F)	±0.2°C (±0.4°F)	±0.5°C (±1°F)	32,510	3.6V ⅔AA	3 years
EL-USB-1-RCG	Temperature with rechargeable battery	-20 to +60°C (-4 to +140°F)	±1°C (±2°F)		32,510	Lithium Ion	1 month (rechargeable)
EL-USB-2	Temperature, humidity & dew point	-35 to +80°C (-31 to +176°F) 0 to 100%RH	±0.5°C (±1°F) ±3%RH	±2°C (±4°F) ±6.0%RH	16,382	3.6V ½AA	1 year
EL-USB-2+	Increased accuracy temperature, humidity & dew point	-35 to +80°C (-31 to +176°F) 0 to 100%RH	±0.3°C (±0.6°F) ±2.0%RH	±1.5°C (±3°F) ±4.0%RH	16,382	3.6V ½AA	1 year
EL-USB-2-LCD	Temperature, humidity & dew point with LCD	-35 to +80°C (-31 to +176°F) 0 to 100%RH	±0.5°C (±1°F) ±3.0%RH	±2°C (±4°F) ±6.0%RH	16,379	3.6V ½AA	1 year
EL-USB-2-LCD+	Increased accuracy temperature, humidity & dew point with LCD	-35 to +80°C (-31 to +176°F) 0 to 100%RH	±0.3°C (±0.6°F) ±2.0%RH	±1.5°C (±3°F) ±4.0%RH	16,379	3.6V ½AA	1 year
EL-USB-3	Voltage	0 to 30V d.c.	±1%		32,510	3.6V ½AA	1 year
EL-USB-4	Current loop	4 to 20mA	±1%		32,510	3.6V ½AA	1 year
EL-USB-5	Counter, Event & State	N/A		±3 secs/24 hrs	32,510	3.6V ½AA	1 year
EL-USB-TC	Thermocouple (J, K and T-type) K-type probe included	-200 to +1350°C (-328 to +2462°F) (K-type) -200 to +1190°C (-328 to +2174°F) (J-type) -200 to +390°C (-328 to +734°F) (T-type)	±1°C (±2°F)		32,510	3.6V ½AA	6 months
EL-USB-TC-LCD	Thermocouple with LCD (J, K and T-type) K-type probe included	-200 to +1350°C (-328 to +2462°F) (K-type) -200 to +1190°C (-328 to +2174°F) (J-type) -200 to +390°C (-328 to +734°F) (T-type)	±1°C (±2°F)		32,510	3.6V ½AA	6 months
EL-USB-CO	Carbon monoxide	0 to 1000ppm **NOT A LIFE SAVING DEVICE**	±6ppm		32,510	3.6V ½AA	3 months
EL-USB-CO300	Carbon monoxide	0 to 300ppm **NOT A LIFE SAVING DEVICE**	±4ppm		32,510	3.6V ½AA	3 months
EL-USB-LITE	Low cost temperature	-10°C to +50°C (+14 to +122°F)	±1°C (±2°F)		4,080	CR1620 Lithium coin cell	1 month
EL-USB-RT	Real-time temperature & humidity monitor	-20 to +70°C (-4 to +158°F)	±1.5°C (±3°F) ±4.5%RH		7 days	N/A	N/A

*Depending on logging rate, ambient temperature, and use of alarm LED

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