DATAQ®
INSTRUMENTS

The EL-USB-3 data logger measures and stores up to 32,510 voltage readings over a 0-30VDC measurement 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. The data can then be graphed, printed and exported to other applications. The data logger is supplied complete with a long-life lithium battery. Correct functioning of the unit is indicated by flashing red and green LEDs. The data logger features a pair of screw terminals and is supplied complete with a set of measurement leads terminating in crocodile clips.

Features

- 0-30V d.c. Measurement Range
- Logging Rates between 1s and 12hr
- Stores 32,510 readings
- Connection via two screw terminals
- USB Interface for Set-up and Data Download
- User-Programmable Alarm Thresholds
- Red and Green LED Status Indication
- Replaceable Internal Lithium Battery

Programmable Elements

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

Record Times

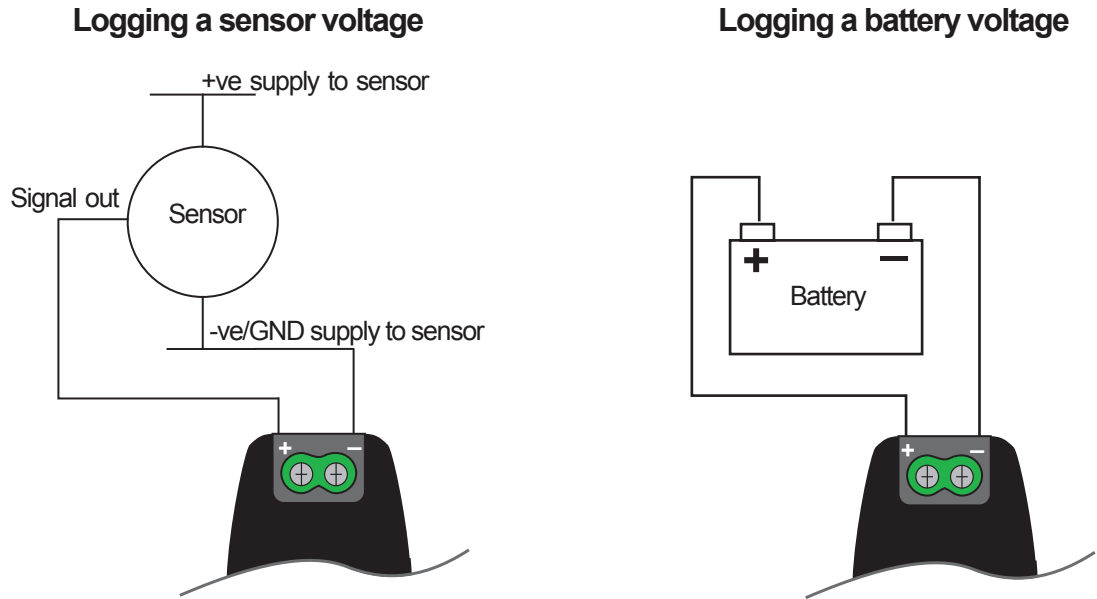| Sampling Interval	Record Times
1 sample every second	9 hours
1 sample every 10 seconds	90 hours
1 sample every minute	22 days
1 sample every 5 minutes	112 days
1 sample every 30 minutes	22 months
1 sample every hour	> 2 years
1 sample every 6 hours	> 2 years
1 sample every 12 hours	> 2 years

EL-USB-3 data logger features a red and a green LED. By default "Hold" is disabled. In this mode the red LED will no longer continue to flash after the logged reading 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 reading has returned to normal. 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.
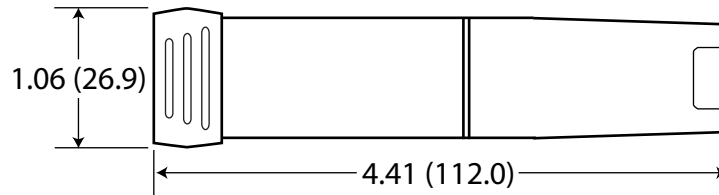
Green LED   Red LED

		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 dead, or there is no battery.

Typical Connections

Logging a sensor voltage

+ve supply to sensor

Signal out

Sensor

-ve/GND supply to sensor

Logging a battery voltage

+ Battery −

Dimensions

1.06 (26.9)

4.41 (112.0)

Dimensions shown are inches (mm)

Specifications

Specification	Minimum	Typical	Maximum	Unit
Measurement Range	0		30	VDC
Internal Resolution		50		mV
Accuracy (overall error)		±1		%
Input Impedance		60		KΩ
Logging Rate	every 1s		every 12hr	-
Memory Size		32,510		Samples
Operating Temperature Range	-25 (-13)		+80 (176)	°C (°F)
Battery Life	1*			Year

*Depending on ambient temperature, logging rate, and use of alarm LED.
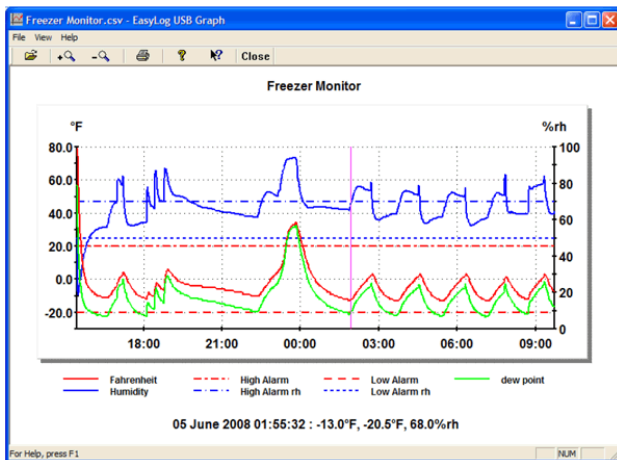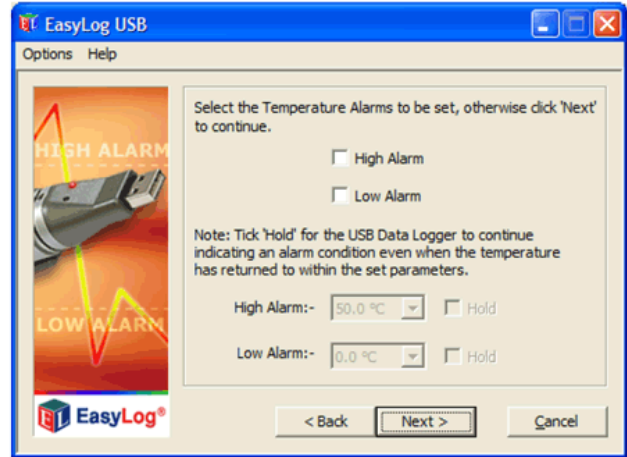
EL-USB-3 Ordering Information

Description	Order Number
Voltage Data Logger Includes EL-USB-3 data logger, measurement leads, software on CD, and battery.	**EL-USB-3**
Battery Replacement battery.	**BAT 3V6**

Easy to Program and Deploy

Getting an EasyLogger product ready to acquire data is simple:

1. Remove the protective USB cover.

2. Plug the instrument into any convenient USB port (image 1).

3. Program the data logger with the provided EasyLog software (image 2):

   • Give the logger a unique name (convenient when deploying multiple units).

   • Select the required sample rate.

   • Select high and/or low alarm thresholds.

   • Select the specific date and time to begin logging.

Now remove the data logger from the USB port, replace the USB cover, and deploy the instrument wherever you need it.

Easy to Upload and Analyze Data

Whether you want to review stored data using the supplied application or using Microsoft Excel, getting meaningful results from recorded data is fast and easy:

1. Remove the protective USB cover.

2. Plug the instrument back into the PC's USB port.

3. Use EasyLog software to stop recording, access the instrument's stored data, and save it to a file that you name on the PC, all in one easy operation. The file format is Excel-compatible.

4. Immediately EasyLog's Graph utility is enabled to display all the stored data in one compressed view.

5. A cursor allows you to determine signal magnitude and time and date of acquisition for any value, and a magnifier utility allows you to zoom in for a closer look over any range – Easy and fast.

6. For more custom analysis and report generation, simply import the stored data file to Microsoft Excel for virtually unlimited flexibility in how you view and interpret your results.

EasyLog Products for Any Application

From temperature and humidity to carbon monoxide trending, there's an EasyLog data logger that's right for you. Click on "Go" to go to the product's web page.

Measurement			Model EL-USB (click on page number to jump to page)																
Function	Range	-LITE	-1	-1-LCD	-1-RCG	-1-PRO	-2	-2+	-2-LCD	-2-LCD+	-3	-4	-5	-ACT	-CO	-TC	-TC-LCD	-TP-LCD	-TP-LCD+
Temperature	-10 to +50°C (+14to +122°F)	Go																	
Temperature	-35 to +80°C (-31 to +176°F)		Go	Go															
Temperature	-20 to +60°C (-4 to +140°F)				Go														
High Temperature	-40 to +125°C (-40 to +257°F)					Go												Go	Go
Humidity, temperature, dew point	0 to 100% RH -35 to +80°C (-31 to +176°F)						Go	Go	Go	Go									
Voltage	0 to 30 VDC										Go								
Process current	4 to 20 mA											Go							
Event, State, Count	3-28 VDC												Go						
Current	-1000 to 1000 mV													Go					
Carbon monoxide	0 to 1000 ppm														Go				
Thermocouple	-130 to +900°C -200 to +1300°C -200 to +350°C															Go	Go		

Lascar Data Logger Product Lines

EL-USB Data Loggers

Lascar EasyLog model EL-USB series products are a line of low cost, compact, battery-operated data loggers with built-in memory and a USB interface for easy setup and data download. Each product in the line offers a specific measurement function (including temperature, voltage, process current, and more).

EL-GFX Data Loggers

The EL-GFX line of data loggers is the latest release from Lascar Electronics with similar functionality of the EL-USB series with an added graphic display for data.

EL-WiFi Data Loggers

Lascar's EL-Wifi Data Logger series products are low cost, compact, battery-operated data loggers with wireless connectivity to any PC over a WiFi router. Each product in the line features a large, easy-to-read display of current measurements, and is purchased for specific measurement functions.

DATAQ® INSTRUMENTS

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Data Acquisition Product Links
(click on text to jump to page)
Data Acquisition | Data Logger