The EL-USB-2 data logger measures and stores up to 16,382 relative humidity and 16,382 temperature readings over 0 to 100%RH and -35 to +80°C (-31 to +176°F) measurement ranges. 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. Relative humidity, temperature and dew point (the temperature at which water vapor present in the air begins to condense) 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 a year. Status indication is via flashing red and green LEDs. The logger is protected against ingress from water and dust to IP67 standard when the plastic cap and seal are fitted.

Features

- 0 to +100%RH Measurement Range
- -35 to +80°C (-31 to +176°F) Measurement Range
- Dew point automatically calculated from RH and temperature
- USB Interface for Set-up and Data Download
- User-Programmable Alarm Thresholds for %RH & T
- Status Indication via Red and Green LEDs
- Supplied with Replaceable Internal Lithium Battery

Programmable Elements

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

Record Times

Sampling Interval	Record Times
1 sample every 10 seconds	45 hours
1 sample every minute	11 days
1 sample every 5 minutes	56 days
1 sample every 30 minutes	11 months
1 sample every hour	1.8 years
1 sample every 6 hours	> 2 years
1 sample every 12 hours	> 2 years

LED Flashing Modes

The EL-USB-2 data logger features 2 bi-color LEDs; one LED represents temperature measurement, the other represents RH. Each is clearly marked on the logger. To save power, the status indication alternates between the two channels every 10 seconds. First you will see the status of the temperature logging and 10 seconds later you will see the status of the RH logging and so on.

RH%	°C (°F)		RH%	°C (°F)
🟢	⚫	**10 seconds later**	⚫	🟢

%RH
Red/Green LED

°C/°F
Red/Green LED

|	
🟢	**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 on the channel.
🔴	**Red Single Flash** The data logger is currently logging. Low alarm on the channel.
🔴	**Red Double Flash** The data logger is currently logging. High alarm on the channel.
🟢	**Green Triple Flash** The data logger is full and has stopped logging. No alarm on the channel.
🔴	**Red Triple Flash** 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.

Accessories and Options

Optional Case

Rugged metal alloy design for harsh conditions. Waterproof to IP-67/NEMA-4X

Dimensions
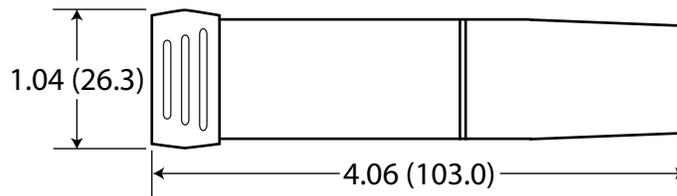
Dimensions shown are inches (mm)

Specifications

	Specification	Minimum	Typical	Maximum	Unit
Relative Humidity	Measurement Range	0		100	%RH
	Humidity Repeatability (short term)		±0.1		%RH
	Accuracy (overall error, 20-80% RH)		±3.0*		%RH
	Internal Resolution		0.5		%RH
	Long-term Stability		0.5		%RH/Yr
Temperature	Measurement Range	-35 (-31)		±80 (±176)	°C (°F)
	Repeatability		±0.1 (±0.2)		°C (°F)
	Accuracy (overall error)		±0.5 (±1)	±2 (±4)	°C (°F)
	Internal Resolution		0.5 (1)		°C (°F)
Dew Point	Accuracy (overall error) (25°C, 40-100%RH)		±1.1 (±2)**		°C (°F)
Logging Rate		every 10s		every 12hr	-
Memory Capacity			16,382		samples
Operating Temperature Range		-35 (-31)		+80 (176)	°C (°F)
Battery Life			1***		Year

* This specifies the overall error in the logged readings, for relative humidity measurements between 20 and 80%RH.
** This specifies the overall error in the calculated dew point, for relative humidity measurements between 40 and 100%RH at 25°C.
*** Depending on sample rate, ambient temperature and use of alarm LEDs
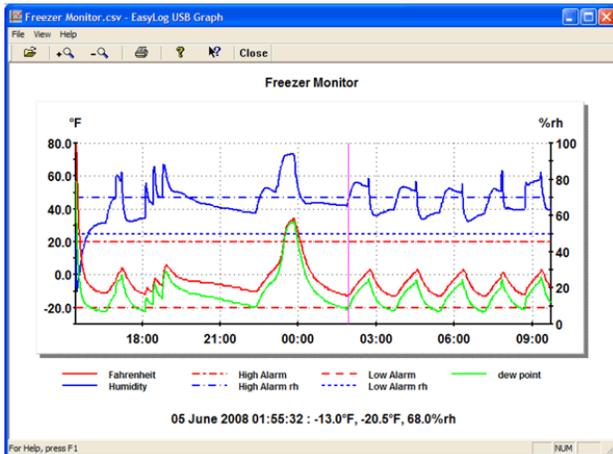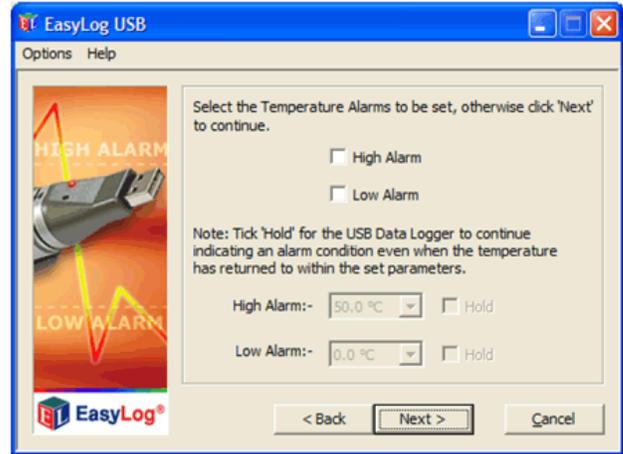
EL-USB-2 Ordering Information

Description	Order Number
RH, Temp, and Dew Point Data Logger Includes EL-USB-2 data logger, software on CD, and battery.	**EL-USB-2**
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.

2.8 inch Full color touch-screen display
Easy-to-use menu to Set Up data loggers; Download data from logger; View Data; and Instrument settings (Time/Date, Power, Status)

On/Off button
ON = Single press
OFF = Press and hold for 3 seconds

The EL-DataPad allows users of certain EL-USB data loggers to configure their units, upload data, and view logging results on-the-spot rather than moving the logger to their PC. This allows shorter breaks in data collection for more data continuity, less travel time, and on-the-spot data review and data logger reconfiguration.

The logger is connected to the EL-DataPad via a standard USB port at the top of the viewer. Once connected, you are guided through a simple touchscreen menu with options to Set-Up Logger, Stop Logger & Download and View Data. On-screen instructions follow the same structure as EL-USB-WIN software for the PC currently provided with each data logger.

Data from up to 100 loggers can be viewed on the EL-DataPad, with data from a further 400 units stored on the unit at any one time. Data can be transferred to a PC using a micro USB cable supplied with the unit. Once uploaded, data is saved in comma separated variable (csv) format, making it suitable for import into spreadsheet programs such as Microsoft Excel or graphed on a PC using EL-WIN-USB software.

Features

- Archive capacity for up to 500 logger uploads
- View uploaded data with general trend and summary reports
- Allows full or quick set-up of compatible EL-USB data loggers
- Touch screen interface for navigation of menus
- 2.8 inch full color TFT display
- Stored data can be transferred to a PC via micro USB cable
- Rechargeable internal built-in lithium battery provides up to 8 hours of use between charges

Compatible EL-USB Data Loggers

The EL-DataPad is compatible with the following Data Loggers:

- EL-USB-LITE
- EL-USB-1
- EL-USB-1-LCD
- EL-USB-1-PRO
- EL-USB-2
- EL-USB-2+
- EL-USB-2-LCD
- EL-USB-2-LCD+
- EL-USB-TC
- EL-USB-TC-LCD

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		

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