EL-USB-2+

High Accuracy Humidity, Temperature and Dew Point USB Data Logger

FEATURES

- Higher accuracy sensor when compared with the EL-USB-2
- 0 to 100%RH measurement range
- -35 to +80°C (-31 to +176°F) measurement range
- Dew point indication via Windows control software
- 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 and Windows control software
- Environmental protection to IP67

This standalone 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 logger and view downloaded data by plugging the data logger into a PC's USB port and running the purpose designed software under Windows 2000, XP, Vista & 7. Relative humidity, temperature and dew point (the temperature at which water vapour 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 1 year.

Specifications		Minimum	Typical	Maximum	Unit
Relative Humidity	Measurement range	0		100	%RH
	Repeatability (short term)		±0.1		%RH
	Accuracy (overall error)		±2.0*	±4.0	%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)		±0.3 (±0.6)	±1.5 (±3)	°C (°F)
	Internal resolution		0.5 (1)		°C (°F)
Dew Point	Accuracy (overall error)		±1.1 (±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

* This specifies the overall error in the logged readings for relative humidity measurements between 10 and 90%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 and ambient temperature

EL-USB-2+
High Accuracy Humidity, Temperature and Dew Point USB Data Logger

WINDOWS 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.

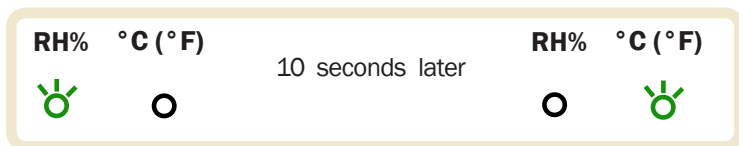The software allows the following parameters to be configured:

- Logger name
- °C, °F
- Logging rate (10s, 1m, 5m, 30m, 1hr, 6hr, 12hr)
- High and low alarms
- Immediate and delayed logging
- Data rollover (allows unlimited logging periods by overwriting the oldest data when the memory is full)

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

LED FLASHING MODES

EL-USB-2+ features two bi-colour LEDs; one LED represents temperature measurement (marked by °C / °F) and the other represents relative humidity (marked by %RH). To save power, the status indication alternates between the two channels every 10 seconds i.e. the temperature channel flashes and 10 seconds later the relative humidity channel flashes, repeating for the duration of logging activity.

RH%	°C (°F)	10 seconds later	RH%	°C (°F)

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 empty or there is no battery fitted.

Dual Red flash (every 60 seconds)
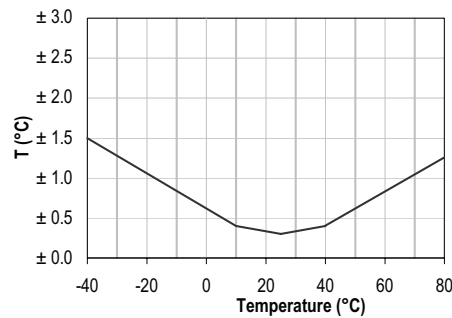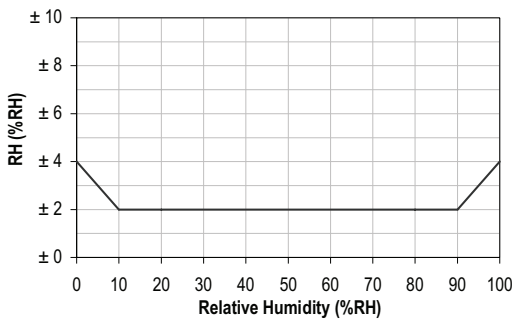The data logger battery is running low as its voltage has dropped below 2.9V

RH%
Red/Green LED

°C (°F)
Red/Green LED

EasyLog

www.lascarelectronics.com

LASCAR electronics

EL-USB-2+
High Accuracy Humidity, Temperature and Dew Point USB Data Logger

DIMENSIONS

All dimensions in mm (inches)

26.6 (1.04)

Internal Relative Humidity and Temperature Sensor Location

26.4 (1.04)

103 (4.06)

MEASUREMENT ACCURACY

BATTERY REPLACEMENT

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

The EL-USB-2+ 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-2+ from the PC.

Note:
Leaving the EL-USB-2+ 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.

EasyLog   www.lascarelectronics.com   **LASCAR** electronics

EL-USB-2+

High Accuracy Humidity, Temperature and Dew Point USB Data Logger

CAUTION

Exposure of the internal sensor to chemical vapours such as those produced by some plastics and foamed materials may interfere with the internal sensor and cause inaccurate readings to be logged, therefore ensure that the logger is used in a ventilated area i.e. air exchange is allowed.

Exposure to extreme conditions or chemical vapours will require the following reconditioning procedure to bring the internal sensor back to calibration state.
80°C (176°F) at < 5% RH for 36h (baking) followed by 20-30°C (70-90°F) at>74%RH for 48h (re-hydration)

High levels of pollutants may cause permanent damage to the internal sensor.

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) Typ.	Max.	Readings	Battery	Battery Life*
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

Module House
Whiteparish, Salisbury
Wiltshire SP5 2SJ
UK
T +44 (1794) 884567
F +44 (1794) 884616
E sales@lascar.co.uk

4258 West 12th Street
Erie
PA 16505
USA
T +1 (814) 835 0621
F +1 (814) 838 8141
E us-sales@lascarelectronics.com

8th Floor, China Aerospace Centre
143 Hoi Bun Road
Kwun Tong, Kowloon
HONG KONG
T +852 2797 3219
F +852 2343 6187
E saleshk@lascar.com.hk

EasyLog   www.lascarelectronics.com   **LASCAR electronics**

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for lascar *manufacturer:*

Other Similar products are found below :

EL-USB-1-PRO EL-USB-5 EL-USB-4 SP400-BLUE SGD21-B EL-WIFI-TP+-PROBE-G S43-RS485 EL-MOTE-WALL-BRACKET EL-MOTE-T-PLUS SGD24-M-IP EL-GFX-1 EM32-1B-LED EMV1200 DPM3AS-BL EL-GFX-DTC EL-USB-RT EL-WIFI-ALERT DTM 995B DPM125-BL PSU30205 PSU203 DPM942-FPSI EL-CC-2-001 PK10 EL-CC-2-005 PK10 S70-TP EL-SIE-1 EL-SIE-1+ EL-SIE-2+ EL-SIE-6+ SGD24-M-IP420 WIRELESS ALERT TP EL-SGD43-ATP EL-GFX-2 EM32-1B EL-USB-ACT EL-CC-2-002 PK10 EL-MOTE-TH EL-USB-CO EMT1900 EL-ENVIROPAD-TC DPM702S SGD 43-A DK+ EL-WIFI-TH EL-USB-2-LCD+ EL-WIFI-21CFR-TP+ EL-GFX-DTP+ EL-CC-2-004 PK10 EL-USB-5+ EL-USB-TP-LCD-PROBE-G EL-CC-1-003 PK10