EL-USB-CO

Carbon Monoxide *(CO)* Data Logger

- 3-1000ppm CO measurement range
- Stores over 32,000 readings
- Logging rates between 10 second and 5 minutes
- Immediate and delayed logging start
- User-programmable alarm thresholds
- Status indication via red and green LEDs
- Buzzer for audible indication of alarm
- EasyLog software available as a free download
- Expected Sensor life 4 years, you can check this under Current Status in the software

This stand-alone data logger measures and stores over 32,000 Carbon Monoxide (CO) readings over a 3 to 1,000ppm range and with a resolution of 0.5ppm.

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 available free downloadable EasyLog software. Data can then be graphed, printed and exported to other applications.

The data logger is supplied complete with a lithium metal battery, which gives a 3 month logging life. The data logger also features a bright red LED and a buzzer sound when a preset warning level has been exceeded.

IMPORTANT SAFETY WARNING

DO NOT ATTEMPT TO USE THE EL-USB-CO WITHOUT READING AND UNDERSTANDING THE DOCUMENTATION. CARBON MONOXIDE MONITORING IS A COMPLEX PROCEDURE. IF THERE IS ANY DOUBT AS TO THE SAFETY OR APPLICATION - STOP! CONSULT A QUALIFIED EXPERT.

The EL-USB-CO is a professional measuring instrument, designed to record Carbon Monoxide (CO) gas levels for later analysis. It is not an alarm/safety/warning device and should not be used in this capacity for the following reasons:

1. The lights and sound emitted by the EL-USB-CO to indicate a high level of CO do not provide adequate warning to those in the surrounding area that a high level of CO has been recorded.
2. The battery life of the EL-USB-CO during audible and visual indication of a high level of CO will rapidly diminish and will therefore only be active for a short period of time.
3. The EL-USB-CO takes a sample reading at intervals as set by the user for recording/monitoring/analysis purposes. Dangerous levels of CO will not register with the device until a sample reading is taken.
4. Due to the limitations of the device as a professional instrument, it is left to the user to set the light and sound alarms indicating the presence of CO. Therefore the instrument can be set up to provide NO form of warning.

Carbon Monoxide is poisonous. It is a clear gas that has no smell or taste and can be lethal even in very low concentrations. It can injure or kill people and animals who are not adequately warned of its presence.

In areas where the safety of humans and animals is a concern we insist that a domestic or industrial CO detector/alarm, designed to a nationally approved quality standard, with features such as a high decibel alarm or siren and a clear visual warning, specifically designed to provide adequate warning of dangerous CO levels, be installed, used and maintained.

SPECIFICATIONS

Measurement range	3 to 1000ppm
Internal resolution	0.5ppm
Accuracy (overall error)	±7ppm / ±6% (whichever is greater)
Logging rate	User selectable between 10 seconds & 5 minutes
Operating temperature range	-10 to +40°C (+14 to +104°F)
Battery Life	3 months (5 minute logging, 25°C)
Readings	32,510
Dimensions	125 x 26.4 x 26.4mm (4.92 x 1.03 x 1.03")

ACCESSORIES

BAT 3V6 1/2AA	Replacement battery

INCLUDED IN BOX

BAT 3V6 1/2AA	Battery

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EL-WIN-USB

Lascar's EasyLog control software is available as a free download from www.easylogusb.com. Easy to install and use, the control software is compatible with 32-bit and 64-bit versions of Windows 7, 8 and 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
- Logging rate (user selectable between 10 seconds and 5 minutes)
- High and low alarms
- Immediate and delayed logging start

Download the latest version of the software free of charge from www.easylogusb.com

LED STATUS INDICATION

The EL-USB-CO features two LEDs: a green LED to indicate logging status and red LED to indicate alarm level status. By default HOLD is disabled. In this mode the red LED will no longer 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.

The LEDs on an EL-USB-CO will flash in one of the following ways, assuming hold of the warning threshold has been turned off in the EL-WIN-USB control software:

	Green single flash *(Every 10 Seconds)* The data logger is currently logging, no alarm.
	Green single flash *(Every 20 Seconds)* The data logger is currently logging. No alarm. Although, battery is low and should be replaced before logging important data.
	Green single flash *(Every 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 *(Every 20 Seconds)* The data logger is full and has stopped logging, no alarm.
	Red single flash *(Every 10 Seconds)* The data logger is currently logging. Alarm.
	Red & green single flash *(Every 20 Seconds)* The data logger is full and has stopped logging. Alarm.
	No LEDs flash The data logger is stopped, the battery is empty or there is no battery fitted.

BATTERY INFORMATION

Replacement
We recommend that you replace the battery 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.

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 including those batteries 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.