

EL-USB-CO

Carbon Monoxide (CO) Data Logger with USB Interface

This data logger measures and stores up to 32,000 Carbon Monoxide (CO) readings over a 0 to 300 ppm measurement range and -10 to +40°C (14 to +104°F) operating temperature range. The user can easily set up the logging rate and start time, and download the stored data by plugging the module straight into a PC's USB port and running the purpose designed software under Windows 98, 2000 or XP. The data can then be graphed, printed and exported to other applications. The data logger is supplied complete with a long-life lithium battery. Data is stored in non-volatile memory and is not lost when the battery is empty. A bright red LED will flash and an alarm will sound when a preset alarm level has been exceeded.

FEATURES

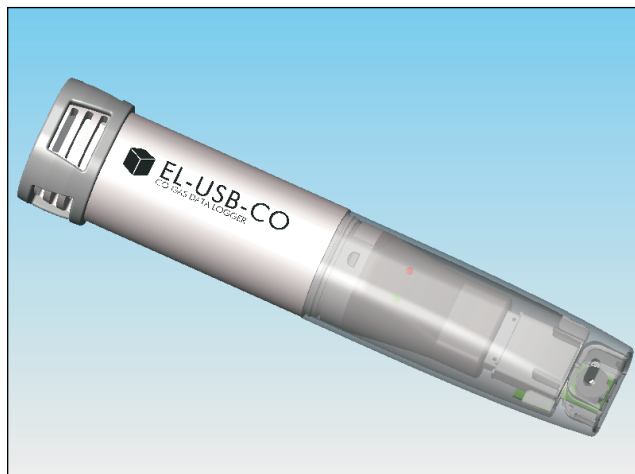
- 0 to 300 ppm CO measurement range
- Stores up to 32,000 Measurements
- 2 User-Programmable Alarm Thresholds with Bright Visual and Audible Warning
- USB Interface for Set-up and Data Download
- Expected sensor life: 5 years
- Replaceable Internal Lithium Battery

WINDOWS CONTROL SOFTWARE

Easy to install and use, the control software runs under Windows 98, 2000 and XP (Home and Professional Editions). It allows the user to set up and download any EL-USB-CO. The latest version of the control software may be downloaded from www.lascarelectronics.com.

DATA LOGGER SET-UPS

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



ORDERING INFORMATION

Standard Data Logger (Data Logger, Software on CD, Battery)	Stock Number EL-USB-CO
Replacement Battery	BAT 3V6

SPECIFICATIONS

Specification	Min.	Typ.	Max.	Unit
Measurement range	0		300	ppm CO
Accuracy		5	10	ppm
Decay of reading over time			5	% / year
Internal resolution		0.5		ppm CO
Response time (to reach 90%)		1		minute
Logging rate	every 10s		every 12hr	-
Operating temperature range (15-90 %RH, non-condensing)	-10 (14)		+40 (104)	°C (°F)
Operating pressure range	0.9		1.1	Atm
1/2AA 3.6V Lithium Battery Life*			3	month

* 10 minute logging rate, 25°C ambient temperature, audible alarm disabled, reading <10 ppm CO..

IMPORTANT SAFETY WARNING

This product is designed to be an instrument that measures and records levels of carbonmonoxide (CO) gas in air. This product is not designed and has not been approved to be a product that protects human and/or animal life against harmful concentrations of CO gas. The user should not rely on this product to provide protection against harmful concentrations of CO gas. If protection against harmful concentrations of CO gas is required, then the user should employ a product that has been designed and approved for that purpose.

Safety guide:

- **If carbon monoxide levels exceed 100 ppm, then immediately remove all personnel from the area.**
- **If carbon monoxide levels exceed 200 ppm, then exposure will result in minor or moderate injury.**
- **Exposure to higher levels will result in convulsions and death within 2 to 3 hours.**

LED FLASHING MODES

EL-USB-CO features a red and a green LED.

The LEDs on an EL-USB-CO will flash in one of the following ways, assuming alarm latching is turned off (exact timings to be confirmed).

- Green single flash, every 30 seconds	Logger primed and ready to start.
- Green single flash, every 10 seconds	Logging in progress, last stored value OK
- Red single flash, every 10 seconds	Logging in progress, the last stored reading is equal to or exceeds the low alarm level (If latching is turned on, then a stored value is equal to or exceeds the low alarm level)
- Red double flash every 10 seconds	Logging in progress, the last stored reading is equal to or exceeds the high alarm level (If latching is turned on, then a stored value is equal to or exceeds the high alarm level)
- Green single flash, every 20 seconds	Low battery, logging in progress, the last stored value OK
- Red single flash, every 20 seconds	Low battery, logging in progress, the last stored value is equal to or exceeds the low alarm level
- Red double flash, every 20 seconds	Low battery, logging in progress, the last stored value is equal to or exceeds the high alarm level
- Green double flash, every 20 seconds	Logger is full, last stored value OK
- Red/Green single flash, every 20 seconds, alarm latching turned on	Logger is full, last stored value is equal to or exceeds the low or high alarm level
- No LEDs flash	LEDs disabled during configuration to save battery power and increase logging duration. or Battery dead.

By default latching is disabled. The red LED will not flash after the logged voltage has returned to normal. Instead, the green LED will flash.

Latching can be turned on via the control software. The red LED will then continue to flash, even after the logged CO value 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.

AUDIBLE WARNING

The audible alarm will sound when time an alarm level has been exceeded.

The audible alarm will sound once every 60 seconds when there is a low battery condition. This indicates that the battery must be replaced.

BATTERY REPLACEMENT

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

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

Note:

Leaving the EL-USB-CO 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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Specifications liable to change without prior warning

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M.C. Applies to EL-USB-CO/1

