# USB-CO300
## High Accuracy USB Carbon Monoxide Logger

**Tempro**
Temperature measurement instruments
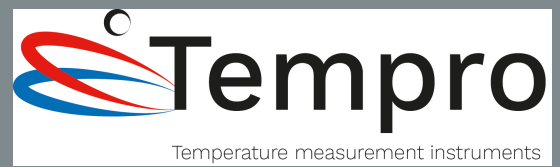
## FEATURES

- 0 to 300 ppm CO measurement range
- Stores up to 32,510 measurements
- User-programmable warning threshold with bright visual and audible warnings
- USB interface for set-up and data download
- Expected sensor life: 4 years
- Supplied with replaceable internal lithium battery and free PC control software

This standalone data logger measures and stores up to 32,510 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 2000, XP, Vista, 7 & 8. 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 a buzzer can sound when a preset warning level has been exceeded.

## IMPORTANT SAFETY WARNING

DO NOT ATTEMPT TO USE THE USB-CO300 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 USB-CO300 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 USB-CO300 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 USB-CO300 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 USB-CO300 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, colorless 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.
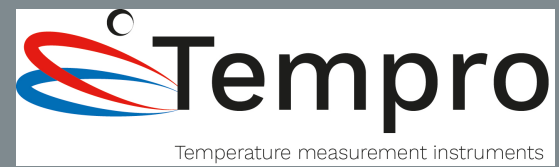
| Specifications | Minimum | Typical | Maximum | Unit |
|---|---|---|---|---|
| Measurement range | 0 | | 300 | ppm CO |
| Internal resolution | | 0.5 | | ppm CO |
| Accuracy (whichever is greater) | | ±4% / ±5 ppm | | |
| Long Term Drift | | | 5 | % / year |
| Zero Offset | | ±2 | | ppm CO |
| Response time (to reach 90%) | | 1 | | Minute |
| Logging rate | every 10 s | | every 5 min | - |
| Operating temperature range (15-90 %RH, non-condensing) | -10 (+14) | | +40 (+104) | °C (°F) |
| Operating pressure range | 900 | | 1100 | mBar |
| 1/2AA 3.6V Lithium Battery Life | | | 3* | Month |

*with battery supplied, 5 minute logging rate, 25°C ambient temperature, audible warning disabled, reading < 10ppm CO

## FREE PC CONTROL SOFTWARE POWERED BY EASYLOG

The FilesThruTheAir™ control software is available as a free download from www.filesthrutheair.com. Easy to install and use, the control software is compatible with 32-bit and 64-bit versions of Windows XP, Vista, 7 & 8. 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
• Measurement parameter (°C or °F)
• Logging rate (customisable between 1 second and 12 hours)
• High and low alarms
• Immediate and delayed logging start
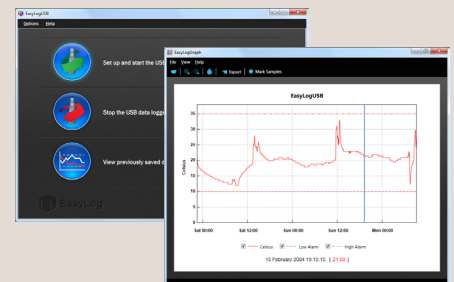


**Download the latest version of the software free of charge from www.filesthrutheair.com**

On inserting a battery the Red then Green LED will flash in turn for approximately 2 min, while the logger stabilises. Do not connect to the USB port of a computer untill this has finished.
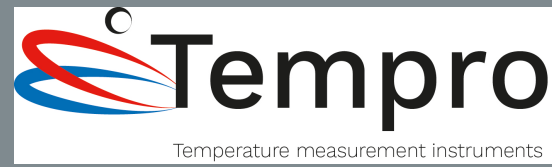
## AUDIBLE WARNING

The audible warning will sound once per second when the warning threshold has been exceeded. To disable the warning, remove the cap from the front of the data logger.

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

## LED FLASHING MODES

USB-CO300 features a red and a green LED.

The LEDs on an USB-CO300 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.

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. Alarm.

**Red/Green single flash (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 REPLACEMENT

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

The USB-CO300 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 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 USB-E from the PC.

**Note:**
Leaving the USB-CO300 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.