

theben

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**CO₂sensor
AMUN 716 9 101**



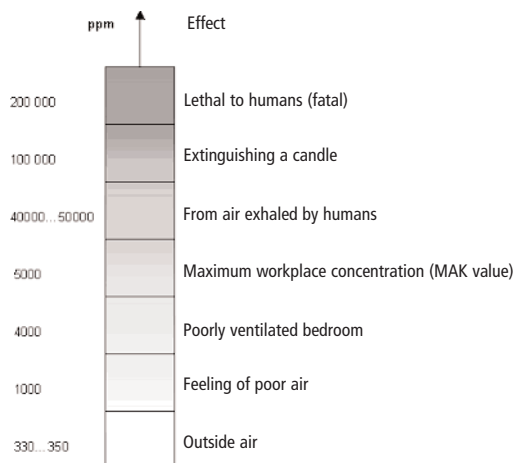
1. Designated use

The sensor records carbon dioxide (CO₂) and the temperature in the living area. The CO₂ content of the air is a verifiable indicator of the air quality in the living area. The greater the CO₂ content, the poorer the air.

2. Characteristics

- The gas CO₂ makes up only approx. 0.034 % of our fresh air and acts as an indicator for assessing the quality of room air.
- The concentration of 0.1 % (1000 ppm) is the limit value for indoor rooms.
- The maximum concentration in a workplace is 5000 ppm.
- Other limit values:

CO₂ Concentrations



Composition of fresh air

Gas		Percentage volume
Nitrogen	N ₂	78,08 %
Oxygen	O ₂	20,95 %
Argon	Ar	0,93 %
Carbon dioxide	CO ₂	340 ppm

3. Installation

- ⇒ Position the CO₂-sensor near to your PC.
- ⇒ Avoid draughts.
- ⇒ Avoid directly exhaled air.

4 Commissioning and installation

4.1 Software

- ⇒ Place the enclosed CD in your computers CD drive.
The following window will open ...
- ⇒ Should the CD not start automatically, open the die CD and run the **start.exe** file.

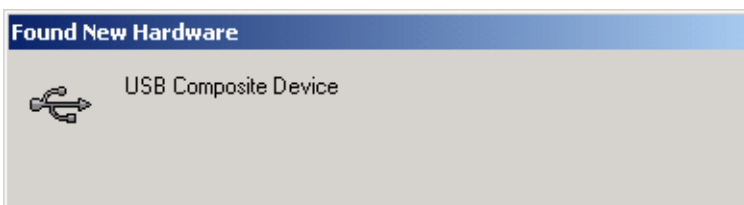


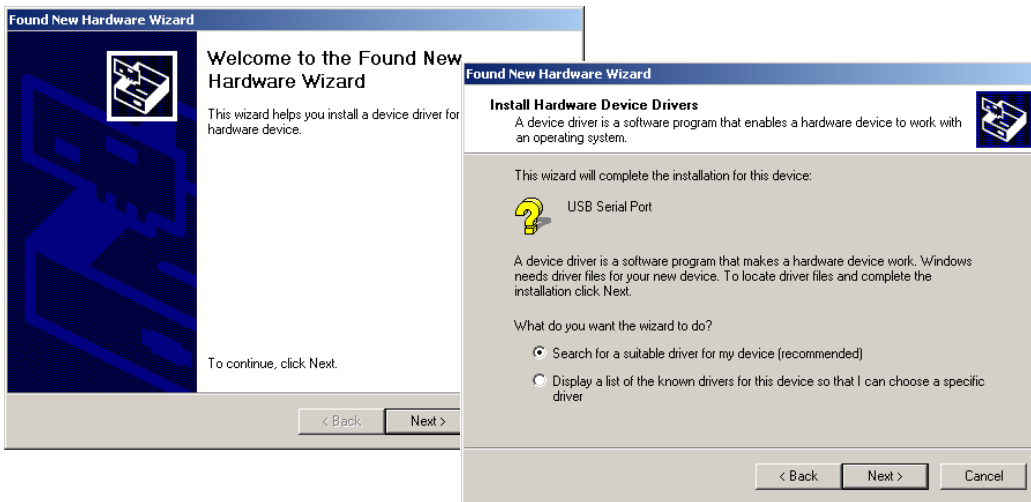
You can now select between:

- **Install CO₂program**
Automatically installs the CO₂program for indicating and recording CO₂values.
- **Read Operating Manual**
Operating Manual opens.
- **Browse CD**
The content of the CD is displayed in the file explorer.

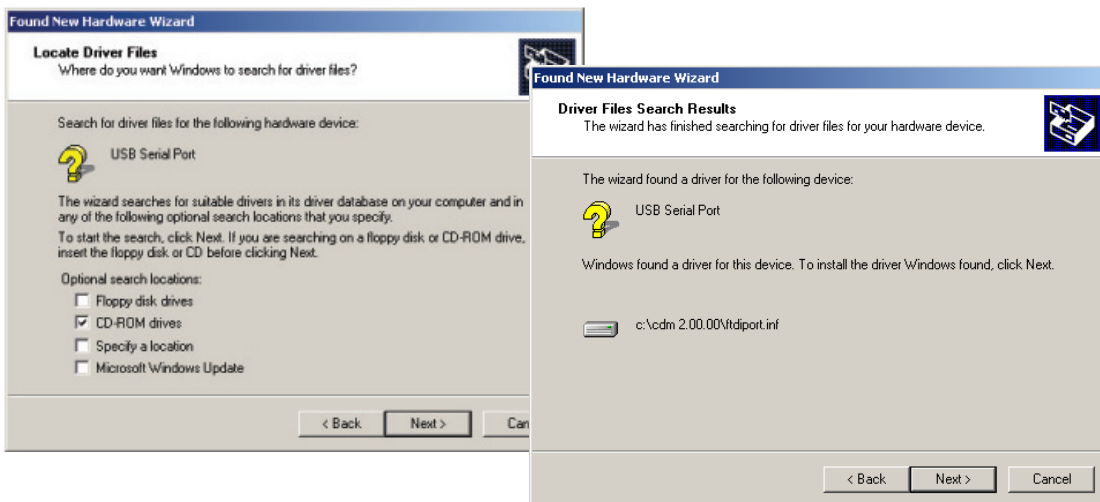
4.2 Hardware

- ⇒ Insert the USB cable in to the USB socket of your computer or laptop.
- ⇒ Carry out the following steps.
The following messages will appear on the computer:





- ⇒ Click on **Next**.
- ⇒ Choose from the selection **Find a suitable driver for this device**.
Click on **Next** again.
- ⇒ Select **CD-ROM drive** as the source.
- ⇒ Click on **Next**.



A driver for the device has been found.

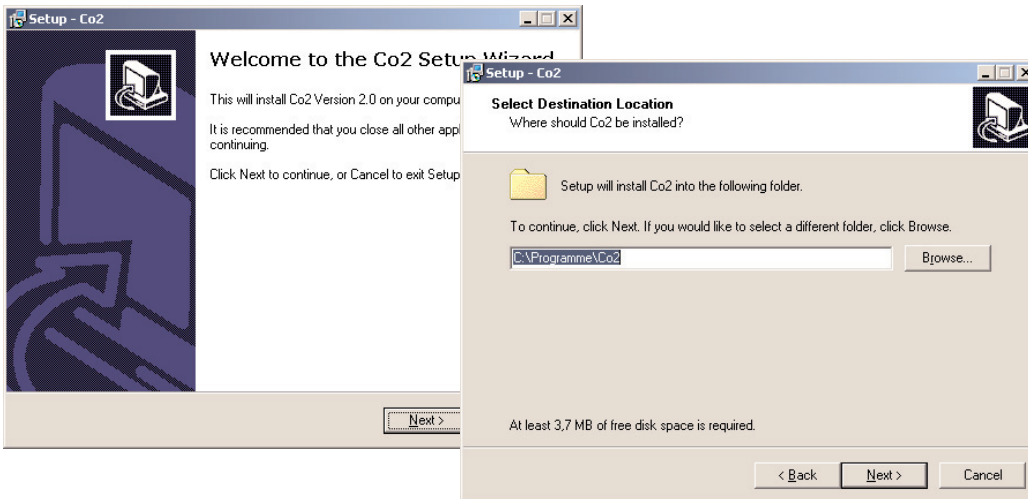
- ⇒ To install the driver, click on **Next**.



- ⇒ Click on **Finish**. Your CO₂sensor has been successfully installed.

Install CO₂ program

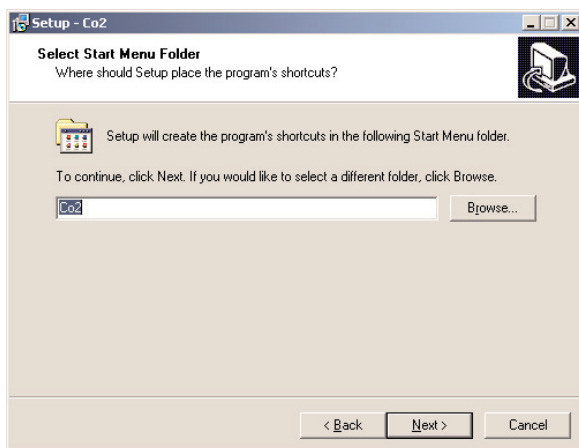
⇒ Click on **Install CO₂ program** and the Wizard will start automatically.



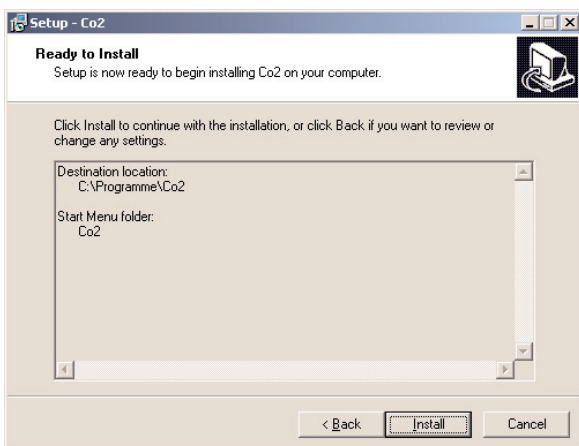
⇒ Click on **Next** for the next view.

⇒ Click on **Next** to continue.

⇒ Click on **Browse**, when you want to select a different folder.

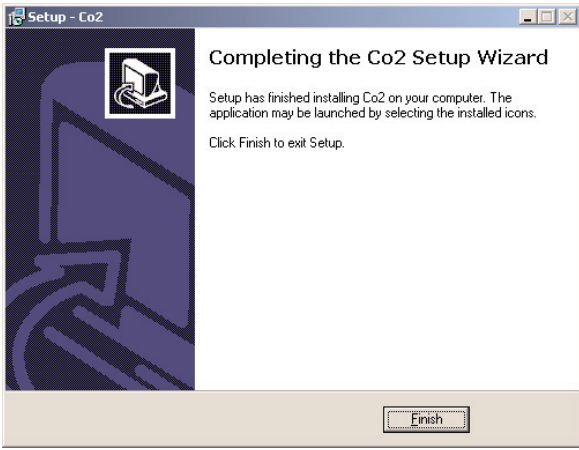


⇒ Select a location for your program link.



⇒ Click on **Install**, to continue.

⇒ Click on **Back**, if you wish to change the settings.



The program has been successfully installed.

⇒ Click on **Finish** to complete installation.

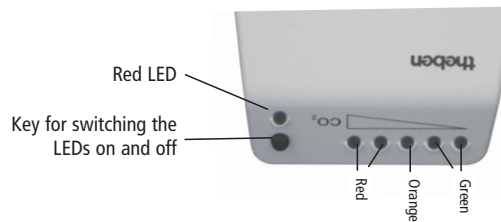
You can now start the program from symbol on your Desktop.

5. Description and function

5.1 LED display

- The CO₂sensor has 5 LEDs that indicate the current CO₂content of the measured ambient air.

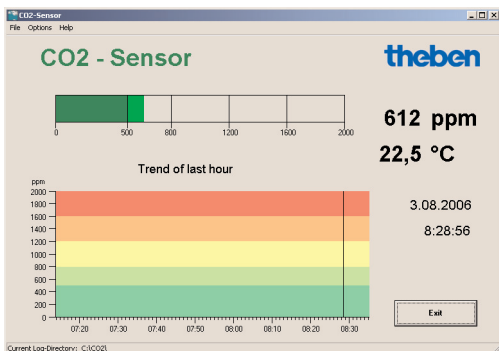
LED	Range
Green 1	0-500
Green 2	500-800
Orange	800-1200
Red 1	1200-1600
Red 2	>1600



- The red LED is an operating display that illuminates if the CO₂sensor is connected to a USB interface.

5.2 CO₂program

When the program has been successfully installed, a symbol will appear on your Desktop. You can start the program for displaying and evaluating CO₂values from this symbol. The following window will appear on your screen:



The current CO₂values is displayed in the top bar.

The bottom scale shows the CO₂ concentration pattern over the previous 80 minutes.

5.3 Save CO₂ records

- **Buffering during the recording operation**

- ⇒ Select the **Save** option from the **File** menu.
A window opens into which you can enter path and file name.

- **Save automatically during the recording operation**

If CO₂ values are recorded over a prolonged period, a file is created each day.

You can specify a location to which the file is to be saved in the **Select directory** in the **Settings** menu.

Every day, a new file will be saved with a name in the following format:

YYYYMMDD_hh (e.g.: 20060511_23 – This file was saved on 11.05.2006, 23.xx hrs)

- **Enable alarm/set alarm threshold**

Any desired **Alarm threshold** can be set in the **Settings** menu under **Enable alarm**.

If the CO₂ content in the ambient air is underrun, an acoustic warning signal is generated.

Should the alarm be enabled, the screen displays a dot which flashes red if the threshold is exceeded.

- **Convert unit (ppm/%)**

In the **Settings** menu under **Units** and the ppm or % option, the value display can be changed to the relevant unit.

- **Automatic range toggling**

If **Automatic range toggling** is activated in the Settings menu, the display range for values >2000 ppm (0.02 %) will change from 0 – 2000 ppm (0 – 0.02 %) to 0 – 5000 ppm (0 – 0.05 %).

If this range is toggled, it will remain in the display

If **Automatic range toggling** is not activated, the values >2000 ppm (0.02 %) will not be displayed. The limit value 2000 ppm (0.02 %) will be displayed.

6. Electrical connection

The device operates via a USB interface and has no external power source.

The interface delivers max. voltage of 5 V.

7. Technical data

Supply voltage:	5 V – USB bus voltage
Degree of protection:	IP 20
Protection class:	III

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