Data sheet: CO2 traffic light DesignHome

The microprocessor-controlled CO2 meter is used to measure CO2 levels (0 to 9,999 ppm), temperature, and humidity. Measurement signals are displayed visually in the form of a numerical display or optionally as a traffic lights or graphic display. The CO2 content of the air is determined using an optical sensor (NDIR), non-dispersive infrared technology. By using the sensor based on the dual principle, measurement interference caused by contamination and aging can be largely eliminated, thus ensuring a long service life of the device. Calibration is not necessary under normal operating conditions. Temperature and humidity serve as additional information displays. The CO2 Traffic Light DesignHome is particularly recommended for use in private rooms, offices, classrooms, and conference rooms, as controlled ventilation keeps the maximum CO2 concentration in the room within limits, thus increasing concentration. The CO2 Traffic Light DesignHome is designed as a wall-mounted device for installation on a flush-mounted box.

Technical data	CO_2 -Ampel DesignHome, Article No.: CO2 - A 300
Measurement method CO_2	Dual Wavelength NDIR, with ABC- self-calibration logic (factory setting)
Measuring range CO_2	0–9.999 ppm
Measuring error CO_2 (25°, 77°F, 3.000ppm)	± 75 ppm or 10% of the reading (the highest value in each case)
Measuring response	< 2 minutes for 90% step size
Measuring intervall	2 sec
Temperature sensitive	0,2 % / °C
Working conditions	0 - 50 °C, 0-95% rel. humidity, non-condensing
Power Supply	230V VAC
Electrical connection	On-site in a flush-mounting box, D 68mm, Minimum depth 35mm
Power usage	1,5 W
Dimensions	95 x 95 x 20 mm
Weight	100 g
Installation	Wall mounting in a switch box
Protection category	III according to EN 60730 and IP31 to EN 60 529
Traffic light display CO_2 value (factory settings)	
green	< 1.000 ppm
yellow	1.000 bis 2.000 ppm
red	> 2.000 ppm
Technical modification reserved	

Connection and Installation

1. The connection is made as shown in the illustration. The N and L terminals are for voltage input, and the PE terminal is used as the protective earth conductor.
2. For wall mounting, open the sensor as shown in the illustration below and attach the back plate to the device socket. Installation location: Not behind a door, near a radiator, or in a corner. The sensor must be protected from direct sunlight and magnetic waves.
3. Then connect the DC-DC cable from the cover to the connector on the circuit board.
4. Replace the cover and secure it with the locking tabs.

Caution: Improper connection will destroy the sensor. Connection should only be carried out by trained and authorized personnel.

DC-DC-cable
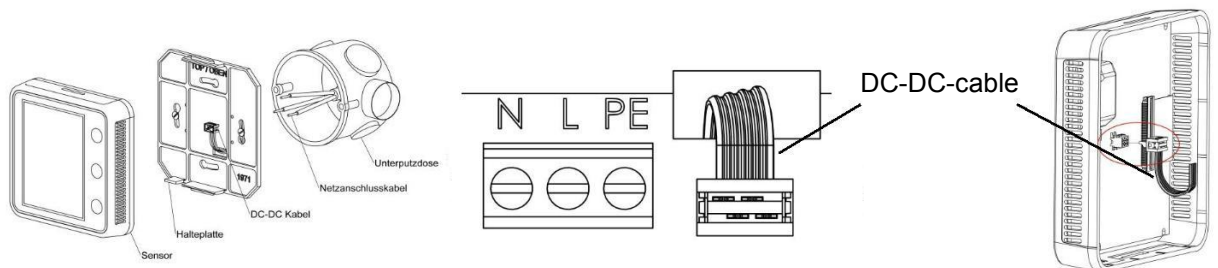
Initial commissioning

After connecting the power supply, the warm-up time begins (150 sec, shown on the display).
For initial commissioning (or if the sensor has not been used for more than one month), the warm-up time is 24 hours, after which the sensor will operate stably. The normal warm-up time is 5 minutes.
Additional information: The three buttons are not functional during the warmup period.

Dimensions
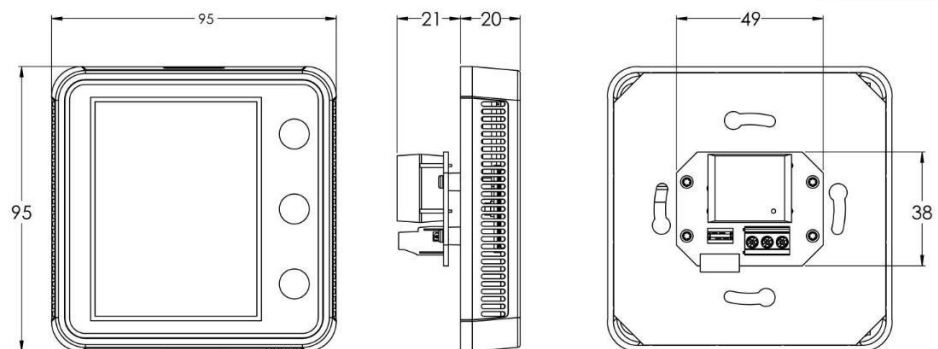
Operating instructions CO2 traffic light DesignHome

The upper button can be used to turn the sensor on or off.

Pressing the middle button switches between the three display modes (values, smiley, and traffic light).

The lower button opens the info menu.

Instructions

1. To protect the infrared CO2 sensor, please avoid shaking or hitting it.

2. When first used or after a long period of non-use, the CO2 sensor must be switched on continuously for at least 2 days so that the CO2 sensor's self-calibration system functions properly.

3. The sensor calibrates itself every 14 days when it reaches 400 ppm (e.g., due to extensive Ventilation or prolonged non-use of the room.)

CO2– values

CO_2– Indoor air CO2 level < 2,000 ppm
Poor air quality Please ensure air exchange (ventilation)

CO_2– Indoor air quality is 1,000 to 2,000 ppm
Medium air quality is present

CO_2– Indoor air level < 1,000 ppm
No significant pollution

Setting the threshold values

In the Info menu, press the middle button and the lower button simultaneously for at least 3 seconds to access the Settings menu.

- The upper button selects the green/yellow threshold setting

- The middle button returns to the previous display (traffic light or numeric display).

- The lower button selects the yellow/red threshold setting.

In the green/yellow or yellow/red settings menu:
- Pressing the upper button increases the threshold by 1 ppm

- Pressing the lower button decreases the threshold by 1 ppm.

- Pressing the middle button exits the settings mode.

  Pressing the setting buttons for longer than 1 second changes the threshold rapidly.

- In the subsequent menu, press the upper button to permanently save the previously set threshold value.
- The middle button has no function in this menu.
- The lower button cancels the setting, i.e., discards the changed setting.

Further information can be found on our website:

www.mb-systemtechnik.de