T & O Electronic Solutions GmbH
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Datasheet: CO_2-Meter CO_2-A 100

The CO2 sensor uses an infrared technique to measure the content of CO2 in air. 6 colour LEDs permit a visualization of CO2 content (in stages from 0 ppm – 2000 ppm).

Ideal for use as a desktop device in classrooms and offices.

Technical data	CO_2-A 100, Articel Number 1001
Measuring method	Dual Wavelength NDIR, Self calibration
Measuring range	0– 2.000 ppm
Measuring error	± 75 ppm
Measuring response	< 2 Minutes
Measuring intervall	2 sec
Temperature sensitive	0,2 % / ℃
Working conditions	0 - 50 ℃, 0-95% rel. Humidity
Power Supply	24 VAC/VDC
Output	0-10 V or 4-20 mA by Jumper
Power Supply	Plug (included)
Power usage	2,0 W
Dimensions	130 x 85 x 39,5 mm
Weight	240 g
Installation	Wall or Table Top (included)
Protection category	III according to EN 60730
CO2 Meter LEDs	
Green 1	0 to 600 ppm
Green 1 and Green 2	600 to 900 ppm
Yellow 1	900 to 1.200 ppm
Yellow 1 and Yellow 2	1.200 to 1.600 ppm
Red 1	1.600 to 2.000 ppm
Red 1 and Red 2	> 2.000 ppm
Sound / Alarm	900/1.200/1.500 (Predefined)/1.800 ppm

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Wall Mounting

1. For wall mounting open the device and fgo ahead according the picture. The mounting place shut not be close to the door or heating system.

Fig.1

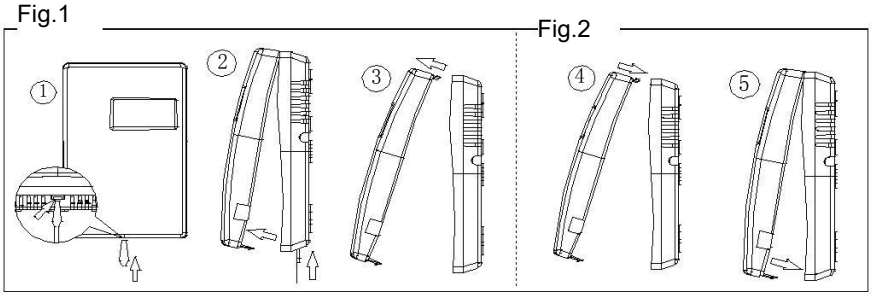
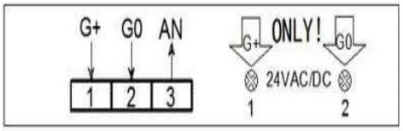


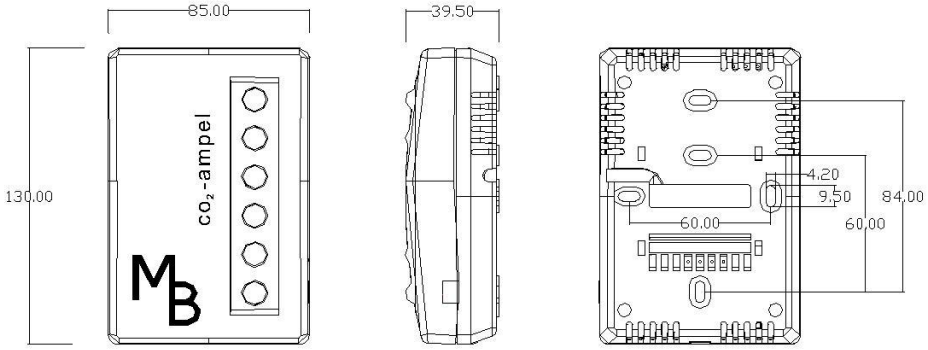
Fig.2

Electrical connection

2. Connection accoding the picture. With wrong connection you can destroy the sesor.



Dimensions

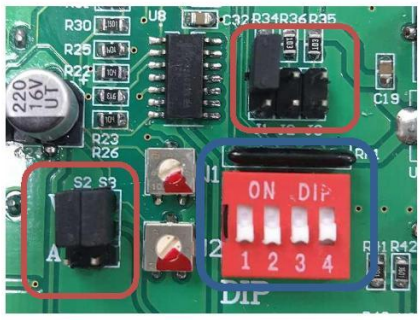


Usage oft Alarm sound

DIP 1 = ON, Alarm is off

DIP 1 = OFF, Alarm is on

DIP2	DIP3	Alarm
OFF	OFF	1.500ppm (Pre defined)
OFF	ON	900ppm
ON	OFF	1.200ppm
ON	ON	1.800ppm



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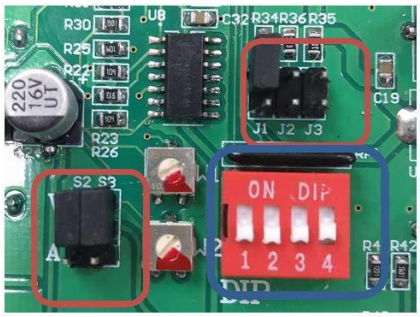
Analog Output

Before to change the output, please switch off the power supply.



Jumper S2-S3	Jumper J1	Analog outputs
Both upper pins connected (V side)	Not connected	0~10VDC (Pre defined)
Both lower pins connected (A side)	Not connected	0~20mA
Both upper pins connected (V side)	Connected	2~10VDC
Both lower pins connected (A side)	Connected	4~20mA

Instructions

1. Do not shake the sensor
2. For first time usage (or longer time without usage), the sensor need 48h continous power supply to conduct a proper self calibration
3. Self Calibration: The sensor has a self calibration. Every 14 days the sensor conduct a self calibration. Therefore the sensor needs every 14 days a CO2 level of 450ppm (outside air).

CO2– Level

CO_2– level higher 2.000 ppm
Urgent ventilation needed

CO_2– level 1.600 to 2.000 ppm
Start of ventilation

CO_2– level 1.200 to 1.600 ppm
Medium Air Quality

Alarm sound at 1.500 ppm (Pre Defined)

CO_2– level 900 to 1.200 ppm

CO_2– level 600 to 900 ppm
Good Air Quality

CO_2– level lower 600 ppm
Outside Air Quality