

Datasheet: CO₂ Measuring device Digital White CO₂ MW 100

The microprocessor-controlled CO₂ measuring instrument is used to record the CO₂ content of the air in the range up to 2,000 ppm, 5,000 ppm or 10,000 ppm, as well as the temperature and humidity. The measuring signals are displayed by a digital display. All measuring signals are available as outputs. The CO₂ content of the air is determined by means of an optical sensor (NDIR), non-dispersive infrared technology. By using the sensor according to the dual principle, disturbances of the measurement by pollution and aging can be excluded as far as possible, so that a long function time of the device is ensured. Calibration is not necessary under normal operating conditions. The application range of the CO₂ measuring device is particularly recommended in teaching rooms, private rooms and conference rooms. The available outputs allow the control of complex processes regarding temperature, rel. humidity and the CO₂ concentration.



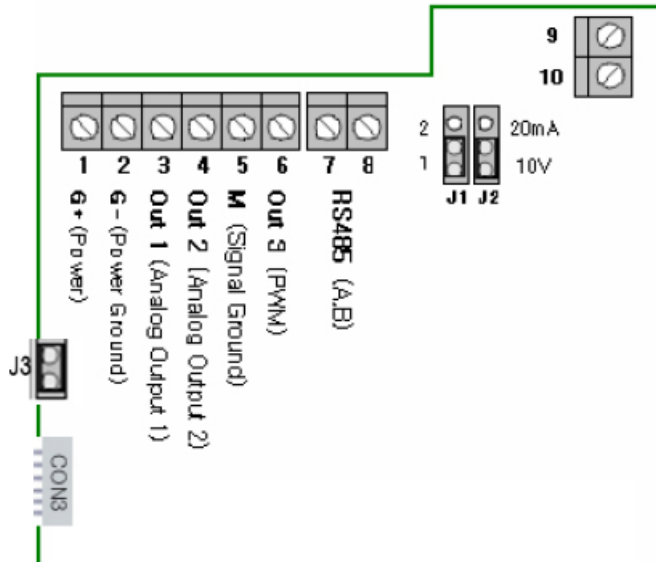
Technical data		CO ₂ MW 100 (Wall mountin)
	Measuring method	Dual Wavelength NDIR
	Temperature	NTC
Accuracy	Measuring range CO ₂	0– 2.000 / -5.000 / -10.000 ppm
	Measuring range temperature	-10 bis + 60 °C
	Measuring range rel. humidity	0-99 % rel. Humidity
	Measurement accuracy CO ₂	± (4 % fixed value + 3 % reading value)
	Measuring accuracy temperature	± 0,2 °C
	Measuring accuracy rel. humidity	± 3%
	General	CO ₂ response
Temperature response		< 10 sec
Measuring interval		1,5 sec
Warm up time CO ₂		< 3 min
Warm-up time temperature / rel. humidity		< 30 sec
Operating characteristics	Temperature dependence	0,2 % / °C
	Ambient temperature	0 - 50 °C
	Perm. rel. ambient humidity	0 - 95 % non-condensing
Voltage	Power supply	24 V AC/DC (<±20 %)
	Current consumption	70 mA
Outputs	Output CO ₂	0 -10 V, 4 -20 mA, RS485
	Output temperature / humidity	0 -10 V, 4 -20 mA
	Output CO ₂	PWM
	Switching output CO ₂	ON/OFF 1.000 / 800 ppm adjustable (max.: 1A / 230V)
Dimensions	Housing with wall mounting	123 mm x 80 mm x 29 mm

Subject to technical changes Subject to technical changes

All data under operating temperatures of 25 °C



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Anschlussdaten

CO₂ MW 100

Klemmen




1	G +	Voltage input (+)	24 V AC/DC ± 20 %
2	G -	Ground	-10 bis + 60 °C
3	Out 1	Signal Output (+) 1	10 V/ 20 mA: 0 - 2.000 ppm Tolerance FS ± 2%
4	Out 2	Signal Output (+) 2	10 V/ 20 mA: 0-50 °C, rel humid 50 % Tolerance FS ± 2%
5	M	Signal Ground (-)	
6	Out 3	Open Collector ON/OFF PWM output (1004 msec Intervall)	ON: 1.000 ppm OFF: 800 ppm 1004 msec Intervall
7	RS485 A	RS- 485	
8	RS485 B		
9	RLY 1	Relay contact	ON: 1.000 ppm
10	RLY 2		OFF: 800 ppm

Jumper-Position

- Jumper 1 Output OUT1 position 1: 0-10 V output, position 2: 0-20mA output
 - Jumper 2 Output OUT2 position 1: 0-10 V output, position 2: 0-20mA output
 - Jumper 3 For RS 485 connection (jumper closed) For RS 485 connection (jumper closed)
- The CON 3 port is not to be used. The CON 3 connection is not to be used

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1. Buttons

- Menü  (CO₂, temperature, rel. humidity)
- UP  Increase setting or Yes
- Down  Reduction of the setting or No

Nr.	Initial Character	Description	Selection by actuation ▲ ▼
0	****ppm	State	Normal or Error
1	DISP	Selection shown in LCD display	▲ CO ₂ (default) ▼ VOC
2	CO ₂ ON	Value of CO ₂ concentration for relay contact ON	1.000 ppm (default): Relay ON– Wert ▲ ▼ : Increase/reduction from 50 ppm
3	CO ₂ OFF	Value of CO ₂ concentration for relay contact OFF	800 ppm (default): Relay OFF– Wert ▲ ▼ : Increase/reduction from 50 ppm
4	VOC ON	Not implemented	
5	VOC OFF	Not implemented	
6	T-USE	Selection of temperature display (Yes/No)	Yes (default): Temperature measurement NO
7	H-USE	Humidity display selection (Yes/No)	Yes (default): Relative humidity measurement NO
8	RANGE	Selection of maximum CO ₂ measured values	(▲ : Increase, ▼ : Reduction) 0: 2.000 ppm (default) 1: 5.000 ppm 2: 10.000 ppm
9	OUT 2 S	Output 2 selection (OUT 2)	(▲ : Increase, ▼ : Reduction) 0: Temperature (default) 1: rel. Humidity (Hum) 2: VOC
10	R- OUT	Relay output selection	▲ : CO ₂ (default) ▼ : VOC
11	RTIME	Time interval for relay contact ON	(▲ : Increase, ▼ : Reduction) 5 Minuten (default) 1min - 40 min pluggable range
12	OUT- 1	CO ₂ output selection	▲ : V- Out (default): 0 V-10 V ▼ : C- Out 4 mA-20mA
13	OUT- 2	Output 2 selection	▲ : V- Out (default): 0 V-10 V ▼ : C- Out 4 mA-20mA

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No.	Initial Character	Description	Selection by actuation ▲ ▼
14	OUT 3	Output 3 selection (CO2)	▲ : Pulse (default): PWM Output ▼ : O-C : On/Off
15	C-F	Selection temperature °C/°F	▲ : °C (default) ▼ : °F
16	CALCO	Calibration CO2 value	▲ : +50 ppm ▼ : -50 ppm
17	CALCO	Calibration VOC value	
18	CAL-T	Calibration temperature	
19	CAL-H	Calibration rel. humidity	
20	MD-ID	Module ID selection	

2. Additional information

CO2 ON, Off Circuit i(output) depends on the measuring range of the sensor

Measuring range	CO2 ON Area	CO2 OFF Area
2.000 ppm	200 ppm - 2.000 ppm	100 ppm - 1.900 ppm
5.000 ppm	200 ppm - 4.000 ppm	100 ppm - 3.900 ppm
10.000 ppm	200 ppm - 8.000 ppm	100 ppm - 7.900 ppm

Increase/decrease 50ppm per actuation ▲ ,▼

3. LED

1. Power LED: Display Power ON/OFF Status
2. OUT LED: Display Relay ON/OFF Status