

## METERS

CO<sub>2</sub> °C

### CO<sub>2</sub>-1 SMA



This small CO<sub>2</sub> meter fits in any measurement set-up. CO<sub>2</sub>-1 SMA is compatible with dipping probes, flow-through cells and non-invasive CO<sub>2</sub> sensor spots of type CD1 (measurement range 1 - 25 % CO<sub>2</sub>). It has temperature compensation, so even in environments with changing temperatures precise CO<sub>2</sub> measurements can be performed. This USB-powered CO<sub>2</sub> meter is operated with the PreSens Measurement Studio 2 software, which enables simultaneous control of several devices and combination with PreSens O<sub>2</sub> and pH meters, so measurement networks can be set up. With numerous features and additional pressure compensation, the software makes the CO<sub>2</sub>-1 SMA applicable in many applications. Optionally, the CO<sub>2</sub>-1 SMA can be expanded with 4 - 20 mA analog output (via a converter box).

- For use with non-invasive sensors, dipping probes & flow-through cells
- Compact & lightweight (only 128 g)
- USB-powered
- Controlled by PreSens Measurement Studio 2
- Integrated temperature and pressure compensation
- Optional 4 - 20 mA analog output

## TECHNICAL

### Specifications

Carbon dioxide sensors	CD1 (optical SMA connector)
Temperature sensor	1 x Pt100 temperature connector (sensor not included)
Temperature performance	0 °C to + 50 °C, resolution ± 0.1 °C, accuracy ± 1.0 °C
Power supply	5 VDC (USB-2.0-Mini-B, cable included)
Temperature: operating/storage	0 °C to + 50 °C / - 10 °C to + 70 °C
Relative humidity	0 % to 80 % (non-condensing)
Dimensions	101 mm (with connectors) x 35 mm x 30 mm
Weight	128 g
Digital interface	USB interface cable to PC (cable included)

## SENSORS

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### CO<sub>2</sub> Dipping Probe DP-CD1



The CO<sub>2</sub> dipping probe DP-CD1 is an optical sensor based on a 2 mm polymer optical fiber. The end of the probe is covered in a high-grade steel tube. It is the solution for invasive measurements and monitoring of dissolved CO<sub>2</sub>.

- Online monitoring
- Measurement range from 10 - 250 hPa pCO<sub>2</sub> (8 ... 180 mmHg)
- No consumption of carbon dioxide
- Measures carbon dioxide in liquids



YOUR CONFIGURATION



PRODUCT  
FINDER



**PreSens**  
PRECISION SENSING

## TECHNICAL

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## Specifications\*

Measurement range	1 - 25 % CO <sub>2</sub> at atmospheric pressure (1013.15 hPa) 10 - 250 hPa pCO <sub>2</sub> 8 - 180 mmHg pCO <sub>2</sub>
Resolution at 20 °C	± 0.06 % at 2 % CO <sub>2</sub> ± 0.15 % at 6 % CO <sub>2</sub> ± 0.5 mmHg at 15 mmHg pCO <sub>2</sub> ± 1.2 mmHg at 45 mmHg pCO <sub>2</sub>
Accuracy**	± 5 % of reading or 0.2 % (1.5 mmHg); whichever is higher
Drift at 37 °C***	Typically < 5 % of reading per week
Measurement temperature range	From + 15 °C to + 45 °C
Response time (t <sub>90</sub> ) at 20 °C	< 3 min. for change from 2 % to 5 % (15 mmHg - 38 mmHg) pCO <sub>2</sub>

## Properties

Compatibility	Aqueous solutions, pH 4 - 9
Cross-sensitivity	Optical pCO <sub>2</sub> sensors display reduced cross-sensitivity to ionic strength (salinity); acetic acid, SO <sub>2</sub> , HCl vapours
Stability	pCO <sub>2</sub> sensors do not stand: organic solvents, pH above 10 or below 4
Cleaning procedure	Depends on the sensor type used - please ask our experts
Calibration	pCO <sub>2</sub> spots are pre-calibrated; re-calibration is possible Beta-irradiated or autoclavable pCO <sub>2</sub> sensors available
Storage	12 months provided the pCO <sub>2</sub> sensor is stored in its original package

\*provided pCO<sub>2</sub> spots are used without further handling in physiological solutions

\*\*after multipoint calibration

\*\*\*in a carbon dioxide incubator with 100 % rel. Hum. at 5 % CO<sub>2</sub>; measurement interval of 1 min



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## GET IN CONTACT

 **Request more info**

 **Request a quote**

 **Rent-a-meter**

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