

DOCKETED

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*Comment Received From: PCE Americas, Inc.
Submitted On: 3/8/2021
Docket Number: 20-RENEW-01*

CO2 Meters for Consideration

Hello,

I have attached for your consideration sales quotes for 5 various models of CO2 Monitoring Devices. They are small desktop devices that measure the CO2 level within a room. PCE-CMM 5, PCE-CMM 8, PCE-CMM 10, PCE-AQD 10, PCE-AQD 20. We also offer calibrated versions of PCE-AQD 10 and PCE-AQD 20.

Additional submitted attachment is included below.

Created on March 8, 2021

Dear Customer,

Below are the total costs for the product you requested. It is in stock.

Please find our general terms and conditions on <https://www.pce-instruments.com/english/terms#AGB>.

1. CO2 Analyzer PCE-CMM 5 (\$154 each)	Qty. 1	\$154
2. Discount 10%		(-\$15)
3. Shipping charge		\$15
Total		\$154

Please allow 3 to 5 days for delivery from Florida.

Sales tax is only charged to Florida shipping addresses. Florida resellers require a tax exemption form for PCE to waive sales tax.

Quotes are valid for 30 days from creation date.

Sincerely, David Durrenberg

ddu@pce-instruments.com

[Delivery contents:](#)

Delivery contents

1 x CO2 Analyzer PCE-CMM 5

1 x Instruction manual

N.B. The device must be charged via the micro USB port. To do this, use the supplied USB charging cable or a USB power supply with 5 V / 1000 mA. Charging via a 500 mA port on a computer is *not* possible.

[Technical Details on following pages](#)



CO2 Analyzer PCE-CMM 5

CO2 analyzer, temperature and humidity / Traffic light function 5h progress display / Battery and power adapter operation

The CO2 Analyzer is a CO2 measuring device for desktop use. The carbon dioxide meter measures the CO2 content in the air and shows the measured value on a large LC display. The CO2 content in the air is an important measure for checking the ventilation behavior in offices, classrooms, lecture halls, etc. The CO2 / carbon dioxide measuring device helps to ensure that, for example, there is regular ventilation for employees in the office. The CO2 / carbon dioxide measuring device checks indoor air quality via the CO2 content. If the CO2 concentration is below 1000 ppm, the indoor air quality is optimal. Good indoor air quality helps to promote concentration. It is also ensured that the aerosol concentration in the air is low, as the aerosols are repeatedly mixed with fresh air. The CO2 / carbon dioxide measuring device shows the air quality as a numerical measured value and as a traffic light indicator. At the push of a button, the CO2 content of the last five hours can be shown on the display. In addition to the CO2 measuring function, the CO2 / carbon dioxide measuring device is equipped with a sensor for temperature and humidity.

The sensors for monitoring the air quality are subject to different requirements than those in industrial or scientific laboratory use. The focus is therefore on sensor properties such as high long-term stability, low maintenance and low energy consumption. This is fulfilled by the indoor air quality measuring device with its NDIR sensor. The non-dispersive infrared (NDIR) absorption measurement enables precise and long-term stable measurements with an absolute measuring range of up to 5000 ppm.

- Large CO2 measuring range up to 5000 ppm
- Maintenance-free NDIR CO2 sensor
- Traffic light function for carbon dioxide
- Measures temperature and humidity
- 5 h graph for long-term monitoring
- Battery and power adapter operation
- 4.3" graphic display
- Date and time display

Measured variable CO2

Measuring range **400 ... 5000 ppm**
Accuracy ± 75ppm or ±5% of measured value (whichever is greater)

Resolution 1ppm
Sensor type CO2 NDIR Sensor

Measured variable temperature

Measuring range **-10 ... 50°C / 14 ... 122°F**
Accuracy $\pm 1^{\circ}\text{C} / 1.8^{\circ}\text{F}$
Resolution $1^{\circ}\text{C} / 1.8^{\circ}\text{F}$

Measured variable air humidity

Measuring range **20 ... 95% r.H.**
Accuracy $\pm 4\%$ r.H.
Resolution 1% r.H.
Sampling rate 1.5 s

Display 4.3" LCD Display
Battery life ca. 6 h
Charging time ca. 2 h
Ambient conditions $-10 \dots 50^{\circ}\text{C} / 14 \dots 122^{\circ}\text{F}, 20 \dots 85\%$ r.H.
Dimensions 145 x 78 x 97.2 mm / 5.7 x 3.1 x 3.8 in
Weight 210 g / < 1 lb

Created on March 8, 2021

Dear Customer,

Below are the total costs for the product you requested. It is in stock.

Please find our general terms and conditions on <https://www.pce-instruments.com/english/terms#AGB>.

4. Carbon Dioxide Meter PCE-CMM 10 (\$210 each)	Qty. 1	\$210
5. Discount 10%		(-\$21)
6. Shipping charge		\$15
Total		\$204

Please allow 3 to 5 days for delivery from Florida.

Sales tax is only charged to Florida shipping addresses. Florida resellers require a tax exemption form for PCE to waive sales tax.

Quotes are valid for 30 days from creation date.

Sincerely, David Durrenberg

ddu@pce-instruments.com

[Delivery contents:](#)

Delivery contents

1 x Carbon Dioxide Meter PCE-CMM 10
1 x USB cable
1 x User manual

[Technical Details on following pages](#)



Carbon Dioxide Meter PCE-CMM 10

CO2 meter / Battery operation / Alarm limits / 400 ... 5000 ppm / Temperature measurement / Visual and acoustic alarm / Automatic switch-off / USB charging / Units can be changed / LC display / Temperature range -10 ... 50°C (4 ... 122°F)

The CO2 measuring device PCE-CMM 10 is a multi-function measuring device for measuring the air quality. This CO2 meter measures synchronously the CO2 concentration, the air temperature and the humidity. In addition, the CO2 meter has permanently programmed alarm limits. As soon as the currently measured CO2 measured value exceeds the alarm limit, the alarm is activated. The user is alerted to the CO2 meter by an audible and visual signal.

Using the built-in USB interface, you can continuously charge the CO2 meter to your PC workstation, for example. Thanks to the small blue shape, you can optimally position the CO2 meter at your workplace. Due to the 3 inch display and the strong backlight, you can read the measured values optimally.

- CO2 measurement
- Battery operation
- Limit exceeded
- Backlight
- Air temperature
- Table housing
- Humidity
- Beep

Measuring range CO2	400 ... 5000 ppm
Resolution	1 ppm
Accuracy	± (5% + 50 ppm) between 400 ... 2000 ppm and an atmospheric pressure of 1
Measuring range temperature	-10.0 ... 50.0°C / 14 ... 122°F
Resolution	0.1°C / 0.18°F
Accuracy	± 1°C / 1.8°F (can be influenced by its own waste heat)
Measuring range humidity	0 ... 99% rh
Resolution	1% rh
Accuracy	± (5% at 25°C / 77°F) between 10 ... 90% rh
Sensor	NDIR principle
ABC	Automatic baseline correction
Audio alarm	Buzzer
Visual alarm	Red backlight
Display	3 inch LC display
battery indicator	Four-level display
display frequency	3 seconds
Automatic shutdown	turns itself off after 2 hours
Backlight	White backlight
Working conditions	0 ... 50°C / 32 ... 122°F, 0 ... 85% rh
Storage conditions	-20 ... 60°C / -4 ... 140°F, 0 ... 95% rh
Power supply	Built-in 3.7V DC battery
Weight	195 g / < 1 lb
Dimensions	75 x 55 x 130 mm / 3 x 2.2 x 5.1 in

Created on March 8, 2021

Dear Customer,

Below are the total costs for the product you requested. It is in stock.

Please find our general terms and conditions on <https://www.pce-instruments.com/english/terms#AGB>.

7. CO2 Analyser PCE-CMM 8 (\$179 each)	Qty. 1	\$179
8. Discount 10%		(-\$18)
9. Shipping charge		\$15
Total		\$176

Please allow 3 to 5 days for delivery from Florida.

Sales tax is only charged to Florida shipping addresses. Florida resellers require a tax exemption form for PCE to waive sales tax.

Quotes are valid for 30 days from creation date.

Sincerely, David Durrenberg

ddu@pce-instruments.com

[Delivery contents:](#)

Delivery contents

1 x CO2 Analyser PCE-CMM 8

1 x User manual

[Technical Details on following pages](#)



CO2 Analyser for tabletop operation / Measures temperature, humidity and CO2 content of the air / CO2 measuring range from 0... 9999 ppm / Traffic light function / Touchscreen / USB supply

With the CO2 meter you can ensure the right climate in your office. In addition to the CO2 content of the air, the CO2 meter measures the relative humidity and room temperature. The CO2 meter shows carbon dioxide concentrations up to 9999 ppm, temperatures from -10... 50 °C, and relative humidity values from 20 ... 95%. On the 3.5" display of the CO2 meter, the corresponding values can be read off directly, and the color of the CO2 display changes to provide an objective statement about the quality of the room air based on the CO2 content. This makes it particularly easy to assess the indoor air quality using the CO2 meter. For these reasons, the CO2 meter is particularly suitable for offices, schools, public buildings or hospitals, and in general for all buildings and rooms in which people are present.

The CO2 meter displays the measured values numerically and graphically on the touchscreen. Operation is intuitive. The menu structure is simple and user friendly. In addition to setting the date and time, the user can parameterize offsets for the measured values of temperature, humidity and the CO2 content. The display can be dimmed automatically, for example at night. The CO2 meter is operated via the mini-USB interface with a 5 V / 2 A power supply unit (not included).

- Traffic light function when the limit value is exceeded
- Touch display with lighting
- Numerical display of the CO2 measured value
- Progress display for °C, r.h., CO2
- USB supply
- Maintenance-free NDIR CO2 sensor
- Innovative design
- Measuring range up to 9999 ppm CO2

Measured variable CO2

Measuring range	0 ... 9999 ppm
Accuracy	± 75ppm or ±5 % of measured value (whichever is greater)
Resolution	1ppm

CO2 sensor type NDIR Sensor

Measured variable temperature

Measuring range **-10 ... 50 °C / 14 ... 122 °F**
Accuracy ±1 °C
Resolution 0.1 °C

Measured variable air humidity

Measuring range **20 ... 95 % r.H.**
Accuracy ±5 % r.H.
Resolution 1 % r.H.

Display 3.5" touch LC display
Power supply 5 V Mini-USB
Standby power <0.5 W
Ambient conditions 1 ... 85 °C / 34 ... 185 °F / 20 ... 85 % r.H.
Degree of protection IP21
Dimensions 96 x 86 x 32.5 mm / 3.7 x 3.4 x 1.2"
Weight 200 g / 7 oz

Created on March 8, 2021

Dear Customer,

Below are the total costs for the product you requested. It is in stock.

Please find our general terms and conditions on <https://www.pce-instruments.com/english/terms#AGB>.

10. Carbon Dioxide Meter PCE-AQD 10 (\$346 each)	Qty. 1	\$346
11. Discount 10%		(-\$35)
12. Shipping		\$15
Total		\$326

Please allow 3-5 weeks for delivery.

Sales tax is only charged to Florida buyers. Florida resellers require a tax exemption form for PCE to waive sales tax.

Quotes are valid for 30 days from creation date.

Sincerely, David Durrenberg

ddu@pce-instruments.com

Delivery contents for 1 unit:

- 1 x Carbon Dioxide Meter PCE-AQD 10
- 1 x CO2 sensor
- 1 x Mains power adapter
- 1 x SD memory card
- 2 x Wall holder
- 1 x Adhesive pad
- 1 x User manual



PCE-AQD 10 Carbon Dioxide Meter

CO2 datalogger for air quality testing / Adjustable storage rate / Backlit LCD / Storage on SD card / Storage as XLS

The CO2 data logger PCE-AQD 10 is used to measure air quality. The CO2 data logger measures carbon dioxide, temperature and humidity. The CO2 sensor from the CO2 data logger is separated from the main unit with a connection cable. The measured values are displayed on the large display of the CO2 data logger. The air quality measurement data is stored on an SD card. The CO2 data logger can set the measured data in adjustable intervals of 1 ... 600 seconds.

The CO2 data logger is used to monitor indoor air quality in lounges, offices, schools, etc. Through the SD memory, the CO2 measurement data can be monitored over a long period of time to initiate further measures to improve the room air quality.

- Memory on SD card
- 3 parameters of air quality
- CO2, air temperature and humidity
- Mains operation, A/C power adapter
- Save as XLS file
- Large display with lighting

Measured quantity CO2

Measuring range 0 ... 4000 ppm
Resolution 1 ppm
Accuracy ± 70 ppm (<1000 ppm)
 $\pm 5\%$ of rdg. (<3000ppm)
 ± 250 ppm (> 3000 ppm)

Measured air humidity

Measuring range 10 ... 90% rh
Resolution 0.1% RH
Accuracy $\pm (4\%$ of rdg. + 1% rh) (> 70% rh)
 $\pm 4\%$ RH (<70% RH)

Measured variable temperature

Measuring range 0 ... 50°C / 32 ... 122°F
Resolution 0.1°C / 0.18°F
Accuracy $\pm 0.8^\circ\text{C}$ / 1.4°F

Storage rate 1, 2, 5, 10, 30, 60, 120, 300, 600 seconds
Storage SD card up to 16 GB
Display LCD with lighting
Refresh rate display 1s
Power supply 6 x 1.5V AA battery (for time back-up only)
Plug-in power supply 9V / 800-mA
Operating conditions 0 ... 50°C / 32 ... 122°F, <85% rh
Dimensions Main unit: 132 x 80 x 32 mm / 5.2 x 3.1 x 1.3 in
CO2 sensor: 132 x 38 x 32 mm / 5.2 x 1.5 x 1.3 in
Weight Approx. 390 g / < 1 lb (total)

Created on March 8, 2021

Dear Customer,

Below are the total costs for the product you requested. It is in stock.

Please find our general terms and conditions on <https://www.pce-instruments.com/english/terms#AGB>.

13. Carbon Dioxide Meter PCE-AQD 20 (\$772 each)	Qty. 1	\$772
14. Discount 10%		(-\$77)
15. Shipping		\$15
Total		\$710

Please allow 3-5 weeks for delivery.

Sales tax is only charged to Florida buyers. Florida resellers require a tax exemption form for PCE to waive sales tax.

Quotes are valid for 30 days from creation date.

Sincerely, David Durrenberg

ddu@pce-instruments.com

Delivery contents for 1 unit:

- 1 x Carbon Dioxide Meter PCE-AQD 20
- 1 x Power adapter 9V / 1 A
- 1 x User manual
- 1 x 4GB SD Memory Card



Carbon Dioxide Meter PCE-AQD 20

Air quality data logger for 5 parameters / Measures temperature, humidity, CO₂, PM_{2.5} and air pressure / SD storage / XLS format / Large LCD / Power adapter and battery operation

The Carbon Dioxide Meter PCE-AQD 20 is an ideal measuring device for monitoring the air quality at workplaces. The air quality data logger is ideal for continuous logging of air temperature, humidity, CO₂, PM_{2.5} and air pressure. All these parameters give the occupational safety expert information about the air quality. The measured values are stored by the CO₂ air quality data logger on an SD memory card.

The format is XLS, so the measured values can be read directly into Excel, without having to be incorporated into a new software. The measured values are displayed on the large, illuminated display. The air quality data logger is operated by batteries or 9 V power supply unit. As a special feature, this air quality data logger is equipped with an alarm function. This offers the possibility to inform the user about an exceeding of temperature, air humidity or dust load. In addition to the measured values, the air quality data logger also informs about the current time.

- 5 measuring functions
- Excel data logger on SD card
- Large display
- Battery and power adapter operation
- Ideal for workplace monitoring
- Alarm function

Measurement function PM2.5

Measuring range **0 ... 250 $\mu\text{m} / \text{m}^3$**
 Resolution **1 $\mu\text{m} / \text{m}^3$**
 Accuracy **\pm (10% of rdg. + 15 μm)**

Measuring function humidity

Measuring range **5 ... 95% rh**
 Resolution **0.1% RH**
 Accuracy **> 70% RH: \pm (3% of the prev + 1% RH)**
<70% RH: \pm 3% RH

Measuring function temperature

Measuring range **0 ... 50°C / 32 ... 122°F**
 Resolution **0.1°C / 0.18°F**
 Accuracy **\pm 0.8°C / 1.44°F**

Measurement function CO2

Measuring range **0 ... 10,000 ppm**
 Resolution **1 ppm**
 Accuracy **< 1000 ppm: \pm 40 ppm**
< 3000 ppm: \pm (50 ppm + 3% of rdg.)
> 3000 ppm: \pm (50 ppm + 5% of rdg.)

Measuring function air pressure

Measuring range **10 ... 1100 hPa**
 Resolution **0.1 hPa**
 Accuracy **\pm 1.5 hPa**

Display **LCD display with backlight**
 Storage **SD card max. 32 GB**
 Storage rate **2 ... 3,600 s**
 Memory error **< 0.1% of the completely stored data**
 Display **Hold, Max, Min**
 Measuring rate **About 1 s**
 Interface **Serial for live visualization on computers
(Data cable SOFT-LUT-USB sold separately)**
 Alarm output **OC output 24V / 70-mA DC**
 Power supply **6 x 1.5V AA battery
9V / 1 A power adapter**
 Current consumption **230-mA without lighting
approx. 250-mA with lighting**
 Operating conditions **0 ... 50°C / 32 ... 122°F, max. 80% rh**
 Weight **About 387 g / < 1 lb**
 Dimensions **164 x 93 x 72 mm / 6.5 x 3.7 x 2.8 in**