

INDUSTRIAL

# Carbon Dioxide Analyzer

#CDANALYZER



## Overview

The McDantim Carbon Dioxide Analyzer is a precision NDIR instrument designed for demanding industrial gas applications — including modified atmosphere packaging (MAP) and welding gas monitoring. Factory calibrated before shipment, it delivers fast, stable CO<sub>2</sub> readings right out of the box. Full technical specifications and key capabilities are detailed below.

## Specifications

<b>Technology</b>	NDIR (Non-Dispersive Infrared)
<b>Measurement Ranges</b>	0–30% CO <sub>2</sub> & 0–100% CO <sub>2</sub>
<b>Optional Measurement</b>	Carbon Monoxide (CO)
<b>Temp Compensation</b>	Automatic
<b>Pressure Compensation</b>	Barometric, Automatic
<b>Display</b>	Digital front panel

<b>Calibration</b>	Zero & Span (front panel)
<b>Applications</b>	MAP, Welding
<b>Mounting</b>	Panel / wall mount
<b>Instructions</b>	See product documentation

## Key Features

### NDIR Technology

Non-Dispersive Infrared sensing for reliable, drift-resistant gas analysis

### Auto Compensation

Automatic temperature and barometric pressure compensation — no manual corrections required

### Multiple CO<sub>2</sub> Ranges

Selectable 0–30% and 0–100% measurement ranges for CO<sub>2</sub> blend applications

### MAP + Welding Ready

Designed for modified atmosphere packaging lines and welding gas management

### Optional CO Measurement

Carbon monoxide monitoring available as an optional add-on capability

### Fast, Stable Performance

Rapid sensor response with noise-free readings across variable environments

## Operating Instructions

Follow the steps below to install and commission your McDantim Carbon Dioxide Analyzer.

1

### Unpack and Inspect

Remove the analyzer from its shipping packaging. Inspect the enclosure, fittings, and display for any transit damage. Confirm all accessories — tubing, fittings, and power cable — are present before beginning installation.

2

### Mount the Enclosure

Install the analyzer in a location sheltered from direct sunlight, moisture, and excessive vibration (not intended for continual outdoor use). Mount securely using the integrated panel brackets if desired. Ensure adequate clearance around sample inlet and outlet connections.



3

### Connect Gas Sample Lines

Attach the sample gas inlet to the source using compatible tubing. Connect the exhaust outlet to an appropriate vent or safe discharge point. Verify all connections are leak-free before powering on.

4

### Apply Power

Connect the power cable to a compatible AC supply to power the analyzer. Allow a minimum 15-minute warm-up period before recording any measurements or a full 30 minutes before performing zero and span calibration.

5

### Begin Measurement

Introduce your process sample gas at 1 L/min and flush for at least 30 seconds before reading. Automatic temperature and barometric pressure compensation applies in real time. Monitor readings on the front panel display and schedule periodic recalibration per your site's quality protocol.

## Calibration Procedure

Factory calibration will be performed before the unit ships — no immediate calibration required. The following procedure applies when recalibration is needed.

1

### Measurement Range

The analyzer will be delivered in the desired CO<sub>2</sub> measurement range and balance gas mix — 0–30% for standard CO<sub>2</sub>/Ar blends or 0–100% CO<sub>2</sub>/N<sub>2</sub> for full-scale applications. Please call for other ranges and gas blends.

2

### Perform Zero Calibration

Allow at least 30 minutes of warm-up before calibrating. Connect a Zero gas (Nitrogen or Argon depending on unit) at approximately 1 L/min to the gas inlet and flush for 30 seconds. Use the VALUE button on the front LCD to access the ZERO adjustment screen and set the reading to zero. Always perform Zero before Span.

3

### Perform Span Calibration

Connect a certified Span gas at a known CO<sub>2</sub> concentration (80–100% of full scale or at exact set point) at approximately 1 L/min and flush for 30 seconds. Access the SPAN adjust screen using the VALUE button on the front LCD and match the display to the certified bottle



concentration. No pressure or temperature correction is needed — the analyzer compensates automatically. Recalibration is recommended every 12 months minimum. Contact McDantim for calibration gas kits if needed.

#### IMPORTANT NOTES

- Factory calibration will be performed before unit ships — no immediate calibration required.
- Stay within the minimum and maximum pressures stated on the panel.
- Contact McDantim if a calibration gas kit is required.
- Always perform Zero calibration before Span calibration.
- Warm up the unit for at least 30 minutes before calibrating.
- Span gas concentration should be 80–100% of the instrument's full scale range, with an accuracy of  $\pm 2\%$  or better, or at the exact measurement point for greatest accuracy. The accuracy of the calibration will depend on the accuracy of the Span gas composition used.
- Maintain a gas flow rate of approximately 1 L/min. Do not restrict the exhaust outlet.
- Never use silicone rubber tubing for gas inlet lines — use nylon, PVC, PU, PE, or neoprene. Inlet tubing should not exceed 6 feet.
- Optional CO measurement requires separate enabling — contact McDantim for details.

## Contact Us

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