

BRASCH

DUAL BEAM INFRARED CARBON DIOXIDE DETECTOR (Office or Duct Mounting)



Model BGS-CD-STD

The BRASCH carbon dioxide (CO₂) detector, model BGS-CD-STD, is applicable to any situation in which the amount of CO₂ is used to indicate the breathing quality of the surrounding air. The dual-beam infrared absorption sensor is self-calibrating and provides exceptional accuracy, sensitivity, and reduced drift. The detector displays the parts per million (PPM) of CO₂ in the air and controls the opening and closing of a set of relay contacts that can be used to actuate fans to bring in fresh air in order to reduce the CO₂ level. In this manner, fresh air may be introduced in a sufficient volume to maintain a healthy breathing environment while keeping energy costs to a minimum. An optional duct mounting kit can be used to mount the unit directly to the cold air return duct system. Up to 20 of these units can be connected to the Brasch universal control panel (Model GDCP) for multi-point applications.

Key Features

- Microprocessor Controlled
- Factory Calibrated
- Low Voltage Wiring
- Easy to Read Display
- High Impact Attractive Enclosure
- Small Size
- Easy Front Panel Programming
- Protected Sensor
- Power Loss Fail-Safe
- Nine Preset Settings

Signal Output

- 4-20 ma Current Loop
- 0-10 VDC Output

Flexibility

- Selectable CO₂ Setpoint
- Selectable Relay Action (NO or NC)
- System Return Air Duct Mounting Option
- Compatible with Brasch Universal Control Panel

Typical Installations

- Office Buildings
- Warehouses
- Schools
- Postal Facilities
- Theaters
- Vegetation Growing Facilities
- Hospitals
- Casinos
- Dry Ice Facilities

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Ratings

Input Voltage

18-30 VAC RMS, 50/60 Hz.
18-42 VDC, polarity protected
1.75 VA max. avg. power
2.75 VA peak power

Ambient Temperature Rating

Storage

-40° to 70°C (-40° to 158°F)

Operating

0° to 50°C (32° to 122°F)

Humidity

0 to 95%, non-condensing

Enclosure

High impact, molded plastic with detachable front panel switch cover

Outputs

Signal

4-20 ma current loop, (<500 ohms)
0-10 VDC, (>100 ohms)

Relay

Normally open or normally closed
2A rating, adjustable setpoint

Digital

RS232 interface through RJ45
8 pin phone jack

Size

3 1/4" W x 5 1/2" L x 1 1/2" D

Agency Certification

FCC Part 15, Class B/CE/CA

Mounting

This unit is to be mounted indoors in a dry location at a height of 5 to 7 feet above floor level. This location will allow the sensing of carbon dioxide at an approximate breathing height and the display can be easily seen. If the unit is duct mounted, the detector should be mounted on or near the cold air return duct.

Unit Operation

The BRASCH carbon dioxide detector encompasses state of the art microprocessor design to meet the growing demand for a reliable indoor air quality monitor. The CO₂ concentration range is adjustable from 0 to 10000 PPM. The concentration at which the relay actuates is variable up to 10000 PPM. The unit can operate without the need for re-calibration for up to five years. When the CO₂ concentration exceeds the preset level,

the detector actuates a set of relay contacts. These contacts can be used to control an exhaust fan, remote alarm, or fresh air damper. The relay contacts can be connected as either normally open or normally closed. This detector has the capability of interfacing with energy management and direct digital control systems. Standard outputs can be configured as a 4 to 20 ma current loop or a 0 to 10 VDC output.

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