

Carbon Dioxide - Infrared Sensor Stand-Alone Gas Detector

The Carbon Dioxide detectors shall be as provided or supplied by Brasch Manufacturing Company, Inc. with specifications and input / output ratings as scheduled.

General:

1. The detector shall conform to FCC PART 15, Class B/CE/CA.
2. The enclosure shall be constructed of heavy gauge molded plastic with removable front switch cover. The cover shall protect the front panel switches and shall require a special tool to open it. The sensor module shall be protected from damage inside the enclosure and the cover shall contain openings to allow proper sensing.
3. The detector shall contain an infrared absorption sensor that can sense in either a flow through or diffusion configuration.
4. The detector shall be provided with a mounting plate for attachment to the mounting location. The plate shall include a provision for all field-wiring connections.
5. The detector shall be protected against static discharge and excessive electrical noise.
6. The detector shall have a liquid crystal display (LCD) that will continually display the current carbon dioxide (CO₂) level, in parts per million (ppm) and a green "power" LED.

Input Ratings:

7. The detector shall be capable of operating from a low voltage power supply with an input of 18-30 VAC RMS, 50/60 Hz. or 18-42 VDC. Power input shall be 1.75 VA average and 2.75 VA peak.

Switches and Controls:

8. The detector shall provide a 4–20 ma DC or 0–10 VDC signal in direct relationship to the carbon dioxide (CO₂) gas concentration. The signal type can be selected at time of order or changed in the field. This signal shall be compatible with building and energy management systems and/or Brasch Manufacturing, Multi-Sensor Control Panels.
9. An output relay providing a set of contacts for remote fans or alarms shall be provided. This relay shall provide either a normally open or normally closed configuration. This relay shall be adjustable in the field for actuation between the range of 900 to 9999 ppm CO₂.
10. Switches and software shall be provided for field selection of one of nine preset programs and one user customized program. Variables such as measurement range, output voltage or current, and relay trigger point shall be selected using these programs.
11. The detector shall include a software algorithm to automatically correct for zero drift over time. This zero drift algorithm shall be turned on or off from the front panel switches.
12. The detector shall include a software algorithm to automatically correct the altitude at which the detector is operating. This altitude correction algorithm shall be selected using the front panel switches.

Bulletin S-709