

GMP251 Carbon Dioxide Probe for %-Level Measurements



GMP251 Probe (top), GMP251 Probe with Indigo300 Transmitter (bottom)

Features/Benefits:

- Uses CARBOCAP® technology to offer exceptional stability
- Measurement range of 0 ... 20% CO₂ with accuracy up to ± 0.1 %CO₂
- Operating temperature range of -40 ... +60 °C (-40 ... +140 °F)
- Supports analog and digital outputs, or can be paired with all Vaisala Indigo transmitters for additional features
- Heated sensor head to prevent condensation
- Active temperature compensation measurement, also compensates for pressure, O₂, and humidity
- IP65 rated enclosure
- Available accessories: Flow-through adapter with gas ports, probe mounting flange, probe mounting clips, calibration adapter, spray shield, flat ribbon cable (designed for incubator/chamber installation)
- Compatible with Vaisala's [Insight PC Software](#) through USB connection. Ability to be field calibrated
- Traceable calibration certificate included

Summary:

Carbon dioxide probe shall incorporate a CARBOCAP® NDIR sensor. Infrared (IR) light source must be used in place of a traditional incandescent light bulb to extend lifetime of sensor. Accuracy (including repeatability and non-linearity) at 25 °C (77 °F) and 1013 hPa at 5 %CO₂ shall be ± 0.1 % CO₂. In the ranges of 0 ... 8 %CO₂ and 8 ... 20 %CO₂, accuracy must be ± 0.2 %CO₂ and ± 0.4 % CO₂, respectively. Operating humidity range shall be from 0 ... 100 %RH, non-condensing; sensor head shall have option to be heated to prevent condensation. Operating temperature range is -40 ... 60 °C (-40 ... 140 °F). Long term stability shall be ± 0.3 %CO₂/year between 0 ... 8 %CO₂, ± 0.5 % CO₂/year between 8 ... 12 %CO₂, and ± 1 %CO₂/year in the range of 12 ... 20 %CO₂. The probe shall be resistant to dust and most chemicals, such as as H₂O₂ (up to 2000 ppm, non-condensing). Flow-through adapter accessory with gas ports available to enable tubing for easy and flexible remote measurement with a separate pump; option for multiplexer to be added for sampling gas from several locations. Analog outputs shall be scaled 0 ... 5/10 V or 0/4 ... 20 mA and correspond to the selected output scaling; digital outputs shall be Modbus® RTU or Vaisala Industrial protocol over RS-485. Operating voltage shall be 12 ... 30 VDC for digital or voltage outputs, or 20 ... 30 VDC with current outputs in use. Power consumption is typically 0.4 W and no greater than 0.5 W. Traceable calibration certificate included.