

GMW90 Series Carbon Dioxide, Temperature, and Humidity Transmitter for Demand Controlled Ventilation Applications

Features/Benefits

- Superior stability with advanced proprietary CARBOCAP® technology
- Accurate measurements due to low self-heating of microglow light source
- Measures: carbon dioxide (0 ... 5,000 ppm), temperature (-5 ... 55 °C), and humidity (0 ... 95 %RH). All parameters and ranges available are model dependent
- Features such as LED indication lights & metric display available on select models
- Analog (0/4 ... 20 mA, 0 ... 5/10 V) outputs or Modbus® RTU support over RS-485 (model dependent)
- Excellent long-term stability, even in buildings with 24/7 occupancy
- Housing rated to IP30 standards
- Optional decorative cover for discrete, aesthetic installations
- Field calibration using replaceable modules (including certificates) or CO₂ reference gas with service port for serial configuration
- 3-point traceable calibration certificate included from factory



Summary:

Carbon dioxide, temperature, and humidity wall mount transmitter shall incorporate a silicon based CARBOCAP® NDIR sensor. Measurement ranges must be 0 ... 5,000ppm CO₂, 0 to 95 %RH, and -5 ... +55 °C (+32 ... +122 °F). CO₂ accuracy from +20 ... +30 °C (+68 ... +86 °F) is ± (30 ppm + 2 % of reading). Total CO₂ accuracy at room temperature applications must be ± 75 ppm at 600 and 1,000 ppm CO₂ including 5 years drift. Temperature sensor to be digital with accuracy of ± 0.5 °C (± 0.9 °F) in the range of +20 ... +30 °C (+68 ... +86 °F) and ± 0.6 °C (± 1.08 °F) in the ranges of +10 ... +20 °C (+50 ... +68 °F) and +30 ... +40 °C (+86 ... +104 °F). Relative humidity sensor shall be a thin-film polymer, capacitive HUMICAP® 180R sensor with accuracy in the temperature range of +10 ... +40 °C (+50 ... +104 °F) to be ± 2.5 %RH from 0 ... 60 %RH, ± 3.0 %RH from 60 ... 80 %RH, and ± 4.0 %RH from 80 ... 95 %RH. Transmitter to be powered by 18 ... 35 VDC or 24 VAC. Analog output transmitters shall produce default linear output signals of 0 ... 5/10 V or 0/4 ... 20 mA corresponding to 0 ... 2,000 ppm CO₂, 0 ... 100 %RH, and -5 ... +55 °C (+23 ... +131 °F) for temperature. Must be capable of calibration check in place using certified gases, a portable meter, or by having field exchangeable calibrated modules. Shall be available with decorative cover for discrete, aesthetic installations. Transmitter shall come fully calibrated with a traceable certificate.

Available models are listed below:

Vaisala Model: GMW93 (CO₂ + T, voltage outputs. GMW93D includes display)

Vaisala Model: GMW94 (CO₂ + T, current outputs. GMW94D includes display)

Vaisala Model: GMW93R (CO₂ + T + RH%, voltage outputs. GMW93RD includes display. GMW93RA includes display in CO₂ indicator LEDs)

Vaisala Model: GMW94R (CO₂ + T + RH%, current outputs. GMW94RD includes display)

Vaisala Model: GMW95 (CO₂ + T, Modbus® RTU output. GMW95D includes display)

Vaisala Model: GMW95R (CO₂ + T + RH%, Modbus® RTU output. GMW95RD includes display)

Vaisala Model: GMW90 (CO₂ + T, analog or Modbus® RTU outputs, configurable model)

Vaisala Model: GMW90R (CO₂ + T + RH%, analog or Modbus® RTU outputs, configurable model)