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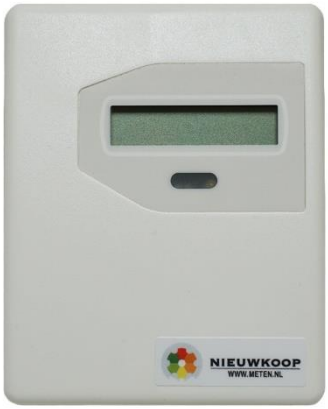
# LEAFLET




## GT3000

$CO_2$ TRANSMITTER, 0-2000 PPM




TO MEASURE = TO KNOW

## CARBON DIOXIDE TRANSMITTER

| STANDARD SPECIFICATION* | |
|---|---|
| Measured gas | Carbon dioxide (CO2) |
| Operating Principle | Non-dispersive infrared (NDIR) |
| Measurement range | 0—2000ppm* |
| OUT1 | 0—10V for 0—2000ppm<br>±2% of reading ±20mV |
| OUT2 | 2—10V (or 4—20mA)<br>for 0—2000ppm<br>±2% of reading ±20mV |
| Accuracy[1] | ±30ppm ±3% of reading |
| Dimensions: | (H x W x D) |
| Disp | 100 x 80 x 28mm |
| Slim | 106 x 67 x 26mm |
| II Disp | 130 x 85 x 30mm |
| Duct Disp, Ind Disp | 142 x 84 x 46mm |
| Life Expectancy | >15years |
| Operation temp. range | 0—50°C |
| Operation humidity range | 0—95%RH (non-condensing) |
| Power supply | 24VAC/DC |
| Power consumption | <1W average |
| Communication | UART |

* Available in different carbon dioxide measurement ranges and different housings.
[1]Accuracy is specified over operating temperature range at normal pressure 101.3kPa. Specification is referenced to certified calibration mixtures. Uncertainty of calibration gas mixtures (±1%) is added to the specified accuracy for absolute measurements.

A simple, low cost, state-of-the-art, infrared and maintenance free carbon dioxide transmitter for installation in the climate zone or in the ventilation duct.

Helps you save money by decreasing your energy consumption while creating a healthier indoor climate!

Measures the carbon dioxide concentration in the ambient air up to 2000 ppm and transforms the data into an analogue output.

### APPLICATIONS

An extremely cost-optimised sensor solution. By controlling the ventilation based on actual demand, it helps you decreasing the energy consumption and having a healthy indoor climate in both residential and commercial buildings. Also available to other normal applications or environments.

### KEY BENEFITS

- Maintenance-free
- Available in different carbon dioxide measurement ranges and different housings
- Internal automatic self-diagnostics
- Cost-optimised for connection to DDC

## Carbon dioxide transmitter Technical Specification

**General Performance:**

Operating Temperature Range.....0–50°C
Storage Temperature Range.....-40–70°C (display model Disp: -20–50°C)
Operating Humidity Range .....0–95%RH (non-condensing)
Operating Environment .....residential, commercial and industrial spaces[1]
Warm-up Time .....1min. (@ full specs 15 min.)
Sensor Life Expectancy.....>15years
Maintenance Interval.....no maintenance required[2]
Self-Diagnostics .....complete function-check, LCD error indication (display model Disp)
Display (Disp).....4 Digits, 7 segments LCD with ppm indicator

**Electrical:**

Power Input.....24VAC/VDC ±20%, 50Hz (half-wave rectifier input)
Power Consumption.....<1W average
Connection screw terminal A.....4 x 1.5mm2 for power input (G+, G0) and voltage outputs (OUT1, OUT2)
Connection screw terminal B.....2 x 1.5mm2 for passive resistive output (Y, M) for option -TR
Model IP50.....34cm 3-wire pigtail. Please note that OUT2 is not made available.

**CO2 Measurement:**

Sensing Method .....EQC (Ethernal Quality Coating) technology with Automatic Baseline Correction (ABC) and passive gas diffusion (no moving parts)
Diffusion Time ($T_{1/e}$).....<3min.
Accuracy[2].....EQC ±30ppm ±3% of reading
Annual Zero Drift[2].....<±10ppm
Pressure Dependence.....+1.6% reading per kPa
Measurement Range.....0–2000ppm

**Outputs:**

Output Signal Terminal $CO_2$ [3]

OUT1 Linear Conversion Range .....0–10VDC for 0–2000ppm
OUT2 Linear Conversion Range .....2–10VDC, or 4–20mA for 0–2000ppm
D/A Resolution.....10 bits, 10mV

Voltage Outputs:

D/A Conversion Accuracy .....±2% of reading ±20mV
D/A Resolution.....10mV
Electrical Characteristics .....ROUT <100Ω, RLOAD >5kΩ

Current Loop Output:

D/A Conversion Accuracy .....±2% of reading ±0.3mA
D/A Resolution.....0.02mA
Electrical Characteristics .....RLOAD <500Ω

Resistive Terminals[4]

Thermistor Outputs .....temperature measurement resistor terminal output with signal Return connected to ground terminal (option TR)

Available in different carbon dioxide measurement ranges and different housings

| Art. No. | Product | Additional features |
|---|---|---|
| 050-8-0002 | | No display |
| 050-8-0005 | Disp | Display |
| 050-8-0026 | TR | No display, terminal for resistive temperature probe |
| 050-8-0004 | Duct | No display |
| 050-8-0009 | Duct Disp | Display |
| 050-8-0047 | Duct | No display, OUT1= 0–5V |
| 050-8-0032 | Ind | No display |
| 050-8-0033 | Ind Disp | Display |
| 050-8-0003 | Slim | No Display, protection class IP50 |
| 050-8-0045 | Slim | OUT1 = 0–5V |
| 050-8-0014 | II | No display |
| 050-8-0012 | II Disp | Display |

Available in different carbon dioxide measurement ranges and different housings

Note 1: The $SO_2$ enriched environments are excluded.

Note 2: In normal IAQ applications (@ NTP) accuracy is defined after minimum 3 ABC periods of continuous operation.
Accuracy is specified over operating temperature range at normal pressure 101.3kPa.
Specification is referenced to certified calibration mixtures. Uncertainty of calibration gas mixtures (±1%) is to be added to the specified accuracy for absolute measurements.

Note 3: The specifications are valid for the output load connected to ground G0. Other outputs and measurement ranges are available per request.

Note 4: Resistive probe is to be mounted by the user. Can be factory pre-mounted upon request.

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