



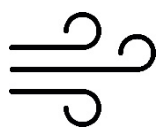
**NIEUWKOOP**

# LEAFLET



## GT3000

CO<sub>2</sub> TRANSMITTER, 0-2000 PPM



TO MEASURE  TO KNOW



## CARBON DIOXIDE TRANSMITTER

### STANDARD SPECIFICATION\*

Measured gas	Carbon dioxide (CO <sub>2</sub> )
Operating Principle	Non-dispersive infrared (NDIR)
Measurement range	0–2000ppm*
OUT1	0–10V for 0–2000ppm ±2% of reading ±20mV
OUT2	2–10V (or 4–20mA) for 0–2000ppm ±2% of reading ±20mV
Accuracy <sup>1</sup>	±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.

<sup>1</sup>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 <sup>1</sup>
Warm-up Time .....	1min. (@ full specs 15 min.)
Sensor Life Expectancy.....	>15years
Maintenance Interval.....	no maintenance required <sup>2</sup>
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 1.5mm <sup>2</sup> for power input (G+, G0) and voltage outputs (OUT1, OUT2)
Connection screw terminal B.....	2 x 1.5mm <sup>2</sup> for passive resistive output (Y, M) for option -TR
Model IP50.....	34cm 3-wire pigtail. Please note that OUT2 is not made available.

### CO<sub>2</sub> Measurement:

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

### Outputs:

#### Output Signal Terminal CO<sub>2</sub>

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<sup>4</sup>

Thermistor Outputs .....	temperature measurement resistor terminal output with signal return connected to ground terminal (option TR)
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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<sub>2</sub> 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 ( $\pm 1\%$ ) 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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