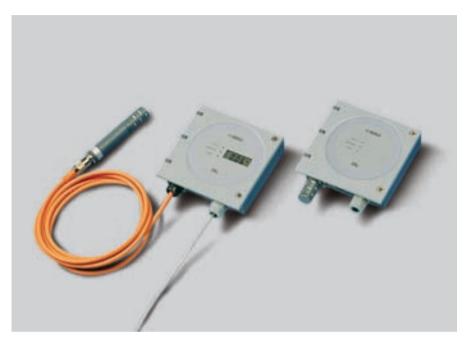
VAISALA www.vaisala.com

# **GMT220 Series Carbon Dioxide Transmitters for Industrial Applications**



The GMT220 transmitters withstand harsh and humid environments.

### Features/Benefits

- Incorporates Vaisala CARBOCAP® - the siliconbased NDIR sensor
- IP65 protected against dust and spray water
- Several measurement ranges
- Easy installation
- Standard analog outputs and two configurable relays available

#### Applications include:

- Horticulture and fruit storage
- Greenhouses and mushroom farming
- Safety alarming and leakage monitoring
- Demand controlled ventilation in harsh environments

The Vaisala CARBOCAP® Carbon Dioxide Transmitter Series GMT220 is designed to measure carbon dioxide in harsh and humid environments. The housing is dust- and waterproof to IP65 standards.

The GMT220 series transmitters incorporate the advanced Vaisala CARBOCAP® Sensor. The patented sensor has unique reference measurement capabilities. Its critical parts are made of silicon; this gives the sensor outstanding stability over both time and temperature. By lengthening the time between calibration intervals, the user saves both time and money.

### Interchangeable probes

The user has a choice of measurement ranges up to 20% of CO<sub>2</sub>. The GMT221 is for higher

concentrations of CO<sub>2</sub> and the GMT222 for lower concentrations of CO<sub>2</sub>. The GMT220 probes are interchangeable. They can be removed and reattached or replaced at any time – without the need for calibration and adjustment. The probes can be attached directly to the transmitter body or, when used with a cable, installed remotely into hard-to-reach places or areas with dangerously high levels of CO<sub>2</sub>. The interchangeability of the GMT220 transmitter's probes truly facilitates

transmitter's probes truly facilitates field maintenance.

The end user can carry out field maintenance without any additional

maintenance without any additional equipment or heavy and expensive calibration gas bottles by simply replacing a probe.

Probes that have been replaced can be sent to Vaisala for recalibration.

## **Technical data**

### Performance

Measurement Ranges		
GMT221	0 2 %	
for high concentrations	0 3 %	
	0 5 %	
	0 10 %	
	0 20 %	
GMT222	0 2000 ppm	
for low concentrations	03000 ppm	
	05000 ppm	
	0 7000 ppm	
	0 10 000 ppm	
Accuracy (including repe	atability, non-linearity and	
calibration uncertainty) at 25 °C and 1013 hPa		
GMT221	$\pm (1.5 \% \text{ of range} + 2 \% \text{ of reading})$	
(applies for concentrations above 2 % of full scale)		
GMT222	$\pm (1.5 \% \text{ of range} + 2 \% \text{ of reading})$	
Temperature dependence	,typical -0.3 % of reading / °C	
Pressure dependence, typ	ical +0.15 % of reading/hPa	
Long-term stability	<±5 %FS/2 years	
Response time (63 %)		
GMT221	20 seconds	
GMT222	30 seconds	
Warm-up time	30 seconds, 15 minute full specifications	
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Inputs and outputs

Outputs	0 20 or 4 20 mA
	and 0 10 V
Resolution of analog outputs	12 bits
Recommended external load:	
current output	max.400 Ohm
voltage output	min.1 kOhm
Two pre-or user-defined relay	
outputs	
Relay contacts	max. 30VAC/60VDC, 0.5A
Connections	screw teminals, 0.5 1.5 mm <sup>2</sup>
Operating voltage	nominal 24 VAC/DC
Power consumption	<4 W

### **Operating environment**

Operating temperature	-20+60 °C (-4+140 °F)
with display	0+50 °C (+32+122 °F)
Storage temperature	-30+70 °C (-22+158 °F)
Humidity	0 100 %RH, non-condensing
Electromagnetic compatibility	EN61326-1, Generic Environment

### **Mechanics**

Housing material	
transmitter body	ABS plastic
probe	PC plastic
Housing classification	IP65
Weight:	
GMT221	max. 280 g
GMT222	max.300 g
Probe cable length	2 m and 10 m (optional)

### **Accessories**

Accessories	
Spare probe	GMP221, GMP222
(use the order form to define m	easurement range etc.)
Clips (2 pcs) for attaching the probe	25245GM
Mounting flange for the probe	GM45156
Probe cables	
2 m	25665GMSP
10 m	210848GMSP
Calibrator for interchangeable probes	GMK220
Wall Assembly Plate	GM45160
In-soil adapter for probe	211921GM
Serial COM adapter	19040GM
Calibration adapter for probe	26150GM

