

# GMA311

Carbon dioxide monitor



- Permanent self-check
- State-of-the-art microprocessor technology
- Infrared sensor
- Sensor lifetime 5 years +
- Safe and economic

# GMA311 - Carbon dioxide monitor

## The best solution for CO<sub>2</sub> monitoring from the specialists in gas detection

The carbon dioxide monitor GMA311 indicates a gas hazard immediately and reliably. The built-in alarm LED and loud horn provide a warning before entering the room. The external visual alarm GMA311 EQ also gives a warning wherever you want it, e.g. at the stairway or at the bar. The GMA311 offers state-of-the-art sensor and microprocessor technology from a compact unit. The sensor and the electronics, horn and lights are integrated in one enclosure, thus saving installation cost. The robust casing is splash-water proof (IP54), so splash-water cannot enter and damage the monitor. Thermostat control and temperature compensation of the sensor ensure reliable measurements and safety even in case of sudden temperature changes.

The infrared (NDIR) sensor has a considerably longer lifetime than an electrochemical CO<sub>2</sub> sensor. The GMA311 is low maintenance, robust and reliable. Installation of the GMA311 is very simple, a 230V mains plug is supplied.

## Infrared principle

Carbon dioxide (CO<sub>2</sub>) absorbs light in the infrared range of the spectral. The NDIR technology of GfG's sensor detects the carbon dioxide concentration precisely and reliably. The infrared light emitted by a lamp passes through the gas sample. Carbon dioxide absorbs the light in a narrow spectral range.

The remaining light is measured at the detector. The difference between emitted and detected light is proportional to the gas concentration. Water vapour and other gases, which may be present in the sensor chamber, do not affect the light absorption in this spectral range.

## Safe detection results, even with temperature changes

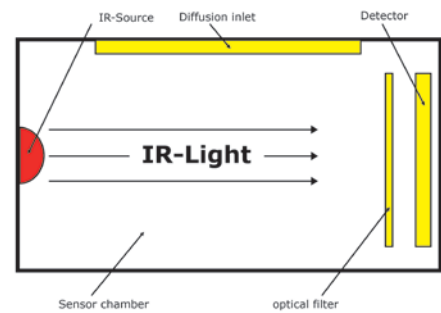
Precise optical measurement ensures best accuracy and repeatability. The IR principle is as distinct as a fingerprint in criminology.

This means that only carbon dioxide is detected, thus eliminating false alarms from interfering gases. GfG products use electronics with voltage stabilisation and temperature compensation. This

results in stable measurement values even with considerable temperature variations.

## Robust technology for long lifetime

The GMA311 has no moving parts which could be subject to wear and tear. This ensures a long lifetime and reduced service requirements. Permanent self-check of functional capability provides additional safety. Sensor and electronics are protected by a robust enclosure (IP54).



## GMA311

**Gas:**  
Carbon dioxide (CO<sub>2</sub>)

**Detection range:**  
0 .. 5 %-Vol.

**Detection principle:**  
Non dispersive infrared absorption  
Thermostat-controlled » no effect from temperature variations  
No condensation of humidity » no false measurement values

**Gas supply:**  
Diffusion

**Expected sensor life:**  
> 5 years

**Humidity:**  
0 .. 99 % r.h.

**Pressure:**  
700 .. 1300 hPa

**Ambient temperature:**  
-10°C .. +45°C

**Casing protection:**  
IP54

**Alarm threshold:**  
0.5 and 1.0 %-Vol. CO<sub>2</sub>

**Alarm:**  
Built-in horn, 95dB(A) at 30 cm  
LED indication  
Connection for external alarm and reset

**Display:**  
Red LED, flashing: pre-alarm  
Red LED, permanent: main alarm  
Green LED: operation  
Yellow LED: fault

**Voltage supply:**  
230 V 50 Hz, incl. 2 m cable and plug

**Dimensions:**  
100 x 100 x 58 mm (WxHxD)

**Weight:**  
approx. 200 g

**Accessories:**  
External visual alarm and reset, impact protection



GfG Gas Detection UK Ltd

Unit 8 | Griggs Business Centre  
West Street | Coggeshall  
CO6 1NT | Essex | UK

Tel.: +44 (0) 1376 561463  
Fax: +44 (0) 1376 561704

[www.gfggasdetection.co.uk](http://www.gfggasdetection.co.uk)  
[sales@gfggas.co.uk](mailto:sales@gfggas.co.uk)