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# GMM111 Carbon Dioxide Module

## Features/Benefits

- Compact $CO_2$ module with flow-through aspiration
- Ideal for light industrial OEM applications
- Incorporates Vaisala CARBOCAP®, the silicon based NDIR sensor with unique internal referencing
- Advanced single-beam, dual wavelength measurement with no moving parts
- Measurement range options 0 ...5 %, 0 ... 10 % and 0 ... 20 % $CO_2$
- Excellent long-term stability

*The Vaisala CARBOCAP® Carbon Dioxide Module GMM111 is a $CO_2$ measurement module with flow-through aspiration.*

## Performance

| | |
|---|---|
| $CO_2$ measurement range | 0 ... 5 %, 0 ... 10 % or 0 ... 20 % |
| Accuracy (including repeatability, non-linearity and calibration uncertainty) | ±(1.5% of range + 3 % of reading) |
| Long-term stability | ±1 % $CO_2$/2 years |
| Response time $T_{90}$ | 1 min at 0.5 l/min flow |
| Flow rate dependence | |
| < 1 l/min flow | no effect |
| 1 ... 10 l/min flow | 4 % of reading/ l/min |
| Temperature dependence, typical | -0.3 % of reading/°C |
| Pressure dependence, typical | +0.15 % of reading/hPa |
| Warm-up time | 1 min, 10 min for full specifications |
| Product lifetime | > 10 years |

## Operating environment

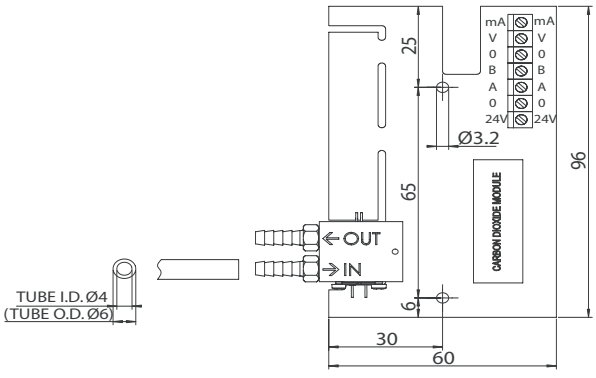
| | |
|---|---|
| Temperature | +5 ... +55 °C |
| Humidity | 0 ... 99 % RH non-condensing |
| Pressure | 700 ... 1200 hPa |
| Gas flow | |
| operating range | < 10 l/min |
| recommended range | 0.2 ... 0.8 l/min |
| Electromagnetic compatibility | EN61326-1, Generic Environment |

## Inputs and outputs

| | |
|---|---|
| Outputs | 4 ... 20 mA, 0 ... 10 V RS485, 2-wire, non-isolated |
| Operating voltage | 24 V (±20 %) AC/DC |
| Power consumption | <2 W |

## Dimensions

Dimensions in mm

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