

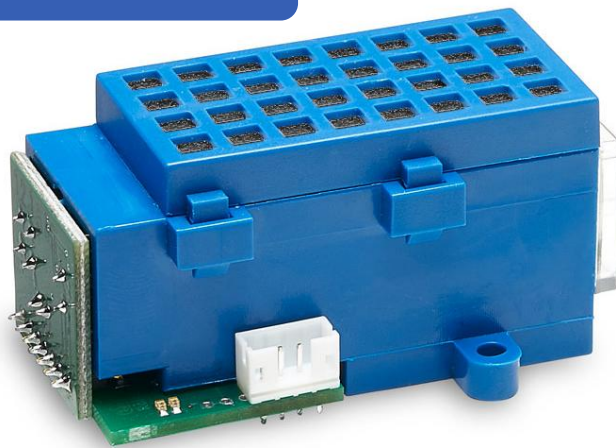
MADE IN GERMANY

BASIC^{EVO}

Infrared Gas Sensor
Ethylene C₂H₄ 2000 ppm
smartGAS item number: B3-032205

Product features:

- Non Dispersive Infra-Red (NDIR)
- Dual beam / Reference channel
- Low Power Consumption
- Small Size
- Low Maintenance



The BASIC^{EVO} NDIR gas sensor is used for ambient air monitoring using dual wavelength technology. It is designed for leak detection in small concentration ranges (ppm range) for wall mount detectors and room air monitoring devices. BASIC^{EVO} diffusion sensors advantages are a long lifetime, low detection limits, very slight drift, a large temperature range, a fast response time and low maintenance costs. The BASIC^{EVO} series is therefore the optimal solution for all applications in which an ambient air sensor should be reliable and at the same time simple in its handling.

Options

- Modulbox
- Ready to use transmitter version
- Connect Interface
- Calibration software
- Data Logger software
- Calibration and test gases
- USB adapter

Support

- Design-In support
- Customization:
 - Software
 - Protocols
 - Measuring ranges
 - Background gas optimizing
 - Interfaces

General features

Release date: 28 Oct 2025

Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0 ... 2000 ppm Full Scale (FS)
Gas supply:	by diffusion (atmospheric pressure)
Mounting dimensions:	62 mm x 37 mm x 30 mm (L x W x H) Other Dimensions : see Technical Drawing
Warm-up time:	< 2 minutes (start up time) < 11 minutes (fade in finished) < 30 minutes (full specification)

Measuring response*

Response time (t ₉₀):	appr. 30 s
Digital resolution:	1 ppm
Detection limit (3 σ):	≤ 1.5 % [FS]
Repeatability:	≤ ± 2 % [FS]
Linearity error (straight line deviation):	≤ ± 2 % [FS]
Long term stability (zero):	≤ ± 5 % [FS] over 12 month period
Long term stability (span):	≤ ± 5 % [FS] over 12 month period

Influence of T, P, flow rate, other*

Temp. dependence (zero):	≤ ± 0.5 % [FS] per °C
Temp. dependence (span):	≤ ± 0.5 % [FS] per °C
Pressure dependence:	+ 0.156 % of actual reading / hPa

Electrical parameters

Supply voltage	3.3V .. 6.0V DC
Supply current (peak):	< 400mA @ 3.3V, < 240mA @ 5.0V
Inrush current:	< 600mA
Average power consumption:	< 800mW
Digital output signal:	Modbus ASCII / RTU via UART, autobaud, autoframe
Calibration:	zero and span by software

Climatic conditions

Operating temperature:	-20 ... + 40 °C
Storage temperature:	-20 ... + 60 °C
Air pressure:	800 ... 1150 hPa
Ambient humidity:	0 ... 95 % relative humidity (not condensing)

* Typical values related to 1013 hPa, T_a = 22 °C, flow = 0.7 l / min for dry (not condensing) and clean sample gas.
Stated values exclude calibration gas tolerance.

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For more information, please visit www.smartgas.eu or contact us at sales@smartgas.eu

Please consult smartGAS sales for parts specified with other temperature and measurement ranges. At first initiation and depending on application and ambient conditions recalibration is recommended. Recurring cycles of recalibration are recommended.