

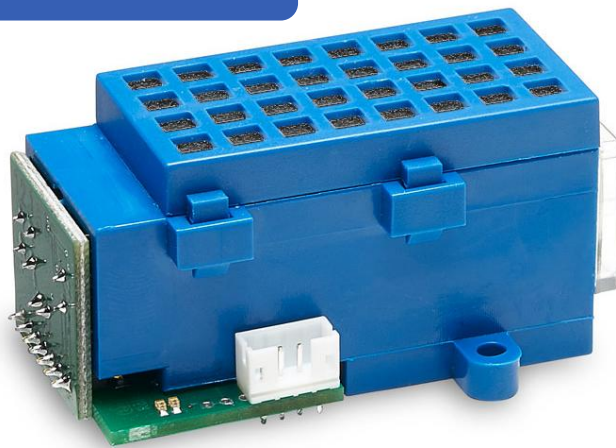
MADE IN GERMANY

BASIC^{EVO}

Infrared gas Sensor
Propan C₃H₈
1,7 Vol.-%
smartGAS item number: B3-052176-00000

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: 22.Nov 2024

Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0 ... 1.7 Vol.-% 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:	0.001 Vol.-%
Detection limit (3 σ):	≤ 1 % [FS]
Repeatability:	≤ ± 1 % [FS]
Linearity error (straight line deviation):	≤ ± 2 % [FS]
Long term stability (zero):	≤ ± 2% [FS] over 12 month period
Long term stability (span):	≤ ± 2.5% [FS] over 12 month period

Influence of T, P, flow rate, other*

Temp. dependence (zero):	≤ ± 0.2 % [FS] per °C
Temp. dependence (span):	≤ ± 2 % [FS] per °C
Pressure dependence:	+ 0.2 % 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.

All rights reserved. Any logos and/or product names are trademarks of smartGAS. The reproduction, transfer, distribution or storage of information contained in this brochure in any form without the prior written consent of smartGAS is strictly prohibited. All specifications – technical included – are subject to change without notice. Depending on the application, the target gas and the measurement range the technical data may differ. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale.

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.