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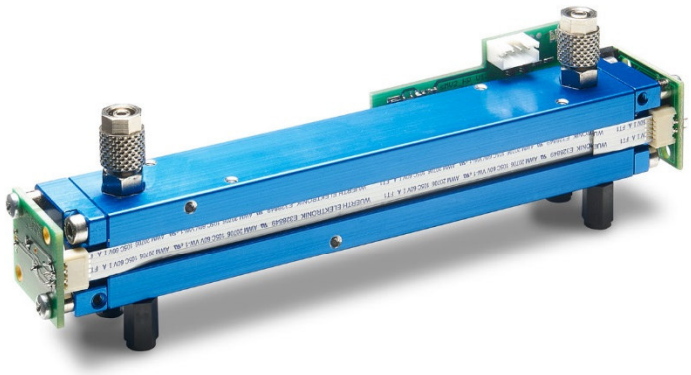
blue performance

FLOW EVO

Infrared gas sensor C_2H_4 // Ethylene // 2000 ppm
smartGAS item number: F3-032205-05000



- **Pre calibrated**
- **Compact design**
- **3/5 mm gas line connectors**
- **3.3 – 6 V DC supply voltage**
- **Modbus ASCII or RTU**
- **Status indication by LED**
- **Low drift**

Non dispersive infrared (NDIR) gas sensor for process control and gas analysing using dual wavelength technology. Designed to be used in food storage and process control in a wide range of gas measurement systems.

The FLOW^{EVO} gas sensor can easily be integrated into OEM systems, where long term stability, repeatability and reliable performance are required. It can be utilised for gas detection in warehouses as well as for continuous gas monitoring in controlled atmosphere (CA) storage facilities and controlled environmental chambers for fruit ripening and degreening. Our C_2H_4 sensors are also suitable for various applications in the field of process control and gas analysis where precise measurements, low signal drift and high selectivity are crucial for subsequent processing.

Modbus ASCII or RTU data communication offer a variety of options to connect the FLOW^{EVO} gas sensor to a controller.

APPLICATION EXAMPLES

FRUIT RIPENING
DEGREENING
PROCESS CONTROL
ANALYSING

FLOW EVO

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General features	
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0 .. 2000 ppm Full Scale (FS)
Gas supply:	by flow (nearly atmospheric pressure)
Flow rate:	0.1 .. 1.0 l / min
Dimensions:	153 mm x 30 mm x 36 mm (L x W x H)
Warm-up time:	< 2 minutes (start up time)
	< 30 minutes (full specification)
Measuring response*	
Response time (t_{90}):	Appr. 12 s @ 0.7 l / min
Digital resolution (@ zero):	1 ppm
Detection limit (3 σ):	≤ 20 ppm
Repeatability:	≤ ± 20 ppm
Linearity error (straight line deviation):	≤ ± 30 ppm
Long term stability (span):	≤ ± 50 ppm over 240 h period
Long term stability (zero):	≤ ± 50 ppm over 240 h period
Influence of T, P, flow rate, other*	
Temp. dependence (zero):	≤ ± 3 ppm per °C
Temp. dependence (span):	≤ ± 6 ppm per °C
Pressure dependence:	+ 0.100 % / hPa
Flow rate dependence:	≤ ± 6 ppm per 0.1 l / min
Cross sensitivity (zero) other gases:	≤ ± 40 ppm @ 10 Vol.-% CO2 in dry air
Electrical inputs and outputs	
Supply voltage:	3.3 V .. 6.0 V DC
Supply current (peak):	< 400 mA @ 3.3 V, < 240 mA @ 5.0 V
Inrush current:	< 600 mA
Average power consumption:	< 800 mW
Digital output signal:	Modbus ASCII / RTU via UART, autobaud, autoframe
Calibration:	zero and span by SW
Climatic conditions	
Operating temperature:	0 .. + 50 °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, Ta=22 °C, flow = 0.7 l / min for dry (not condensing) and clean sample gas. Stated values exclude calibration gas tolerance.

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.