smartGAS
MIKROSENSORIK

INNOVATIVE GAS SENSORS

blue performance

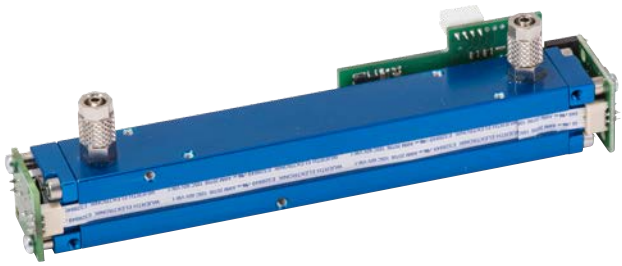
smartMODUL FLOW^{EVO}

C_2H_4 // ETHYLENE // 2000 ppm

Infrared gas sensor C_2H_4 2000 ppm // F3-030205-05000





- 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 C2H4 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.

C_2H_4 // ETHYLENE SENSOR

FRUIT RIPENING

DEGREENING

PROCESS CONTROL

ANALYZING

More gases and measuring ranges on request

Sensors similar to the illustration

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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:	156 mm x 30 mm x 37 mm (L x W x H)
Warm-up time:	< 2 minutes (start up time)
	< 30 minutes (full specification)
Measuring response	related to Pa = 1013 hPa, Ta = 25 °C, flow = 0.7 l /min
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 1000 h period
Long term stability (zero):	≤ ± 50 ppm over 1000 h period
Influence of T, P, flow rate, other	related to Pa = 1013 hPa, Ta = 25 °C, flow = 0.7 l /min
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% CO2 in dry air
Electrical inputs and outputs	
Supply voltage:	3.3V .. 6.0V DC
Supply current (peak):	< 400mA @ 3.3V, < 240mA @ 5.0V
Inrush current:	< 450mA
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)

Please consult smartGAS Marketing 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.

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