SMART MODUL

INNOVATIVE GAS SENSORS

PREMIUM4^{EVO} for ripening // technical Data

Infrared gas sensor for flow with analogue and digital interfaces

- Pre calibrated
- Compact design
- 3/5 mm gas line connectors
- 12 - 24 V DC supply voltage
- Modbus ASCII or RTU
- (0)4-20mA or 0-2V /5V /10V
- Namur NE43 conform (option)
- Status indication by LED

Infrared gas sensor for process control and gas analysing using dual wavelength technology. Designed for different applications in a wide range of gas measurement systems. The PREMIUM4 EVO sensor is easy to be integrated into OEM systems, where long term stability, repeatability and reliable performance are required.
A wide supply voltage range, Modbus ASCII or RTU data communication, current and voltage interfaces (optional with Namur NE43) offer a variety of options to connect the PREMIUM4 EVO sensor.
Atmospheric pressure compensation, on board status LED, temperature compensation, low drift, ready to use calibration, a wide range of different gases and measurement ranges - all that makes the smartGAS PREMIUM4 EVO sensor the best choice also for your application and helps to save time and costs with design in.

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P4-030205-00000 ethylene C2H4 2.000 ppm

General features	
Model type:	P4-030205-00000
Measurement principle:	Non Dispersive InfraRed (NDIR)
Gas:	ethylene, C_2H_4
Measurement range:	0 - 2.000 ppm
Gas supply:	Flow, with pump
Gas line connector:	3 mm internal, 5 mm outer diameter
Flow Rate:	0.2 to 0.8 l / min (const)
Dimensions Sensor:	153 mm x 30 mm x 43 mm (L x H X W)
Dimensions Interface:	72 mm x 55 mm x 23 mm (L x H X W)
Warm-up time Start up:	≤ 2 minutes
Warm-up time full spec:	≤ 30 minutes
measuring response (1)	
Response time (t_{90}): (1)	appr. 20 s (@ 0.5 l/min)
Digital resolution:	1 ppm
Detection limit (3 δ):	≤ 20 ppm (typically)
Repeatebility:	≤ ± 20 ppm
Linearity error: (2)	≤ ± 30 ppm
Influencing Variable (4)	
Temp. Dependence (zero):	≤ ± 0.1 % Full scale per °C
Temp. Dependence (span):	≤ ± 0.2 % Full scale per °C
Pressure Dependence (zero):	---
Pressure compensation:	Atmospheric
Electrical data	
Supply Voltage:	12-24 V DC
Power Consumption:	< 1 Watt
Digital output:	RS485 MODBUS ASCII / RTU
Unit intervall:	2 400 - 115 200 Baud
Analogue output:	0 (4) - 20 mA, Namur NE43 optional 0 - 2 V / 5 V / 10V
Calibration:	digital out: zero and span by software analogue out: Zero and span per jumper
optical display:	Status-, function and calibrationmods with LED
Climatic conditions	
Operating temperature:	-10 °C ... + 40 ° C
Storage Temperature:	-20 °C ... + 60 ° C
Air pressure:	800 to 1 200 hPa
Humidity:	0 % to 95 % rel. Humidity (not condensing)
Optional Accessories:	Micropump Filter

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At first initiation and depending on application and ambient conditions recalibration is recommended.

Please consult smartGAS Sales for parts specified with other temperature and measurement ranges

1) Relating to sample gas pressure 1013 hPa absolute, 0.5 l/ min gas flow and 25°C ambient and gas temperature

2) Stated linearity error excludes calibration gas tolerence of 2%

3) For dry and clean test gas at 25°C and 1013 hPa absolute - depending on the operation and ambient conditions values may differ

4) Relating to calibration conditions (see final check)