PAS

Photoacoustic gas Sensor
Ethylene C₂H₄
200 ppm
smartGAS item number: PA-032204-00000

- Self-controlled or partially control via a connected PLC
- Compact Design
- Zero-calibration by external command or automatic
- Measured values continuously accessible via UART data stream
- Status indicated by LED
- Automatic compensation of the water vapor cross-sensitivity
- Designed for 24/7 operation

Application examples
- Gas analysis
- Biogas application
- Environmental monitoring
- Process control
- Emission monitoring

Available equipment
- Gas cooler
- Particle filter
- Gas pump
- Mounting equipment
- Galvanically isolated output

Available design in support
- Mechanical Installation
- Data communication
- Gas pre-treatment
**General features**

- **Measurement principle:** Photoacoustic
- **Measurement range:** 1 ... 200 ppm Full Scale (FS)
- **Gas supply:** by flow (nearly atmospheric pressure)
- **Flow rate:** 0.1 ... 2.0 l / min
- **Mounting dimensions:** 127 mm x 96.5 mm x 200 mm (L x W x H)
- **Warm-up time:** ≤ 10 minutes

**Measuring response**

- **Digital resolution:** 0.1 ppm
- **Detection limit (3 σ):** ≤ 1 ppm
- **Repeatability:** ≤ 1% of measured value plus ± 0.5 ppm
- **Long term stability (zero):** ≤ ± 1.0 ppm over 24 h period
- **Long term stability (span):** ≤ 1% of value ± 2 ppm over 24 h period

**Electrical parameters**

- **Power Supply:** 12 Volts DC ± 1%
- **Power consumption:** 10 minute heat up approx. 45 Watts / Operation approx. 15 Watts
- **Communication:** TTL-UART and digital I/O’s
- **Calibration:** Zero-calibration by external command or automatic

**Climatic conditions**

- **Operating temperature:** +10°C – +40 °C
- **Storage temperature:** +10°C – +40 °C
- **Air pressure:** 800 – 1150 hPa
- **Ambient humidity:** 0 – 95% relative humidity (not condensing); Housing has to be purged with dry air or nitrogen.

*Typical values related to 1013 hPa, Ta = 0 °C, flow = 0.7 l / min for dry (not condensing) and clean sample gas.
Stated values exclude calibration gas tolerance.
Adjustable only via smartGAS Calibration-Tool SW.

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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.