

PAS SENSE 1512

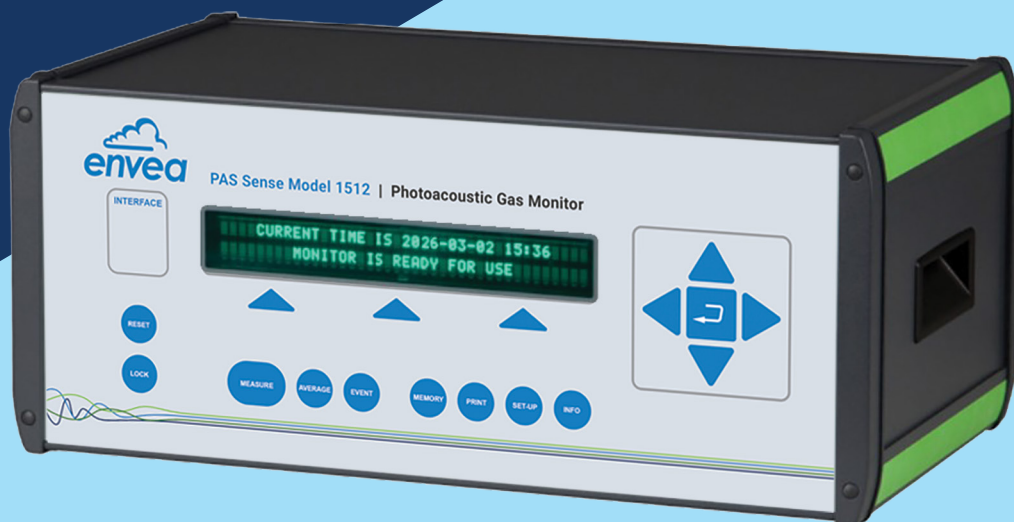
PHOTOACOUSTIC INFRARED SPECTROSCOPY
(PAS) ANALYZERS



PAS Sense photoacoustic spectroscopy analyzer is capable of detecting from 1 to 5 gas parameters, including H₂O, that absorb in the mid-IR spectrum.

FEATURES AND BENEFITS

- Measures up to five gases plus water vapor
- Linear response over a wide dynamic range
- Stable and reliable, ensuring a maximum of only 2 calibrations per year
- Easy calibration, configuration, and viewing/analyzing of data via PC
- Compensates for temperature and pressure fluctuations, water vapor interference from other known gases
- Extremely low volume flushing possible
- Virtually no warm up time necessary
- Remote control capability via TCP/IP network interface protocol
- Expandable up to 16 locations with Multipoint Sampler & Datalogger software
- Bench mount or easily transportable for remote mounting in the field.



ECE 49-06
Compliant

PAS SENSE 1512

PHOTOACOUSTIC INFRARED SPECTROSCOPY (PAS) ANALYZERS



TECHNICAL SPECIFICATIONS

PAS Sense 1512 analyzer

Zero Drift Typically	± Detection limit per 3 months
Influence of temperature	+/- 10% of detection limit/°C
Influence of pressure	+/- 0.5% of detection limit/mbar
Repeatability	1% of measured value
Range Drift	+/- 2.5% of measured value per 3 months
Influence of temperature	+/- 0.3% of measured value/°C -0.01% of measured value/mbar
Influence of pressure	60%. (Concentration of 100x detection limit used in determining these specs.) Measured at 1013 mbar, and RH: 60% Measured at 20 °C and RH: 60% Detection limit is @5 s S.I.T.
Interference	Automatically compensates for temp and pressure fluctuations in its analysis cell and can compensate for water vapor in air sample. If optical filter is installed to measure a known interferent, the 1512 can cross compensate for the interferent.
Acoustic Sensitivity	Not influenced by external sound
Vibration Sensitivity	Strong vibrations at 20 Hz can affect detection limit
Internal data storage capacity	Total space available in Display Memory to store data is 131072 measurement cycles. If a measurement cycle takes 15 sec, then display Memory space will be sufficient for a 22-day monitoring task.
Dimensions (HxWxD)	7.68 x 17.44 x 9.60 in. (195 x 443 x 244 mm)
Weight	24.3 lbs (11 kg)
Communication	Monitor uses 3 interfaces: USB, Ethernet, and RS232, for data exchange and remote control of the 1512. Software communicates using USB, Ethernet, and RS232.

PAS SENSE 1512 PHOTOACOUSTIC ANALYZER

The PAS Sense 1512 Photoacoustic Gas Monitor is a highly accurate, reliable, and stable quantitative gas monitoring system. Its measurement system, based on the photoacoustic infrared detection method, is capable of measuring almost any gas that absorbs infrared light.

Gas selectivity is achieved through the use of optical filters. By installing up to five filters, the 1512 can measure the concentration of up to five component gases and water vapor in any air sample. The detection limit is gas-dependent, but is typically in the ppb region. Accuracy of these measurements is ensured by the 1512's ability to compensate for temperature and pressure fluctuations, water vapor interference, and interference from other gases known to be present. Reliability of measurement results can be ensured by regular self tests. This measurement system requires no consumables and very little regular maintenance. For most applications, recalibration is only necessary one to two times a year.

MEASURED GASES

Capable of detecting from 1 to 5 gas parameters, including H₂Ov, that absorb in the mid-IR Spectrum.

EtO / SF₆ & CO₂ / NH₃, Ethanol, N₂O, CO₂, CO & H₂O

MEASURING RANGES

Detection Limit Gas dependent, but typically in the ppb region. Using the Gas Detection Limits chart, the detection limit for a selected sample integration time (S.I.T.) can be calculated.

Dynamic Range Typically 4 orders of magnitude (i.e. 10,000 times the detection limit at 5 S.I.T.). Using two span concentrations it can be expanded to 5 orders of magnitude.