

Product Flyer

EISense

Published in May 2025 - technical changes reserved



V&F
Analyse- und
Messtechnik
GmbH

Process Mass Spectrometer EISense

Technology under change

Constant optimization and increase in efficiency of production- and combustion processes are the goals of engineers. To achieve these process requirements, it's necessary to inspect the efficiency or quality of a product constantly. Our series EISense offers an extremely selective and rapid analysis for a multitude of process – gas components and doesn't ask for much maintenance at the same time. Our new designed software allows intuitive handling and easy adaptation to any application. Various interfaces permit easy integration of the analyzer into existent process control systems.

Independent from gas matrix and pressure Changes

For problem-free linking to highly varied conditions of extraction in process analysis, a primary pressure control, independent from gas type and matrix, is included in the analyser, which works from 0.5 to 5 bars. An ultra-fast gas analysis, as well as insensibility towards high water content is achieved by the use of a new, heated capillary inlet. The pre-vacuum, already from the sampling point on, reduces the possibility of condensation and contamination and even enables rapid gas transport. With the exchangeable pre-filtration, even finest particles can be removed from the process gas. Therefore, the analyzer is characterized by high long-term stability and low drifting behaviour.

High operating comfort

Using the highly approved browser technology Microsoft.net with its unique advantages superior to former analysis- and operation software packages, this equipment offers a maximum of user-friendliness. Integrated functions for correlations, matrix correction and calibration allow a selective analysis with high measuring accuracy and reproducibility. Assessment of measuring data is already possible while viewing online.

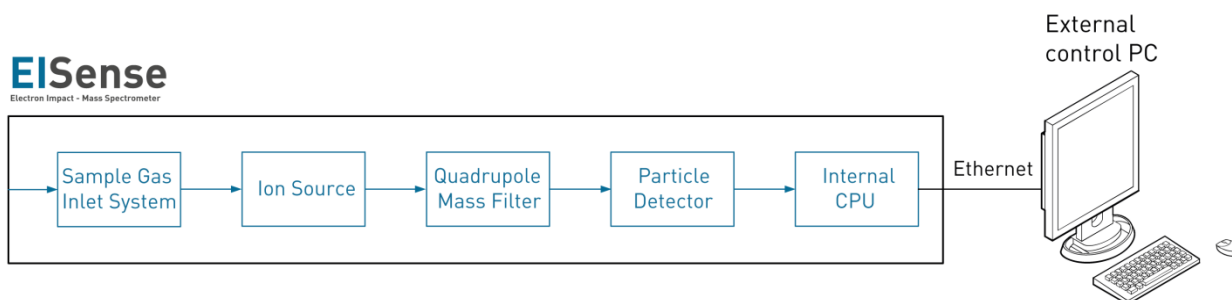


Typical Applications

- Process monitoring of pyrolysis plants
- Development of combustion engines (diesel and gasoline)
- Alternative fuels
- Catalysts development
- Hydrogen measurements

Function principle

The ElSense is a classic quadrupole mass spectrometer with electron impact ionisation (EI-MS). This analyzer is the entry level model into online multi component process- and trace gas analysis from V&F. The ionisation takes place at 70eV and the mass range is from 1 to 100 amu with a resolution of 1 amu.



The selectivity of the analyzer is amplified by an integrated interference calculation. The self-explanatory matrix correction in the software is easy to handle and allows quick adaptation to a multitude of applications. In addition, this modern device is high in detection ability and robust.

Features, benefits

- high temporal resolution < 10 msec per component
- automatic pressure regulation ranging from 0.75 to 2 bar(a)
- integrated matrix – correction – calculation and auto-calibration
- selective
- robust
- high in sensitivity
- temperature controlled gas inlet
- without sample preparation (wet, ambient air)
- operator interface with 4-button control
- automatic parameter monitoring

Specification, technical data

Technical Data	EI-MS	Technical Data	EI-MS
Mass range	1 – 100 amu	Ambient temperature	20°C - 35°C
Resolution	< 1 amu	Humidity max.	80 % (non-condensing)
Analysis time	>= 32 msec/amu	Gas consumption ²	30 – 3000 ml/min
Measuring range ¹	0 – 100 Vol%	Gas inlet temperature	50°C – 190°C adjustable
Response time ¹	T90 < 150 msec	Gas inlet pressure ²	0.75 – 2 bar(a)
Lower detection limit ¹	> 0.01Vol%	Power	230V/50Hz or 115V/60Hz 800 W
Concentration drift	< ± 5% over 24 h	Dimension (WxHxD)	534 x 743 x 639 mm
Precision	< ± 3%	Weight	61 kg
Accuracy	< ± 3%		

¹ depending on the measured components, system setup and the settings

² depending on the type of gas inlet system



V&F Analyse- und Messtechnik GmbH
Andreas-Hofer-Str. 15 · A-6067 Absam
Tel +43 (5223) 43105 · Fax +43 (5223) 45170
office@vandf.com · www.vandf.com