

Ion Mobility Spectrometer (IMS)

- usable stationary and mobile -

Real-time analysis of substances based on tiny gas traces

Application fields:

- Environmental protection, especially emission control and monitoring
- Air control for workplace safety
- Process and production control (e.g. chemistry and semiconductor industries)
- Detection of narcotics and drugs
- Detection of toxic substances and explosives
- Detection of chemical warfare agents
- Analysis in food industry
- Medical diagnostics

Features:

- high sensitivity, minimised cross sensitivity
- fast response
- continuous monitoring
- portable as well as stationary devices available
- compact and rugged design
- low power consumption
- minimal effort for service and maintenance
- integrated analysis software
- interfaces for data transmission and evaluation in and control by higher-level monitoring and process control systems
- remote control and service via the Internet



APPLICATIONS:

- ENVIRONMENTAL PROTECTION
- MONITORING CHEMISTRY
- CRBN & CIVIL DEFENCE
- FIRE BRIGADES
- CUSTOMS
- SECURITY
- MEDICAL DIAGNOSTIC

Technical Specifications: Ion Mobility Spectrometer

Ionisation	Tritium (Beta-emitter), Activity < 100 MBq (under the exemption limit)
Detection limit	1 ppb 1 ppm range
Generation of measurement signal	an IMS average spectrum of 16 individual spectra in the interval of 1 second
Resolution of the spectrum	$R \geq 50$ (drift time/peak width with half amplitude)
Sampling procedure	self-priming or sample loop (suction pump)
Inlet part	direct inlet, protectable with dust filter 0.45 μ m
Measuring temperature	inlet system and detector heated freely programmable <ul style="list-style-type: none"> - standard version up to 100 °C - special version up to 180 °C
Data input of the spectrum	16-bit A/D-converter
Internal control	all IMS components are controlled by a 32-bit ARM7 processor
Integrated micro-computer for graphical control and spectrum analysis while stand-alone operation	MIO-2261N-96A1E (1,66 GHz, 2 GB RAM)
Data storage medium	SSD 128 GB
Color Display	AVO 7 “ TFT LCD 800 x 480 16M color Touch screen
Interfaces for data communication	Ethernet, USB, MODBUS - optional: RS232, Current Loop 4-20 mA Digital IOs
Remote Control	via internet TeamViewer
Power supply:	- stationary type: extern or power supply <ul style="list-style-type: none"> - input: 90-264 V AC - output: 19 V DC / 7,9 A / 150 W
Power consumption	approx. 40 W without or 70 W with heating
Battery powered	Li-Ion accumulator: 14,2 -16,8 V DC, 7,6 Ah
Operation temperature	from 0 °C up to 45 °C (depending on IMS version)
Dimensions	- stationary: 440 x 320 x 140 mm - mobile: 360 x 320 x 160 mm
Weight (with battery)	approx. 8 kg

Selected fields of application

Agriculture	H ₂ S, NH ₃ , Pesticides, Ketosis marker ...
Chemical, Petrochemical, Refining	Aromatics, Phosgene, Alkanes, Cl ₂ , TDI...
Gases in Sewage Treatment Plants and Landfills	Siloxanes, PCB, PCP PAC, Aromatics, VC, DCE
Food industry, Beverage industry	Quality control, Aromatics
Oil and Gas exploration and production	Sulfur compounds, H ₂ S, Mercaptans ...
Laboratory	Identification and Monitoring harmful substances
Medicine	Medical diagnosis through analysis of breath air, body liquids, secrets, sweat
Power generation and distribution	NH ₃ , H ₂ S, SO ₂ , HF, PAC, PCB
Public security, Military, Police, Customs and Terrorism countermeasures	Air monitoring / Detection of dangerous substances, e.g. Explosives, Narcotics, CWA
Semiconductor industry	NH ₃ , Amines, Acid gases (HF, HCL, Cl ₂) ... Monitoring of solvent incineration plants (DMSO, PGME, PGMEA, DMF, NMP ...)
Fire Departments	fire warning systems, e.g. pyrolytic products
Tunnel, Garages monitoring	NO _x , SO ₂ , Mercaptans, Harmful substances
Police, Drug searches	Narcotics, Cannabis...
Waste disposal, Incineration, Recycling	Dioxin precursors, PCB, PCP, H ₂ S, NH ₃ , Amines, HC's, VOC ...

Are you looking for the detection of a certain substance?

Request the STEP substance database!

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