AR500 Series

Multi-Component Analysers for Ambient Air Quality Monitoring

The OPSIS AR500 Analyser is the central unit of an OPSIS ambient air quality monitoring system. It receives light from one or more light paths via a fibre optic cable and provides data for presentation through OPSIS software.

The analyser has a high-performance spectrometer. Here, received light is converted into digital signals and analysed by the built-in computer. The computer software includes the spectrographic 'fingerprints' of a number of user-specified compounds.

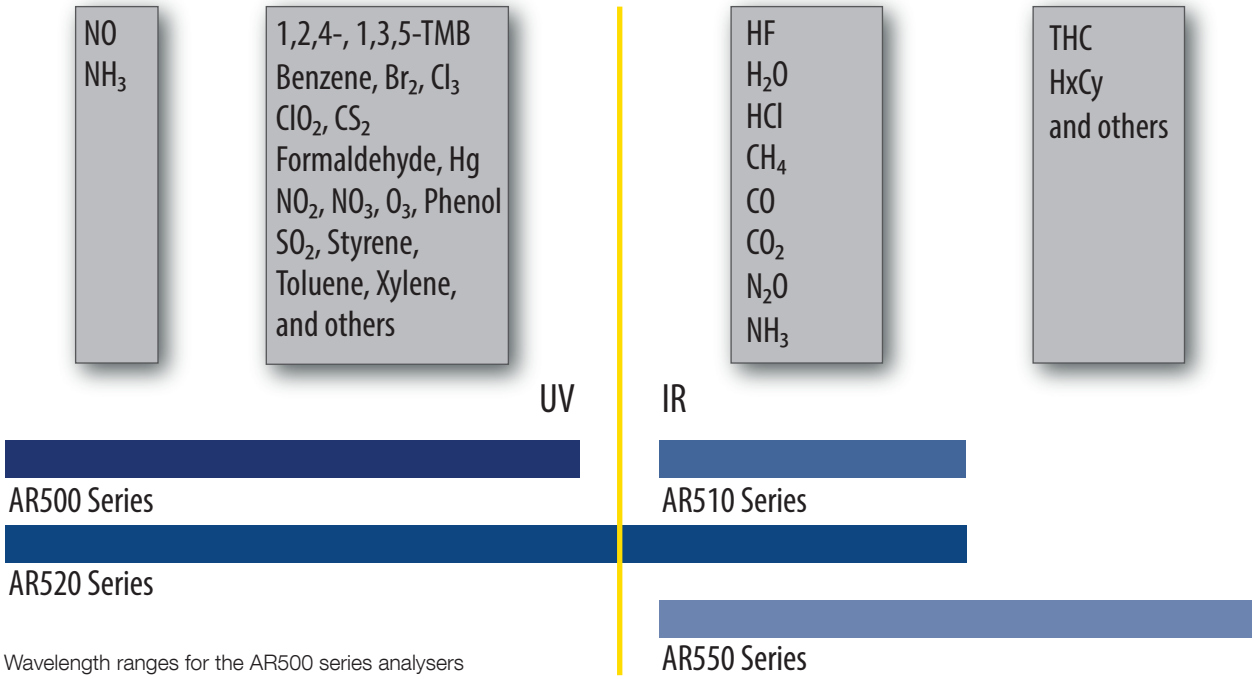
Using Beer Lambert's Law, it detects and measures these compounds through the depletions they cause in the spectrum of received light.

The system refines results by calculating margins of error for each value and by noting the proportion of transmitted light received by the analyser. This allows both data and system verification.

OPSIS is a fully modular system which may be updated or expanded at any time. An OPSIS analyser includes interfaces for a multiplexer (for multiple light paths) and for a data logger (when integrating external signals from e.g. meteorological sensors) as standard. Furthermore, it is prepared for the addition of automatic calibration equipment.

Communication ports are available for data transfer via modem, LAN or Internet, using optional communication devices.

Updating an OPSIS system to monitor additional gases often only involves a simple software upgrade.



Wavelength ranges for the AR500 series analysers

Technical Specifications AR500

Dimensions (L × W × H)	600 × 440 × 266 mm
Weight incl. case (approx.)	35 kg
Voltage supply	230 V (+6%, –10%) / 115 V (±10%) 50/60 Hz
Power consumption	110 W
Computer	Embedded PC with VGA screen
Flash memory	512 Mb
Serial output	RS 232C
Operating temperature	+5°C to +30°C (+41°F to +86°F)
Recommended operating temperature	+15°C to +25°C (+59°F to +77°F)
Degree of protection	IP 20

Standard – Separately Ordered

Gas calibrations (see application sheets)

Options

AR501 with one UV detector
AR502 with two UV detectors
AR503 with three UV detectors
AR510 with one IR detector
AR520 with one IR detector and one UV detector
AR550 with one IR detector
UV filter UF230 series
Temperature controlled cabinet
EnviMan software
Calibration equipment
WT256 Web transfer
Data loggers
IO256 Signal handling system
Ambient pressure and temperature sensors
Short-haul modems

Please contact your OPSIS supplier to discuss your particular system requirements, including the compounds you wish to monitor. Separate application and other product sheets are available. Specifications subject to change without notice.

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