

Aether



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hemera
analyzers

Gas Analyser

H₂S





Aether

high resolution spectroscopy UV Analyser

Powered by HEMERA

HYDROGEN SULFIDE



Hemera has developed a new generation of on-line H₂S gas monitoring solution with unique patented method in order to fit most applications.

Compare to other methods such electro-chemical, paper tape, infrared sensors or classic UV spectroscopy (frontal elution chromatography) the Aether analyzer uses UV spectroscopy by **FTLS*** gives high selectivity of measurement in any matrix.

FTSL*method has many advantages:

- Long term stability
- Maintenance cycle once a year
- Insensitive to interference
- Sensor without consumable
- NO separation by columns needed.
- Drift eliminate
- Very fast response time - up to 2sec





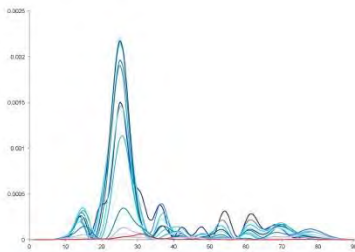
PROCESS APPLICATIONS

H₂S analyzer is design to reach required level for oil & gas Industry, detection limit as low as 0.1ppm for H₂S..

Depending on your application the measuring system can be heated up to 190°C

The enclosure in SS316 is for ATEX zone 2 or zone 1 available as option.

MULTI-COMPONENTS

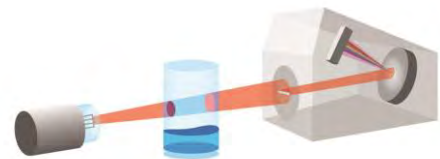


Aether's innovative measurement process offers the possibility to monitor additional components such as H₂S, COS, SO₂, Mercaptan, CS₂, Moisture... Simultaneous.

FTLS METHODE and how it works:

Measuring system:

The measuring principle FTLS is based on light absorption according to Beer--Lambert's law, using Ultra Violet (UV) energy source, a measuring cell and a spectrograph. The energy source is a xenon lamp that emits UV to infra-red energy. The spectrograph is designed in such a way that it can retrieve the ultraviolet part of the energy source. This is the part we are interested in as this is where the measurements are done via UV absorption. We specific focus on the UV between 180 and 280 nm, a resolution is achieved of about 0.2 nm per pixel while running a compact spectrograph. The sensor achieves 512 pixels. Each transmission spectrum has therefore 512 points.



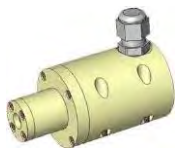


HIGH RESOLUTION SPECTROGRAPH



A new spectrograph was designed to obtain high resolution absorbance spectra in the ultraviolet range. Actually this is the most performant spectrograph in the market compare to similar models for the same application

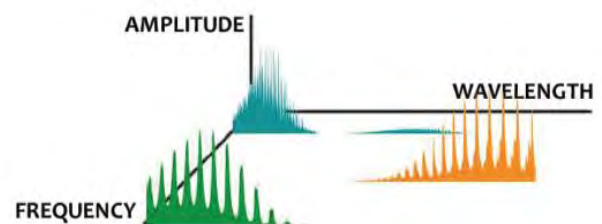
XENON LAMP



Long-lasting Xenon flash lamp eliminate the need for periodic lamp replacement (expected 5 years). New design of power supply lamp emits pulses which reduce power consumption compare to other models

MATHEMATICAL TREATMENT

Innovative mathematical treatment on the absorption spectra allows selective measurement through to Fourier Transform & Least square calculation.





SPECIFICATIONS

PERFORMANCE

Method	UV spectroscopy by FTLS
Range	0 – 1ppm 0 – 10%
Accuracy	+/- 1% of full scale
Repeatability	+/- 1% of full scale
Linearity	+/- 1% of full scale
Detection limit	0.1 ppm H ₂ S

SAMPLE

Temperature	up to 190°C
Flow	0.1 – 5 l/min
Pressure	0 – 0.5 barg
Connection	3.2 x 6.4mm

ENCLOSURE

Dimensions	400 x 300 x 200 mm (H x W x D)
Weight	12kg
Material	SS316 / NEMA 4X
Protection	IP65 / ATEX (optional)

POWER

Supply	90 to 264 VAC 50/60HZ
Consumption	100W

Output

Analog	4 – 20mA
Alarm	Failure relay
Interface	RS485 (MODBUS)

CERTIFICATIONS

CE	IEC61010-1 / IEC61326 Typical values, please contact IMAC for more detailed information
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ORDERING INFORMATION:

Application
Range
Process conditions
Wall mounting or free standing frame
Power supply

REPRESENTED BY: