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## ON LINE HYDROGENE SULPHIDES LIQUID ANALYSER NOVASULF™ HL400

# HL400 Series H<sub>2</sub>S in HC Liquids Analyser

- **Measurement specific to H<sub>2</sub>S**  
No interference from other components
- **Wide range capability**  
Measures between 0-2ppm H<sub>2</sub>S to 0-100% H<sub>2</sub>S
- **Low volume humidifier**  
Response times as low as 30 seconds
- **Single Optical Sensor**  
Eliminates temperature drift
- **Fibre optic link between housings**  
Reduces affects caused by ambient temperature swings
- **Up to 2 detection modules per controller**  
Minimises capital investment



### PRINCIPLE OF OPERATION

The measurement principle is based on a variation of HENRY's law: the weight of any gas dissolved in a definite volume of liquid is directly proportional to the partial pressure the gas exerts above the liquid at a constant temperature.

The Analyser consists of a stripping system coupled with an H<sub>2</sub>S Analyser NOVASULF™ HG SERIES.

The liquid sample enters an insulated, heated sample handling cabinet and then passes through a pressure regulator to maintain a constant pressure for the liquid sample sweep. The sample feeds through a final filter which protects the metering pump. A metering pump continuously injects measured quantities of sample and is mixed with flowing nitrogen, at a constant and measured flow-rate,. The blend then enters a vaporiser with an adjustable nozzle which sprays the blend into a glass chamber. This phenomenon causes the stripping of H<sub>2</sub>S into the nitrogen. The degassed liquid falls into a reservoir and then to the drain. At the same time, the nitrogen containing H<sub>2</sub>S in proportion to that in the original liquid, is piped directly to the NOVASULF™ HG SERIES H<sub>2</sub>S Analyser.



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## SPECIFICATIONS

### ANALYSER:

Measurement principle	Dissolved H <sub>2</sub> S in liquids is stripped out with a nitrogen carrier gas and measurement made using colorimetric techniques
Software	C++ Windows XPe based
Electronics	PC104, 512Mb compact flash for the operating system, application, customised parameters and calibration curves storage
Keypad	Accessible through flameproof box using <i>Touchsense</i> ™ technology
Measurement range	Between 0-2ppm H <sub>2</sub> S to 0-100% H <sub>2</sub> S in liquid
Repeatability	± 3% full scale
Output	1 x 4-20mA per module (Modbus optional – RS485)
Alarms	1 x measurement alarm, 1 x instrument failure alarm. Additional optional alarms available
Area classification	ATEX approved,  Ex d [ia] IIC T4
Ambient temperature limits	-2°C to +40°C, with ambient swings of 5°C maximum
Tape life	Up to 40 days depending on application.
Weather protection	IP66
Response time	Depends on application between 30 secs to 8 minutes

### UTILITIES

Power	85 / 264 VAC 50 / 60 Hz
Power rating	40 VA
Process sample	Max pressure 1.5 – 4.0 bar, flow rate 0.15 to 0.3 l/min , 40°C max temp
Nitrogen	Pressure 0.5 to 1 l/min

### INSTALLATION

Process connections	¼" NPT female vent (for sample in atmospheric vent)
Analyser Vent	To Atmospheric, no back pressure or vacuum allowed
Weight	50 Kg approx
Dimensions	800(w), 1700(h), 350(d) mm

### ORDERING INFORMATION:

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

### REPRESENTED BY: