

H₂S IN LIQUIDS PROCESS ANALYZER

Model 205 PermaStream | Crude Oil, Fuel Oil, Dirty/Clean Water, Drilling Fluid, Condensate, Diesel



Product Features

- Real-time & accurate measurement
- Measure H₂S in crude, water, diesel, etc.
- Specific to H₂S only, no false positives ever
- No field calibrations required
- No liquid sample conditioning required
- No sample filters required
- Only one tap-point needed for sample exit and return (when pitot probe is utilized)
- Fast response time
- Proven reliability
- Conformity to ASTM methods
- Set in-line at process pressure and flow

Applications

- Crude Oil (light/medium/heavy) • Dirty/clean Water • Diesel • Fuel Oil • Drilling Fluid • Condensate • Quality control
- Corrosion control • Transportation safety • Loading/unloading of trucks, rail cars, pipelines, etc. • Compliance

- No 'false positives'** The only detection method specific to H₂S only, proven by thousands of applications
- Ultra low-maintenance** Advanced Colorimetric-Rateometric Detector is guaranteed hassle-free for long term operation
- Dependable operation** No sample conditioning required; no filters, no pressure regulators, no pumps required
- No field calibrations** The analyzer does not require calibrations in the field even with unexpected process changes

Product Description

The effective procedure to measure H₂S in crude oil and other opaque liquids requires the representative stripping of the H₂S from the liquid into the gas phase for analysis by a gas H₂S analyzer or sensor. Traditionally, headspace stripping columns have been used for this purpose but have become infamous for being problematic, high maintenance, and requiring many moving parts that break down over time.

Analytical Systems has overcome the shortfalls of the headspace stripping column by developing a reliable alternative; the state-of-the-art PermaStream utilizing KECO Membrane Technology. The PermaStream efficiently and reliably separates the H₂S from the liquid sample for measurement in the gas phase by the H₂S analyzer which is specific only to H₂S and does not suffer from false positives. The PermaStream is a simple device that continuously provides an ultra-clean and dry sample to the H₂S sensor. This results in radically reduced maintenance when compared to the headspace stripping column.

Analytical Systems is established as the world-wide leader in H₂S in liquids analysis online due to the many benefits of PermaStream's exclusive technology. The 205 PermaStream is capable of measuring in ppb, ppm or even percent ranges and will never suffer from false-positives like other H₂S detection methods.

Typical Specifications

DISPLAY

- Alpha Numeric LCD
- 128 x 64 pixel
- Back-lit display

TEMPERATURE RANGES

- 1°C to 50°C (operating) without cooling/heating
- 0°C to 70°C (storage)

ANALOG

- 4-20mA Isolated

ANALYTICAL PERFORMANCE

- Resolution: 1 ppb
- Accuracy: ±2%
- Repeatability: ±1%
- Linearity: ±1%
- Drift: Nil
- Temp. Coefficient: 0.01% / °C
- Analysis time: 0.75 Second

DETECTION RANGES

- 0-1 ppm
- 0-10 ppm
- 0-50 ppm
- 0-100 ppm
- 0-500 ppm
- Percent ranges
- Customer specified (contact factory)

SAMPLING SYSTEM

- Carrier Air/Gas requirement: 15 psig constant and 150 ml/min flow rate
- Liquid requirement: Minimum 0.5 L/min flow and maximum 1,500 psig

WEIGHT

- ~175 lbs (analyzer only, no options)

DIMENSIONS

- 3 ft X 3 ft X 1.5 ft

UTILITIES/SETTINGS

- 110VAC or 220VAC
- 100 Watts normal, 700 Watts max
- Carrier Air/Gas: 180 ml/min (15 psig max)
- Sample flow: 0.5 L/min minimum
- Sample pressure: 1,500 psig max

AREA CLASSIFICATIONS

- Class 1 Division 1
- Class 1 Division 2
- Zone 1 or Zone 2

AVAILABLE OPTIONS

- Concentration relay alarms
- Diagnostic/fault relay alarms
- Low flow relay alarms
- RS-232/485 Modbus
- Data Logger for data download to PC
- Remote monitoring/control with PC
- Automatic calibration

TECHNOLOGIES

- PermaStream™(ASI Membrane Technology)
- Rateometric-Colorimetric Tape

Advantages

- No 'false positives'** The only detection method specific to H₂S only, proven by thousands of applications
- Ultra low-maintenance** Advanced Colorimetric-Rateometric Detector is guaranteed hassle-free for long term operation
- Dependable operation** ASI Membrane Technology eliminates liquid carry-over that plague **headspace stripping columns**
- No field calibrations** The analyzer does not require calibrations in the field despite any unexpected process changes

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