

## PRODUCT DATA SHEET

# 930 H<sub>2</sub>S in Sulfur Pit (Tank) Analyzer

Insuring safety through hydrogen sulfide (H<sub>2</sub>S) and sulfur dioxide (SO<sub>2</sub>) measurement

Produced liquid sulfur contains approximately 350 parts per million (ppm) of dissolved H<sub>2</sub>S and hydrogen polysulfides. Spontaneous degassing results in accumulation of these gases in the head space. If the sweep gas is interrupted, H<sub>2</sub>S can reach the lower explosive limit (LEL) (approximately 3.25%) creating a hazardous condition. In addition, a smoldering pyrophoric fire can be a source of ignition and monitoring SO<sub>2</sub> in the head space warns of this condition.

The 930 analyzer samples the vapor space gas using proven ultraviolet (UV) technology. The sampling system has a sulfur knock out at the probe to eliminate entry of excess sulfur vapor or liquid into the system. The sample is transported through an electrically traced sample line to the analyzer.

### Minimal baseline and span drift

The dual beam configuration, combined with the reference measurement, ensures low noise performance with minimal baseline and span drift. Measurements from ppm to percent level are possible.

### Simultaneous measurement

The 930 is a multi-component analyzer that is configured for simultaneous measurement of both H<sub>2</sub>S and SO<sub>2</sub>.



## KEY BENEFITS

- Measurements from ppm to percent level
- Output alarms for H<sub>2</sub>S LEL and SO<sub>2</sub> (smoldering fire)
- Common design with the 900 (air demand) and 910/920 (stack gas) analyzers
- Exceptional baseline stability and sensitivity
- Advanced Sulfur Removal (ASR) probe prevents sulfur plugging

## APPLICATIONS

- Sulfur recovery units
- Liquid sulfur storage
- De-gassing

## KEY MARKETS

- Refinery and gas processing based sulfur recovery units
- Sulfur de-gassing

## PERFORMANCE SPECIFICATIONS

<b>Methodology</b>	Multiple wavelength, high resolution, nondispersive UV
<b>Typical range</b>	0 to 4% H <sub>2</sub> S, 0 to 2% SO <sub>2</sub> (other ranges available on request)
<b>Accuracy</b>	±1% of full scale of standard ranges
<b>Repeatability</b>	Better than 0.5% full scale of standard ranges
<b>Linearity</b>	Better than 1% of reading
<b>Response time</b>	Typically less than 30s to T90 (excl. sample system)
<b>Sample transport</b>	Air aspiration
<b>Typical sample flow</b>	3 to 5 L/min (0.1 to 0.2 CFM)
<b>Temperature control</b>	Independent control of four zones (oven, sample line, probe, vent line)
<b>Ambient temperature</b>	5 to 50°C (41 to 122°F)
<b>Instrument air</b>	Minimum 413.6KPa (60 psig), 120 L/min (4.24 CFM), instrument quality air
<b>Power</b>	120 VAC ±10%, 47-63 Hz or 240 ±10%, 47-63 Hz; 600 W for analyzer only excluding sample and vent line and ASR probe
<b>Analog outputs</b>	4-20 mA self-powered (optional loop-powered), maximum of four
<b>Communications</b>	RS422 with Modbus protocol, RS485 optional and Ethernet optional Relays: (3) independent sets of SPDT relays for alarm conditions
<b>Physical dimensions (W x H x D)</b>	1553.6 x 1117.6 x 306 mm (61.17 x 44 x 12 in.)
<b>Weight</b>	Estimated minimum 160 kg (350 lbs)
<b>Approvals and certifications</b>	NEC/CEC Class I, Division 2, Groups C & D ATEX II 2 G Ex db eb pxb IIB T3 Gb IECEX Ex db eb pxb IIB T3 Gb GOST: ExpydIIIBT3 Complies with all relevant European Directives GOST Pattern Approval

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