

# Envent 330S and 331S

## H<sub>2</sub>S & Total Sulfur Analyzer

The Model 330S/331S H<sub>2</sub>S analyzer utilizes field proven tape-based measurement technology that provides a linear and interference-free output of H<sub>2</sub>S. An optional Total Sulfur measurement can be added to the analyzer. Certified for Class I, Division 1 Groups B, C and D (330S) and Class I, Division 2, Groups B, C and D (331S).

### Features

- Fast Response times Rapid Response Algorithm (RRA) ~ 20 seconds to alarm
- No interference from other components in the sample
- Low power consumption
- Extended tape life of 60 to 90 days
- Measures up to 5 times the calibrated range
- Quick Delivery
- Full field service & training available

### Application Flexibility

The model 330S/331S measures H<sub>2</sub>S and/or Total Sulfur in natural gas, petrochemical streams, condensate, water, or LPG. Common applications include:

- Sales Gas
- Plant Inlet
- Acid Gas
- Fuel Gas Monitoring
- Bio Gas
- Pipeline Monitoring & Blending
- H<sub>2</sub>S Scavenger Systems
- Wellhead Monitoring

### User Interface

I.C.E. (Integrated Configuration Environment) is a Windows based program that accompanies all Envent Analyzers for full configurability

- Field friendly interface via front display panel
- Easily configurable alarm processor and calculation processor
- 3 Mb event triggered archive storage
- Alarm/Event log
- Customizable serial RS-232 & RS-485 mapping
- Remote Display (optional)
- Communications including 4 – 20 mA outputs, alarm outputs, solenoid drivers, serial Modbus, and Modbus TCP/IP (optional)

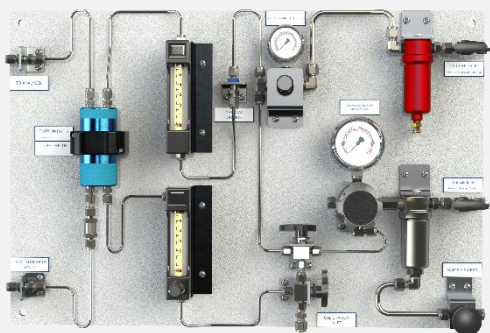


Envent Model 331S H<sub>2</sub>S Analyzer



Envent Model 330S with Standard Sample Conditioning and Total Sulfur Oven





Permeable Membrane Dilution System for Measuring High Range H<sub>2</sub>S and Total Sulfur Samples



Envent Model 330S Analyzer



331S H<sub>2</sub>S Analyzer with Standard Sampling System

## Specifications

### Analysis Method

Hydrogen Sulfide measured as per ASTM D-4084

### Power

12 – 24 VDC @ less than 3 watts or 100 – 240 VAC, 50/60 Hz  
Total Sulfur Option Current (Steady State) Maximum: 2.6 A @ 100 - 240VAC

### Electrical Classification

330S: Class I, Division 1 Groups B, C, D T3C (T4 Option available upon request)  
331S: Class I, Division 2 Groups B, C, D T3C (T4 Option available upon request)

### Ambient

0°C to 50°C (32°F to 122°F). Consult factory for other requirements

### Output Ranges

Standard Ranges: 0 – 10 ppm, 0 – 20 ppm, 0 – 100 ppm (other ranges available upon request)  
Concentration ranges above 0 – 400 ppm require a dilution system

### H<sub>2</sub>S:

|                 |  |
|-----------------|--|
| Accuracy        | Repeatability                            |
| < 1 ppm         | Consult Factory                          |
| 1 ppm – 200 ppm | +/- 1.5% F.S. (331S); +/- 2% F.S. (330S) |
| > 200 ppm       | +/- 2.0% F.S. [with dilution 331S]       |
|                 | +/- 2.5% F.S. [with dilution 330S]       |

### Accuracy / Repeatability

### TS:

|                 |  |
|-----------------|--|
| Accuracy        | Repeatability                            |
| < 1 ppm         | Consult Factory                          |
| 2 ppm – 400 ppm | +/- 2% F.S. (331S); +/- 2.5% F.S. (330S) |
| > 400 ppm       | +/- 2.5% F.S. [with dilution 331S]       |
|                 | +/- 3% F.S. [with dilution 330S]         |

### Inputs

Four digital inputs are individually configurable for pressure switches, temperature switches, or flow switches.

### Outputs

2 Analog Outputs  
4 Solenoid Drivers  
4 Serial Ports  
4 Relay Outputs  
1 Ethernet Port (Optional)

### Display

128 x 64 Graphic Display  
Menu is scrolled by internal button or external magnet

### Dimensions

|                         |                             |
|-------------------------|-----------------------------|
| 330S                    | 331S                        |
| 17.4"W x 32.7"H x 13.7" | 13"W x 15"H x 8"D           |
| (442W x 831H x 348D mm) | (330.2W x 381H x 203.2D mm) |

### Configuration Software

Windows based software for customer configuration, archive retrieval, and Modbus mapping.  
\* Product specifications subject to change without notice to improve reliability, function, design or otherwise

## Optional Equipment

### Ethernet Card

Expansion board to provide TCP Modbus via Ethernet

### Total Sulfur

Total sulfur furnace converts all sulfur compounds to H<sub>2</sub>S, which allows analyzer to measure Total Sulfur as per ASTM D4468

### Stream Switching

Maximum 2 streams, or H<sub>2</sub>S/TS 1 Stream

### Dilution

Above 10%, please contact Envent to discuss available options

### Liquid Sampling

Liquid sample system to measure H<sub>2</sub>S in Hydrocarbon liquids or water

### Custom Systems

Envent Can design custom integrated systems to meet application requirements

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