

MODEL

331 H₂S/Total Sulfur Analyzer

This uniquely rugged and simple design by Envent utilizes a lead acetate based detection system that provides a linear and interference-free output of H₂S or optional Total Sulfur concentration.

APPLICATIONS

An analyzer that measures H₂S and /or Total sulfur in natural gas, petrochemical streams, condensate, or LPG with optional integrated CO₂ bench

FEATURES

- Ranges from 0–50 ppb to 0-100%
- 1.5% accuracy, 1% repeatability (ppm H₂S)
- Modbus serial communications,
- Displays up to 5 times full scale
- Dual Isolated 4–20 mA outputs
- Less than 20-second response time to alarm
- Optional Total Sulfur and CO₂
- Interference-free Envent sensing tape
- 60–90 day tape (longest tape life in the market)
- Auto Zero each cycle

VALUE

The 331 measures H₂S in natural gas and other process gasses. The unit has dual 4–20 mA outputs, dual measurement alarms, plus trouble and fault alarm relays. The 331 displays H₂S concentration in user specified units (ppb, ppm, grams, %, mg/M³) and as well will auto-range to 5 times the lower calibrated range. Calibration is performed manually via the operator interface or automatically when connected to a calibration cylinder and optional auto calibration solenoid. The 331 is available with a number of sample systems and accessories to handle various applications such as high range H₂S, Total Sulfur or H₂S in liquids.

Sensor: Lead acetate technology is interference-free

This is why it is used by the majority of natural gas processors when accurate measurement is required. The linear output allows the user to perform a single-point calibration.

Longest Tape Life: Envent Tape is the strongest in the market, with the longest tape life by using a proprietary tape advance algorithm to make complete use of the 300-foot tape. The unit will accept up to a 350-foot roll.



Model 331, Div 2



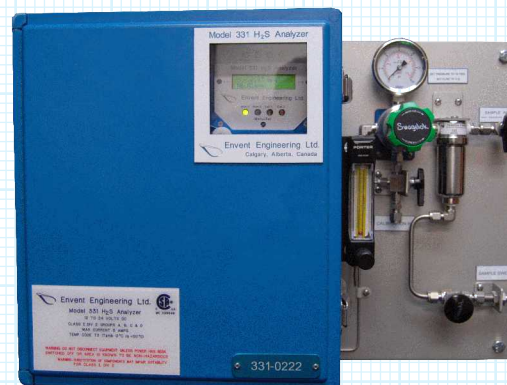
Model 331 door open

SPECIFICATIONS

Power	12–24 vdc @ less than 3 watts 100–240 VAC, 50/60Hz
Electrical Classification	Class 1, Div 2 Grps A, B, C, & D certified to CSA standards
Ambient	0-50 °C (std) consult factory for other requirements
Output Ranges	H2S 0–50 ppb to 0–100 ppm are standard. For higher concentrations, consult factory.
Response time	20-sec to alarm
Accuracy	1.5% full-scale (H2S); 3% (TS and Dilution)
Inputs	24 bit A/D Microprocessor-based sensor Low Tape Alarm option Remote calibrate, stream switch, or low pressure alarm
Outputs	Dual isolated 4–20 mA (loop powered) (Modbus) serial RS-232 & RS-485 (Ethernet available) Four 5 amp SPDT alarm relays (high reading, high high reading, low tape, fault) Four solid state solenoid drivers (auto cal, total sulfur, stream switching, valve actuator)
Displays	2 x 16 character LCD with back lighting Menu is scrolled by internal button

OPTIONAL EQUIPMENT

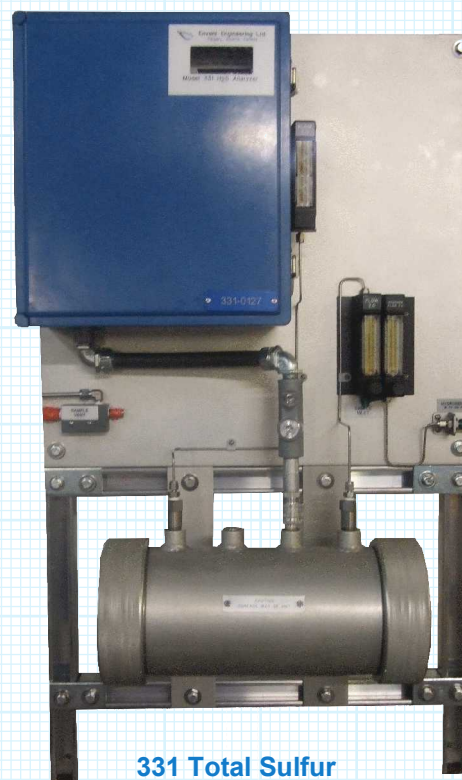
Total Sulfur	Total Sulfur furnace converts all sulfur compounds to H ₂ S which allows analyzer to measure Total Sulfur.
CO₂	Dual-beam IR bench. CO ₂ concentration is displayed on the second line of display and can be configured as a 4–20 mA analog output. CO ₂ ranges from 0–2000 ppm to 0–100%
Configuration Software	Window software for customer configuration, archive retrieval, and Modbus mapping
Auto Calibration	Allows user to initiate a calibration based on time or external switch
Stream Switching	Allows switching of two input streams or from H ₂ S to Total Sulfur measurement
Dilution	Allows measurements up to 100% H ₂ S using permeable membrane dilution.
Liquid sampling	Liquid sample system to measure H ₂ S in Hydrocarbon liquids and water
Custom systems	Envent can design custom integrated systems to meet application requirements
Panels	331 is 13"W x 15"H x 8"L fibreglass enclosure Standard system and 331 are mounted on a 24"W x 16"H x ¼" thick anodized panel



Model 331 Div 2 and sample system



Permeable membrane dilution system



331 Total Sulfur