

MODEL 3010BR



The AMI Model 3010BR Trace Hydrogen Sulfide (H₂S) analyzer provides H₂S monitoring in an unprecedented low cost, compact size, virtually maintenance-free package. Using AMI's patented cell block technology, it allows a specially modified electrochemical sensor to operate on oxygen-free sample gas, eliminating the need for hazardous-waste generating lead acetate tape.

- Display reads hydrogen sulfide from 0.00ppm up to 200 (or optionally 2000ppm) with no range changes
- Analog output and alarms can be configured to operate over any of four ranges from 0-10ppm to 0-200ppm (optional 2000ppm) for best resolution.
- CSA approved to meet Class 1 Div. 1 Group BCD with a flammable sample requirements
- Complete sample system built in to AMI's patented cell block.
- Easily replaceable sensor, no tools required.
- 0-200ppm H₂S sensor standard, 0-2000ppm optional.
- Simple, versatile installation.
- Operates either off 115VAC or 10-28VDC with very low power consumption
- Available integral explosion-proof heater for cold environments
- Field selectable analog output - 1-5V or 4-20mA, isolated.
- Analog output can be calibrated to a SCADA system or flow computer.
- 2 independent, fully adjustable alarm settings with relay contacts.
- Complete alarm logic programming: latching or non-latching, open or close on alarm, high alarm or low alarm, alarm-on delays and alarm hold-off.
- Integral data logger: Logs data for 15 days @ 1min intervals and 30 days @ 2min. intervals, etc.
- USB connectivity to a PC: Allows complete access to the internal functions.
- Logs sensor calibration history: Shows last five calibrations with calibration gas used.
- ModBus: Industry standard protocol over RS485.

The Model 3010BR provides a complete, industry proven electronics package and integrated sample system. It is offered for about a third the price of competitive models. AMI's patented cell block allows the analyzer to be built with almost no possibility of internal leaking, with minimal volume and with front-panel sensor access. All sample handling components – the flow meter, needle valve and a four-way sample/span/off selection valve – are integrated into a solid metal block. Connections between them are drilled passages in place of long lengths of tubing. The result is a highly reliable sample system with all necessary components provided, and a fast response time – hydrogen sulfide is a “sticky” gas so minimizing the sample path is vital to get the least possible wetted surface area.

The expected sensor life is from one to two years depending on environment. The sensor is immediately accessible on the front panel of the analyzer, and can be replaced in seconds. For low temperature operation an integral (approved) explosion-proof heater can be supplied. This unit directly heats the cell block and thus is extremely efficient, allowing operation off a solar panel/battery system down to -20°F. The heater option does not require additional enclosures or wiring, or change the footprint in any way. For extreme environments down to -40F, an outer insulated enclosure can be supplied, but no additional power is required.

The analyzer is approved by CSA for operation in a Class 1 Division 1 Group BCD hazardous area with a flammable gas as the sample. No additional safety barriers are needed. The analyzer can be calibrated and sensor replaced without declassifying the area because the analytical electronics are intrinsically safe, protected by internal safety barriers. The electronic and software package is exceptionally complete, and all features are provided as standard with no additional cost (except for the heater). It is capable of operating off a battery and solar panel, and it logs power brown outs and failures should they occur. It also logs the ambient and the sensor temperatures and so can be used to alarm on the failure of a catalytic heater if one is used in a meter building. It tracks the life of the sensor and indicates the remaining life. It logs the calibration history. It logs the hydrogen sulfide readings over its operational (output) range, and also tracks excursions of up to ten times that range. The analyzer can be wall-mounted with 4 externally accessible screws, or bolted to a 2” pipe using standard U bolts.

FEATURES

- 4 user selectable output ranges to choose from
- High resolution 3 ½ digit LCD
- 2 fully adjustable Hydrogen Sulfide (H₂S) Concentration alarms
- Alarm delays
- Alarm hold off/Bypass
- RFI protected
- 1-5VDC and 4-20mA. isolated analog output signals
- USB virtual comport and Modbus Bidirectional RS485 communication for advanced features.
- Datalog – 15 days hydrogen sulfide reading recording at 1 minute per sample
- Calibration history – stores the last five calibrations with time, date, span factor and calibration gas.
- Brown-out history – stores the last five brown-outs and recoveries.
- Power up history – stores the last ten times the unit was powered up.
- Advanced analog output calibration.
- Power requirements: Choice of 10-28VDC or 115VAC power
- Low minimum detection limit
- Excellent repeatability
- Extended operating temperature range
- Patented Cellblock Technology: Allows for all components such as flow control valve, flowmeter, and 4-way selector valve to be an integral part of the cellblock. This eliminates long lengths of tubing and fittings.
- Benefits of this design include compact size, faster response times and front panel sensor access without the need for tools.
- Area Classification: CSA approved to UL-913 and UL-1203 Class 1, Div. 1, Groups B,C,D with a flammable gas sample
- Wall mount or 2.0" pipe
- Compact size
- 2 year warranty for analyzer, parts and labor
- 1 year sensor warranty, life expectancy 1-3 years
- Requires optional AMI User Interface software

SPECIFICATIONS

- 4 standard user selectable output ranges to choose from: 0-10ppm, 0-50ppm, 0-100ppm, 0-200ppm
- Optional output ranges available: 0-500ppm, 0-1000ppm and 2000ppm
- The selection of an output range simultaneously controls the two alarms, the analog output and the data logger so that all 4 functions operate on the same range
- Digital display: High resolution 3 ½ digit LCD. Reads full scale from 0.00ppm to 200ppm independently of output range selection and 0.00ppm to 2000ppm when using high range sensor.
- Alarms: 2 fully adjustable Hydrogen Sulfide (H₂S) concentration alarms Dry contacts 5A. @24VDC/115VAC
- Alarm delays: Programmable from 0-300 minutes
- Alarm hold off: Programmable from 0-120 minutes
- Isolated analog output signal: 1-5VDC or 4-20mA Represents the output range selected: 0-10ppm, 0-50ppm, 0-100ppm, 0-200ppm
- Data logger: Logs data for 15 days @ 1 minute intervals, 30 days @ 2 minute intervals, etc. Represents the output range selected: 0-10ppm, 0-50ppm, 0-100ppm, 0-200ppm
- Power requirements: 10-28VDC/ 115VAC < 70mA. @ 12VDC non heated < 24W @ 12VDC with heated option
- Minimum detection: 50ppb of Hydrogen Sulfide (H₂S)
- Repeatability: +/- 1% of range or +/- 0.2ppm of H₂S, whichever is greater
- Operating temperature range: 25 to 115° F non-heated; -20 to 115° F heated option
- Diurnal temperature specification: < +/- 2% of scale over temperature range
- 90% full scale response times for specified range: 0-100ppm < 120 seconds @ 1.5SCFH; 0-2000ppm < 120 seconds @ 1.5SCFH
- Response to Methyl Mercaptan: 40% of actual concentration
- Response to Sulfur Dioxide: 18% of actual concentration
- Area Classification: CSA approved to UL-913 and UL-1203 Class 1, Div. 1, Groups B,C,D with a flammable gas sample
- Inlet gas pressure: 0.5 to 150psig
- Gas connections: ¼" 316 S.S. compression fittings
- Wetted parts: 316 S.S. fittings, electroless nickel plated cellblock, gold plated contacts, acrylic flow meter and Viton O-rings
- Recommended flow rate: from 1.0 to 1.5 SCFH
- Mounting: Wall mount or 2.0" pipe
- Dimensions: 13.0"W x 9.5"H x 5.0"D
- Weight: 16 lbs.