

ECO-SENSE Electrochemical H₂S

2-wire, Loop-powered Gas Detector

The Net Safety Monitoring ECO-SENSE detector is an innovative H₂S gas detection package designed specifically for 2-wire, loop-powered installations. An economic and ecological choice, this extremely versatile detector functions at less than 0.75 watts of power with 10–30 V dc and a full LCD display with LED indicators.

- Low power gas sensor functions in a 2-wire 4–20 mA sink mode
- Allows "one man" sensor calibration in hazardous areas without area declassification. No electric devices needed
- LCD readout and front panel alarm LED indicators for Alarm 1, Alarm 2, Fault, and IN CAL are standard
- Security mode allows locking of critical parameter
- CSA/ANSI/ATEX certifications
- Standard "Fault Supervision" circuitry continuously monitors for failed sensor

Features and Benefits

This advanced sensor interface includes a real time clock and calendar which is used for logging events such as sensor replacement, alarms and calibrations. Calibration offset and gain factors may be viewed for accurately predicting sensor "end of life" conditions.

Operator interface is through a menu driven magnetic keypad allowing full access without opening the enclosure. There are no potentiometers and all adjustments are performed through the keypad. Calibration magnet is included for non-intrusive calibration, no other special electronic devices are needed. Users can also program warm up and calibration exit delays to avoid false alarms. Delay hold outputs at zero until sensor signals stabilize. IN/OUT alarm trip delays may also be programmed.



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- Field replaceable H₂S sensor module - range configured on sensor module
- 4–20 mA signal may be transmitted thousands of feet on 2-wires

The Net Safety ECO-SENSE H₂S sensor overcomes noise immunity problems associated with electrochemical sensors by enclosing all low level signals within a grounded sensor head available in aluminum and stainless steel. An integral "transient voltage suppressor" protects the device in case of lightning or other surge voltage levels. The sensor is enclosed in a rugged Class 1, Div 1 enclosure suitable for hazardous environment installations and has been certified by CSA, ANSI and ATEX.

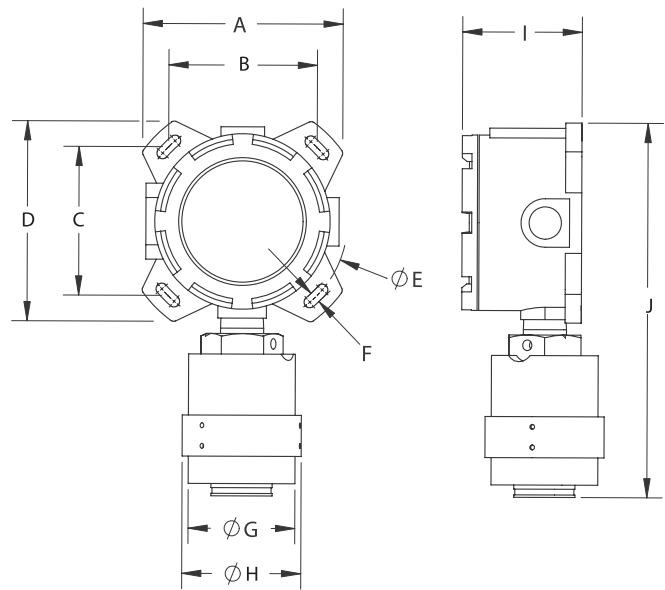
Specifications

Table 1 - ECO-SENSE Electrochemical H₂S

Controller Specifications	
Outputs	Low-powered, Analog 2-Wire 4–20 mA current sink output
Electrical	
Power Supply	10–30 Vdc at less than .75 Watts @ nominal 24 Vdc 2-Wire max loop R is 500 ohms 64 x 128 pixel LCD displays 30 minute trend, bar-graph and large engineering units and LED indicators
Environmental	
Temperature	-30 °C to +50 °C (-22 °F to + 122 °F) Ambient Range
Enclosure	
Metallurgy	316 Stainless Steel
Conduit Opening	3/4" NPT (3X)
Mounting	Surface Mount / 2" Pipe Mount
Certification	CSA ANSI-UL/ISA ATEX Ex/AEx/EEEx/ d IIB + H2 T5 Class I, Division 1& 2 - Groups B, C and D T5 NEMA 4X, IP67
Warranty	2 Years

ST490 Sensor Specifications	
Sensor Module	Electrochemical type sensor with range configuration resistor and shorting transistor integrated into sensor module
Certifications	CSA ANSI-UL/ISA ATEX Ex/AEx/EEEx/ d IIB + H2 T4 Class I, Division 1& 2 - Groups B, C and D T4 NEMA 4X, IP64
Response Times	T20 < 10 secs T50 < 30 secs
Accuracy	±5 % of full scale ± 1 count
Range	0–100 PPM
Temperature	-30 °C to +50 °C (-22 °F to + 122 °F) Ambient Range
Temperature Drift	< .1 % per °C over ambient temperature range
Housing	Aluminum and 316 Stainless Steel enclosure available
Warranty	2 Years

ORDERING INFORMATION	
Transmitters and ST490 H2S Sensor	
ECO-A-S	Single Channel-Analog-Stainless Steel
ECO-A-A	Single Channel-Analog-Aluminum



A		B		C		D		E	
in	mm	in	mm	in	mm	in	mm	in	mm
4.8	122	3.6	91	3.6	91	4.8	122	5.1	130
4.7	119	3.6	91	3.6	91	4.8	122	5.1	130

F		G		H		I		J	
in	mm	in	mm	in	mm	in	mm	in	mm
0.3	7.6	2.6	66	2.9	74	3.0	76	9.0	229
0.3	7.6	2.6	66	2.9	74	2.8	71	8.9	226

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