

DATASHEET

HW5000-H2S


**H SERIES
SENSORS**


▶ Highlights

- H₂S measurement range: 0 to 100 ppm
- Resolution: 0.1 ppm
- Field replaceable sensor module
- RS485 Modbus interface
- 2 configurable alarm setpoints: high and high-high
- 2 alarm status DOs (Solid State Relay)
- Field calibratable, 2 points (zero and custom: 10-50 ppm)
- Dust/splash guard included
- Bump tests and alarm acknowledgments can be performed using just the external scroll button
- Provides helpful sensor maintenance tags such as total days since last bump test and calibration
- Advanced local LCD display interface
- 9-30 Vdc
- IP66, -40 to 50 °C (-40 to 122 °F)
- Class I, Division 1 (Zone 0), Intrinsically Safe



▶ H₂S Gas Detection Solution with Alarm Outputs

Integrated H₂S Detection Solution

The OleumTech® H Series Hydrogen Sulfide (H₂S) Gas Detection Transmitter is an RS485 Modbus interface solution for continuously monitoring air quality and generating alarms when H₂S concentration levels exceed user-configured setpoints to ensure a safe working environment. The transmitter is equipped with a replaceable H₂S sensor module enclosed in a robust 316 stainless steel housing with a steel mesh filter. A dust/splash guard is also included for added layer of protection. The H₂S Transmitter provides helpful sensor maintenance tags like bump test count, total days since last successful bump test, and calibration. In addition, the HW5000-H2S Transmitter provides two solid state relay outputs for alarm annunciation.

Reliable, Scalable, and Safe

The local user interface allows for device configuration and instant data access. Bump tests and alarm acknowledgments can be performed using a single external button.

The OleumTech H Series H₂S Transmitter, HW5000-H2S, is Intrinsically Safe and is certified for use in Class I, Division 1 hazardous locations. The instrument can be ordered with 12 or 24 V IS Barrier Boards. The OleumTech HW5000-H2S is a natural choice for a wide variety of oil, gas, water, wastewater, and other mission-critical applications that require a high level of accuracy and reliability.

Technical Specifications

HARDWARE FEATURES

Device Functionality	· RS485 Modbus Transmitter with Hydrogen Sulfide (H ₂ S) Gas Detection Capabilities
Embedded Controller	· Ultra-Low Power RISC Microcontroller with Internal FLASH (Field Upgradeable)
Configuration	· USB to RS485 Converter (SX1000-CC8)
Interface	· RS485 Modbus
Baud Rate	· 1200-115,200 bps
Alarm Status DOs	· 2 Solid State Relays (High and High-High)
Local Configuration/Calibration	· Integral LCD with Four Function Key Interface
Bump Test	· Bump Test / Alarm Acknowledgment Performed Using the External Scroll Button

HYDROGEN SULFIDE (H₂S) DETECTION SENSOR

H ₂ S Measurement Range	· 0 to 100 ppm (Maximum Overload: 200 ppm)
Resolution	· 0.1 ppm
Response Time (T ₉₀)	· ≤ 45 Seconds
Temperature Range	· -40 °C to 50 °C / -40 °F to 122 °F
Storage Temperature	· 10 °C to 30 °C / 50 °F to 86 °F (Recommended)
Pressure Range	· 1 ± 0.1 atm
Humidity	· 15 to 90 % RH Non-Condensing
Expected Operating Life	· 2 Years
Field Calibratable	· 2-Point Calibration: Zero and Custom Level Between 10-50 ppm in 5 ppm Increments (Within +/- 5 ppm of Reading)
Sensor Module	· Replaceable Type, Field Swappable

CERTIFICATION & COMPLIANCE

	· Intrinsically Safe for Use in Hazardous Environments
	· Class I Division 1, Class I, Group A, B, C, D, Zone 0, Ex ia IIC T4, AEx ia IIC T4 Ga
	· ATEX: Sira 16ATEX2229X; Ex ia IIC T4 Ga
	· IECEx: SIR 16.0079X; Ex ia IIC T4 Ga

MECHANICAL SPECIFICATIONS

Dimensions	· H ₂ S: 5.5" (W) x 10.2" (H) x 4.5" (D) / 138 mm (W) x 259 mm (H) x 115 mm (D) / H ₂ S-A: 15" / 379 mm (H)
Package Dimensions	· 10.25" (W) x 14" (H) x 6.5" (D) / 260 mm (W) x 356 mm (H) x 165 mm (D)
Package Weight	· 4.5 lbs / 2.1 kg
Connection Fitting	· 3/4" NPT Female
Enclosure Casing Material	· Type 4X Aluminum; IP66

ELECTRICAL SPECIFICATIONS

DC Power Input	· 9-30 Vdc (30 V Max)
Current Consumption	· 25 mA Peak / 1.2 mA Idle
IS Safety Protection	· Barrier Board (See Part Numbers under Ordering Information)

GENERAL SPECIFICATIONS

Operating Conditions	· Sensor -40 to 50 °C (-40 °F to 122 °F)
	· Transmitter: Ambient Temperature (Class I, Division 1): -40 °C to 50 °C (-40 °F to 122 °F)
	· LCD Screen -20 °C to 70 °C (-4 °F to 158 °F)
Warranty	· 2-Year Parts and Labor
Country of Origin	· USA

ORDERING INFORMATION

Model Numbers	· HW5000-H ₂ S
IS Barrier Boards	· 12 V Kit: SX1000-B12, RS485 Module (61-6002-001) + 12 V Module (61-6003-001)
	· 24 V Kit: SX1000-B24, RS485 Module (61-6002-001) + 24 V Module (61-6004-001)
Configuration Kit	· H Series Configuration Kit (SX1000-CC8)
Bump Test Kit	· SX1000-BTK (Includes Housing Adapter, 3/16" (ID) Barb, Removable Plug, and 18" Tubing)