Flexible Options

System Level Controller

Single Channel Card

EQP® Addressable Loop

ELS Point-to-Point

4-20mA w/ HART

Local Display/Control

GDTB Local Termination Box

FlexVu™ Universal Display

4-20mA

NTMOS Sensor

EQP® Controller
SIL 2

GT3000 Detector
with FlexVu™ Display

X3301 Multispectrum
IR Flame Detector

PointWatch Eclipse®
IR Combustible
Gas Detector

ELS Safety
System

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DET-TRONICS®
A UTC Fire & Security Company

DET-TRONICS®
A UTC Fire & Security Company

NTMOS

Nanotechnology Metal Oxide Semiconductor

H_2S Gas Sensor

RELIABLE FLEXIBLE FUNCTIONAL

When it comes to

detecting toxic gas

would you rather be alerted in 30 seconds...

or 5 seconds?

ISA

HART

Because every second counts.

Because every second counts

NTMOS

Nanotechnology Metal Oxide Semiconductor

Functional

It's time for safety

When just a few breaths of air containing high levels of hydrogen sulfide gas can be deadly, every second counts. The Det-Tronics NTMOS H_2S gas sensor detects hydrogen sulfide in the air 6 times faster than the ISA standard.

In developing the NTMOS H_2S gas sensor, we knew we had to break records. After all, lives depend on this product. While other detection devices take thirty seconds or longer to alert you to the presence of toxic hydrogen sulfide, Det-Tronics' NTMOS H_2S gas sensor responds accurately in less than 5 seconds.

But it's not about saving time; it's about saving lives.

Exposure to hydrogen sulfide gas can make your employees sick, even threaten their lives. Offering protection and safety is as simple as choosing the NTMOS H_2S gas sensor. You can take comfort in the fact that no other toxic gas detector responds faster.

Nanotechnology is anything but small

Nanotechnology promises improvements in the quality, efficiency, and effectiveness of gas sensors. The faster the sensor, the faster appropriate action can be taken to minimize H_2S exposure. Because the technology is on the nanoscale, it provides increased effective surface area. The greater the surface area, the greater the reactivity, the faster the response. And the faster the response, the better the protection.

Unparalleled performance in extreme conditions

In rugged environments where severe temperatures and/or humidity levels occur – including the Middle East – Det-Tronics metal oxide semiconductors deliver the most reliable gas detection technology available in the fastest response rate possible. Whether the air is dusty, arid, hot, or muggy, the NTMOS H_2S gas sensor will alert you to the presence of hydrogen sulfide gas in five seconds or less.

Reliable

- Performance tested and approved to ISA-92.0.01
- Response time: T50 ≤ 5 seconds; 6x faster than ISA Standard
- Long-term stability in extreme temperatures
- Onboard humidity sensor for improved accuracy and repeatibility
- Approved as a stand-alone sensor (4-20mA)
- Available with FlexVu™ Universal Display (4-20mA with HART)

NTMOS shown with available FlexVu™ Universal Display

ISA

HART® FIELD COMMUNICATIONS PROTOCOL

DET-TRONICS®

A UTC Fire & Security Company

SPECIFICATION DATA

Nanotechnology Metal Oxide Semiconductor (NTMOS) H_2S Gas Sensor

APPLICATIONS

The Det-Tronics Nanotechnology Metal Oxide Semiconductor (NTMOS) Hydrogen Sulfide (H_2S) stand-alone gas sensor delivers an ideal detection solution in challenging environments where electrochemical sensing technologies are not preferred.

The NTMOS H_2S sensor uses the latest Nanotechnology (NT) to ensure the highest performance and reliability. The sensor provides improved accuracy, reliability, and extended calibration intervals when compared to ordinary solid state type sensors. The sensing element is packaged in a rugged housing and protected by a sintered stainless steel flame arrestor, making it suitable for installation in Class I, Division 1 locations.

The NTMOS sensor is approved as a stand alone device, or it can easily be integrated with an additional transmitter, controller, or GDTB termination box. For applications where a local display of detected H_2S gas level is required, the FlexVu™ UD10 Universal Display is recommended. The NTMOS sensor is easily integrated with the Eagle Quantum Premier® (EQP) system using the Analog Input Module (AIM) to provide display and control capabilities. The NTMOS sensor is also easily retrofitted into existing R8471B Series control/display card systems, or systems using the Model U9500B Infiniti® Transmitter.

FEATURES AND BENEFITS

- Fast response to all H_2S concentrations
- Linear 4-20 mA output signal corresponding to 0-100 ppm H_2S (non-isolated)
- Performance approved to ANSI/ISA 92.0.01
- Non-intrusive calibration using the internal magnetic reed switch on the GDTB or UD10, or an externally located pushbutton (not included)
- Automatic fault diagnostics via current output
- Sensor approved as a stand alone unit and provides automatic calibration capability
- Designed to integrate into existing Det-Tronics control systems

SPECIFICATIONS

Measurement Range 0 to 100 ppm H_2S.

Input Voltage 18 to 30 Vdc, 24 Vdc nominal.

Input Power 2.5 watts maximum.

Temperature Range Operating: –40°F to +149°F (–40°C to +65°C).
Storage: –31°F to +149°F (–35°C to +65°C).

Humidity Range 5 to 95% RH.

Response Time T50 ≤ 5 seconds with full scale gas applied.
T90 < 10 seconds (typical) with full scale gas applied.

Accuracy (Linearity) Per ANSI/ISA-92.0.01 environmental ranges.
±10% of applied gas concentration or 2 ppm.

Performance

Temperature Variation: Per ANSI/ISA-92.0.01 environmental ranges. ±5% full scale @ 50% applied gas concentration.

Humidity Variation: Per ANSI/ISA-92.0.01 environmental ranges. ±5% full scale @ 50% applied gas concentration.

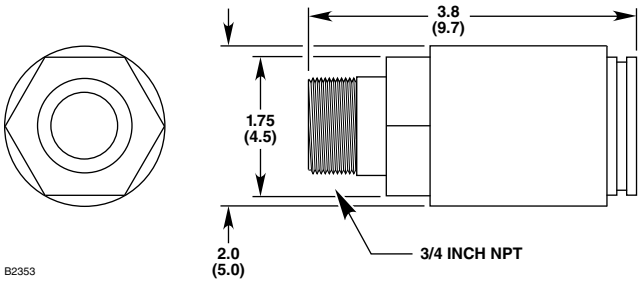
Calibration Single point, 50 ppm ampoule calibration required.

Warranty 2 years.

Shipping Weight 1.7 pounds (0.77 kilogram).

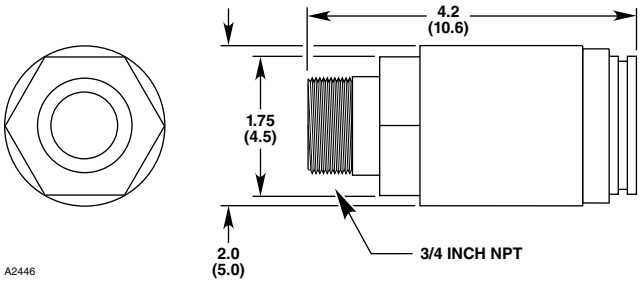
Certification

FM: ANSI/ISA-92.0.01
Class I, Division 1, Groups B, C, & D.
Class I, Division 2, Groups A, B, C, & D.
–40°C to +65°C (Performance Verified).
–40°C to +75°C (Haz. Loc. Rating).
IP53.



Dimensions of NTMOS Sensor without Sinter Guard
in Inches (Centimeters)

CSA: Class I, Div. 1, Groups B, C & D (T5).
Class I, Div. 2, Groups A, B, C & D (T5).
T_{amb} = –40°C to +75°C (Haz. Loc. Rating).
IP53.



Dimensions of NTMOS Sensor with Sinter Guard
in Inches (Centimeters)

Specifications subject to change without notice.

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