

ST3 NE-MOS Toxic Gas Sensor

Millennium II Series SMART Sensors

The ST3 NE-MOS series of SMART metal oxide semiconductor toxic gas sensors provide high specificity, fast response, and long life. All ST3 sensors are part of the universal Millennium II Gas Detection platform and are compatible with the M21, M22, and M2B transmitters. Our advanced sensor design employs the latest nano-enhanced, solid state gas sensing technology with very low power consumption.



ST3 Sensors shown with JB-MPD-A/S

- SMART Sensor Technology, Transmitter Automatically Recognizes Sensor Configuration
- Lowest Power Consumption Available
- Long Range (+2000ft.) Sensor Separation
- Industry Leading 2 Year Warranty
- Field Selectable Gas Ranges (20/50/100 ppm)
- Recovers Quickly from High Gas Concentrations
- Fine-tuned Specific Response Ensures Accurate Detection, Even In The Presence of Other Gases
- Designed to Perform in the Most Extreme Industrial Environments

Single or Dual Channel Transmitter Available

There's no longer the need to purchase multiple gas specific detectors. You have the option to utilize 1 or 2 toxic and/or combustible gas sensors on a single Millennium II transmitter and easily mix and match any of our sensor technologies.

SMART Sensor Technology

SMART (Self Monitoring Analysis and Reporting Technology) sensors are pre-calibrated and easily connected to the transmitter which instantly recognizes a newly fitted sensor, automatically uploading it's specific configuration profile.

Digital Communications

Sensor and transmitter continuously communicate digitally, giving you the confidence of stable, accurate protection with fast response times even over long separation distances.

Global Certifications

The ST3 Series has been approved to international hazardous area safety standards for functional operation and performance.

Nano-technology Enhanced Sensing

Sensor utilizes recent advances in nano-engineered materials to dramatically increase the sensor's sensitivity, selectivity, and stability. This technology is quite robust and ideal for dry/hot applications, provides leading response times, and the sensor does not "fall asleep", a common issue with traditional MOS sensing materials.

Advanced Environmental Immunity

The ST3 Series of toxic gas sensors are all internally temperature-compensated to their target gas as well as the particular field-selected range (20/50/100 ppm) in order to provide as stable a sample as possible to the sensing element.


Compatible Transmitters:

M21-A/S
M22-A/S
M2B-A/S



ST3 NE-MOS Toxic Gas Sensor

Specifications

HYDROGEN SULPHIDE [H2S] (SOLID STATE NE-MOS) P/N: ST321(A/S)-100-ASSY	
Performance	
Response Time	T20 ≤ 7sec T50 ≤ 13sec T90 ≤ 17sec
Accuracy	(+/-) 2ppm
Detection Range	0–20/50/100 ppm (Field Selectable)
Zero Drift	2ppm over 6 months
Repeatability	(+/-) 1ppm or 5% full scale
Environmental	
Temperature	Certified: -40°C to +60°C (-40°F to 140°F) Performance Verified: -40°C to +65°C (-67°F to 149°F)
Relative Humidity	0–95% RH non condensing
IP/NEMA Rating	IP64 - NEMA 4X
Enclosure	
Metallurgy	Aluminum or 316 SS
Certifications	North American - Class I, Division 1, Groups BCD, T5; Class I, Zone 1, Group IIB+H2 - Type 4X, IP64 ATEX -  II 2 G Exd IIB+H2 T5 IP64 IECEX (pending) INMETRO - Ex d IIB+H2 T4 Gb IP66/67 ANSI/ISA-S 92.0.01 SIL2 Rated
Sensor Separation	Up to 2000 feet/600 meters (18 AWG cabling)
Transmitter Req'd	Millennium II Series (M21, M22, M2B)
Warranty	2 years

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Accessories and Ordering Information

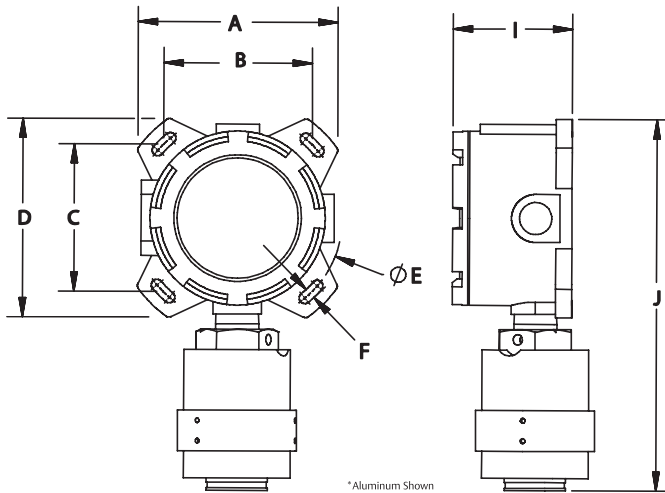
JB-MPD-S	Termination Box - Digital Output - Stainless Steel
JB-MPD-A	Termination Box - Digital Output - Aluminum
CCS-1	Calibration Cup/Rain Shield/Splash Guard/Dust Filter with DF-1
DSC-1	Dust / Sand protective clip (includes DF-1 disposable filter)
IPF-001	IP 66/67 Filter for SX3 Series sensors, enhanced sensor protection from contamination by dirt and moisture

ORDERING INFORMATION

ST321A-100-ASSY (Aluminum Housing)
 Hydrogen Sulfide [H₂S], 0-20/50/100ppm Field Selectable

ST321S-100-ASSY (Stainless Steel Housing)
 Hydrogen Sulfide [H₂S], 0-20/50/100ppm Field Selectable

Drawings and Dimensions



	A		B		C		D		E	
Aluminum Housings	6.3	160	5.6	142	5.4	137	9.7	246	6.0	152
Stainless Steel Housings	5.9	150	5.1	130	4.6	117	8.9	226	6.0	152
	F		G		H		I			
Aluminum Housings	5.7	145	2.6	66	2.9	74	4.1	103		
Stainless Steel Housings	5.8	147	2.6	66	2.9	74	3.9	100		

HEADQUARTERS:
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°Please refer to manuals for complete specifications.