ST Series Toxic Gas Detector
Electrochemical Sensor Technology

Net Safety's Millennium ST Series of toxic gas detectors utilize electrochemical sensing technology to continuously monitor your site for a wide range of toxic gas types. The Millennium ST is fast , accurate, and requires only periodic calibration and maintenance with a typical sensor life of 3–5 years.

- **Numerous PPM Ranges, Full Range of Gas Toxicity**
- **Operating Temperature Range -50 °C to +50 °C (-58 °F to +122 °F) [sensor dependent]**
- **Analog or Relay Configurations**
- **Intuitive Menu Systems Simple Set-up/Calibrations**
- **Explosion-proof, Class I, Division 1 Approval**
- **CSA, NRTL/C and IEC Certified**
- **10.5 to 32 Vdc Operating Voltage**
- **Two Wire Sensor Separation Reduces Installation Costs**
- **Long Range (+2000 ft.) Sensor Separation**

ST Series Toxic Gas Detector

Utilizing our field-proven electrochemical sensor design, the Millennium ST Series continuously monitors your industrial site for a wide range of toxic gas types. Fast and accurate response with only periodic calibration and maintenance required, the ST Series provides reliable coverage and is backed by one of the best warranties in the industry.

Enclosed in a compact and explosion-proof housing, the Millennium transmitter features a power disconnect switch to simplify maintenance, a clearly visible scrolling LED display for calibration and configuration and meter jack for easy current loop monitoring.

The transmitter includes internal push button controls while maintaining a Class 1 Division 2 rating as well as an external magnetic switch for non-intrusive controls during calibration and configuration.

The Millennium ST Toxic Gas Detector was designed for both 12 or 24 V dc systems and is available with Analog or Relay configurations as well as a Low Power option that draws as little as 32 mA of power.

The Millennium ST Toxic Gas Detector is an intelligently designed toxic gas detector, engineered to the highest standards for performance and quality and ideally suited to provide reliable coverage in even the most extreme, high-risk industrial applications.

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ST Series Toxic Gas Detector
Specifications

Millennium Toxic Sensors

ST Series Sensor *	Detection Range	Linearity / Repeatability	Span Drift	Response Time	Operating Temperature
Hydrogen Sulfide H2S (ST1200) *Methanol Resistant*	0–10/50/100 ppm	3 % full scale / < 5 % full scale	< 2 % full scale/mth	< 30 s - T90	-50 °C to +50 °C (-58 °F to 122 °F) Certified to -40 °C. For temperatures lower than -40 °C, response times will slow and readings may show higher than expected.
Sulphur Dioxide SO2 (ST1300)	0–20/100 ppm	3 % full scale / 2 % full scale	< 2 % full scale/mth	< 15 s - T90	-20 °C to +50 °C (-4 °F to 122 °F)
Carbon Monoxide CO (ST1600)	0–500 ppm	3 % full scale / 1 % full scale	< 5 % full scale/yr	< 30 s - T90	-20 °C to +50 °C (-4 °F to 122 °F)
Chlorine CL2 (ST1500) *	0–10 ppm	3 % full scale / 2 % full scale	< 2 % full scale/mth	< 60 s - T90	-20 °C to +50 °C (-4 °F to 122 °F)
Ammonia NH3 (ST1700) *	0–100 ppm	5 % full scale / 10 % full scale	< 2 % full scale/mth	< 90 s - T90	-40 °C to +50 °C (-40 °F to 122 °F)
Certifications	CSA and NRTL/C certified for hazardous locations. Class I, Division 1 (Division 2 only), Groups C and D. IEC Rating Ex d IIB T6 NEMA 3R				
Enclosure Material	Anodized / Powder coated aluminum (optional stainless steel)				
Sensor Warranty	2 Years				

Millennium Transmitter/Controller

Specification	MLP "A" Version	MLP "AR" Version
Operating Voltage Range	10.5 to 32.0 V dc	
Power Consumption (at 24 V dc)	Nominal 62 mA, 1.49 W Maximum 90 mA, 2.16 W	Nominal 62 mA, 1.49 W Maximum 90 mA, 2.16 W
Operating Temperature and Humidity Range	Operational -50 °C to +80 °C (-58 °F to +185 °F) / Certified -40 °C to +85 °C (-40 °F to 185 °F) 0 to 100 % Relative humidity, non-condensing	
Output(s)	**Analog 4–20 mA:** Max. loop impedance of 800 Ohms at 32 V dc or 150 Ohms at 10.5 V dc. Isolated or non-isolated loop supply	**Relays:** 3 Form C contacts rated 5 Amp at 30 V dc / 250 V dc
Enclosure Material	Powder coated Copper Free Cast Aluminum (316 Stainless Steel Optional)	
Weight	3.2 Kg (7.0 lbs)	
Electronics Warranty	3 Years	
Alpha-numeric display	Bright 8-digit LED scrolling type display - English, French and Spanish languages available.	
Unique Features	Local Power Switch and Meter Test Jacks on faceplate for easy maintenance. Easy to read instructions for one-person, NON-INSTRUSIVE calibrations.	
Certifications	▪ CSA and NRTL/C certified for hazardous locations. Class I, Division 1, Groups B, C and D. Temperature code T5. ▪ IEC Rating Ex d IIB+H2 T5 (Class I, Zone 1 Group IIB+H2T5). Maximum Operating Ambient of 85 °C. Enclosure Type 4X ▪ II2G EEx d IIB+H2 T5 (-40 °C ≤ Tamb ≤ 85 °C).	
	NOTE: Electronics only - CSA and NRTL/C certified for hazardous locations Class I, Division 2 Groups A, B, C and D.	

ORDERING INFORMATION

Millennium Premium	Toxic Sensors Element	Options / Accessories
MLB-A- Analog output only	**ST1200-20** 0 to 10 ppm H2S **ST1200-50** 0 to 50 ppm H2S **ST1200-100** 0 to 100 ppm H2S **ST1300-20** 0 to 20 ppm SO2 **ST1300-100** 0 to 100 ppm SO2 **ST1500-10** 0 to 10 ppm CL2 **ST1600-500** 0 to 500 ppm CO **ST1700-100** 0 to 100 ppm NH3	**-SEP** Analog Sensor Separation Kit **CCS-1** Splash guard / Calibration cup **DUCTM-TOXIC** Duct Mount Assembly **-SS** Stainless Steel
MLP-AR- Analog and Relay outputs		**Order Example: MLP-A-ST1200-100-SEP** Millennium Premium Toxic Gas Detector with ST1200 H2S sensor for 0–100 ppm H2S range, 4–20 mA output only and sensor separation option included.

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