

MILLENNIUM II

Single or Multi Channel
"SMART" Gas Detector



- **SMART Technology**
- **Fastest H₂S Response Available On The Market**
 - -55°C to +85°C Temperature Range
- **Sensor Diagnostics**
- **Event And Data Logging**
 - **Intuitive Menu System Simple Set-up/Calibrations**
- **Lowest Power Consumption Available On The Market**
 - **Selectable Gas Curves**
 - **Long Range (+2000ft.) Sensor Separation**



Optional Dual Channel



The Millennium II series of gas detectors has been engineered from the ground-up to include the innovative features that managers and operators in the field demand while providing rock solid day-to-day operation, even in the most extreme conditions. The Millennium II pushes the boundaries of what you can expect from your detectors.

Single or Multi-Channel Controller

No need to purchase additional gas specific detectors. Use with 1 or 2 sensors and mix and match gas types.

SMART Sensor Technology

The transmitter can be fitted with a wide range of toxic and/or combustible gas sensors. SMART (Self Monitoring Analysis and Reporting Technology) sensors are pre-calibrated and easily connect to the transmitter which instantly recognizes a newly fitted sensor and automatically uploads it's specific configuration profile.

Digital Communications

Sensor and transmitter continuously communicate digitally, giving you the confidence of stable, accurate protection with market-leading response times.

Analog, Relay, Modbus 485 RTU & HART

Enhanced communication protocols allows the Millennium II to work seamlessly with external safety equipment.

Global Certifications

The Millennium II is approved to FM, CSA, ATEX, ANSI, SIL2 by TÜV SÜD, INMETRO, and GOST-R safety, technical and performance standards.

Superior OLED Display

The only full graphic OLED display available, easy to read in all ambient lighting conditions and operates down to -55°C!

Field-proven Sensor Innovations

Nano-enhanced solid state MOS sensors that "do not fall asleep"; poison-resistant catalytic bead technology with *SensorGuard*, which prolongs catalytic bead sensor life; infrared sensor technology utilizing a dual beam design with no "mirrors" that may become contaminated ("fogged up") or misaligned; and a full range of electrochemical toxic gas sensors.

Easy To Use Menus

English, French, Portuguese or Spanish display. The full text menu makes installation, operation and calibration simple. No manual necessary!

MILLENNIUM II

Single or Multi Channel Gas Detector

BCR-0033-00-021

MILLENNIUM II CONTROLLER

Electrical

Power Consumption	Up to 200 mA @ 24 Vdc with a single sensor (will vary depending on sensor types and quantities)
Voltage Range	10.5 – 32.0 Vdc
RFI, EMI Immunity	RFI: 150 to 170 MHz and 450 to 470 MHz, 5W FM radio 1 meter away EMC: IEC 61000-1-4 and IEC 61000-4-3 Severity Level 2

Display Organic LED (OLED), Status LED's

Environmental

Temperature	-55°C to +85°C (-67°F to +185°F) Operating Range
Relative Humidity	0-99% RH non condensing

Enclosure

Metallurgy	Aluminum or 316 SS
Conduit Opening	3/4" NPT (3X)

Outputs Standard: Analog 4-20mA

Optional: Four 5 Amp Form C Relays, Modbus® 485 RTU, and HART® (PROFIBUS and Foundation Fieldbus pending)

Certifications

CSA | ANSI | ATEX | INMETRO | GOST-R

Ex/AEx/EEEx/BR-Ex/1Ex d IIB+H2, T5
Class 1, Division 1 - Groups BCD; Class 1, Zone 1

Factory Mutual (FM) 6310, 6320 | CSA 22.2 No 152 | IEC 61779

SIL2 by TÜV SÜD | IP67 | NEMA Type 4X

Sensors

Combustible: Infrared, Catalytic Bead – see pg3 for specs
Toxic: Electrochemical, Solid State MOS – see pg3 for specs

Warranty

3 years

Mounting

Surface Mount / 2" Pipe Mount

Accessories

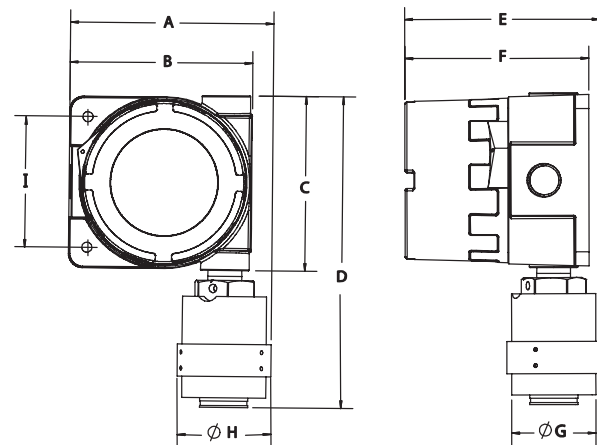
Calibration Cup, Collecting Cone, Mounting Bracket c/w Hardware, Sun Shade/Deluge Protection, Duct Mount and Hardware Kit, Dust / Sand filter

Weight

Approx. 3.6 kg (8 lbs.)

Dimensions

See below



	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		

Changes are periodically made to the information within this document and incorporated without notice into subsequent revisions. Net Safety Monitoring Inc. assumes no responsibility for any errors that may be contained within this document. Please refer to manuals for complete specifications.

Distributed by:

ISO 9001:2008



FLAME DETECTION • COMBUSTIBLE & TOXIC GAS DETECTION • SAFETY SYSTEMS • SURVEILLANCE • SMOKE DETECTION

2721 Hopewell Place NE, Calgary, Alberta, Canada T1Y 7J7 | 1-866-FIREGAS (347-3427) | ph. (403) 219-0688 | fx. (403) 219-0694 | www.net-safety.com

MILLENNIUM II SENSORS (continued on pg 4)

"SMART" Sensor Technology

COMBUSTIBLE SENSORS

INFRARED

CATALYTIC BEAD

PERFORMANCE	Part Number: SC311(A/S)-100-ASSY	Part Number: SC310(A/S)-100-ASSY
• Response Time	T50 ≤ 4.3 sec T90 ≤ 11 sec	T50 <6sec T60 <7sec T90 < 13sec (100% LEL)
• Accuracy	(+/-) 2% < 50% (+/-) 5% >50%	(+/-)3% up to 50% (+/-)5% above 50%
• Range of Detection	0 to 100% LEL	0 to 100% LEL
• Zero Drift	2% full scale per year	2% full scale over 6 months
• Repeatability	+/- 2% full scale	< 1 % full scale
ENVIRONMENTAL		
• Temperature	-40°C to +75°C (-40°F to 167°F)	-55°C to +85°C (-67°F to 185°F)
• Relative Humidity	0–99% RH non condensing	0–99% RH non condensing
ENCLOSURE		
• Metallurgy	Aluminum or 316 SS	Aluminum or 316 SS
CERTIFICATIONS	Factory Mutual (FM) Class 6310, 6320 CSA 22.2 No. 152 IEC/EN 61179-1 and -4 SIL2 by TÜV SÜD	Factory Mutual (FM) Class 6310, 6320 CSA 22.2 No. 152
	CSA ANSI-UL/ISA ATEX INMETRO GOST-R — Ex/AEx/EEEx/BR-Ex/1Ex d IIB+H2 - Class 1, Division 1, Grps BCD; Class 1, Zone 1	
	Temperature Rating: T5 IP 66/67 (filter) NEMA Type 4x	Temperature Rating: T8/T4/T5 IP 66/67 (filter) NEMA Type 4x
SENSOR SEPARATION	Up to 2000 feet/600 meters	Up to 2000 feet/600 meters
WARRANTY	5 years	5 years
SPECIAL FEATURES	<ul style="list-style-type: none"> • Calibration Required Only Once Per Year • Enhanced Sensor Diagnostics • Dual Beam Technology • Flame Arrestor Beam Protector • "Quick" Calibration Option 	<ul style="list-style-type: none"> • Enhanced Sensor Diagnostics • <i>SensorGuard</i> Technology • Poison Resistant • Custom K-factor Input (HART only)

TOXIC SENSORS

SOLID STATE H₂S

SOLID STATE NH₃

PERFORMANCE	Part Number: ST321(A/S)-100-ASSY	Part Number: ST371(A/S)-300-ASSY
• Response Time	T20 ≤ 3 sec T50 ≤ 6 sec (20ppm range)	T20 ≤ 9 sec (50ppm range)
• Accuracy	+/- 2ppm or 10% full scale	+/- 5ppm or 10% full scale
• Zero drift	2ppm full scale over 6 months	2ppm full scale over 6 months
• Repeatability	+/- 1ppm or 5% full scale	+/- 2ppm or 5% full scale
ENVIRONMENTAL		
• Temperature	-40°C to +65°C (-40°F to 149°F) Operational	-40°C to +65°C (-40°F to 149°F) Operational
• Relative Humidity	0–95% RH non condensing	0–90% RH non condensing
ENCLOSURE		
• Metallurgy	Aluminum or 316 SS	Aluminum or 316 SS
CERTIFICATIONS	Factory Mutual (FM) Class 6310, 6320 CSA 22.2 No. 152 ANSI/ISA-S 92.0.01 SIL2 by TÜV SÜD	Factory Mutual (FM) Class 6310, 6320 CSA 22.2 No. 152 ANSI/ISA-S 92.03.01
	CSA ANSI-UL/ISA ATEX INMETRO GOST-R — Ex/AEx/EEEx/BR-Ex/1Ex d IIB+H2 - Class 1, Division 1, Grps BCD; Class 1, Zone 1	
	Temperature Rating: T5 IP 66/67 (filter) NEMA Type 4x	Temperature Rating: T5/T6 IP 66/67 (filter) NEMA Type 4x
SENSOR SEPARATION	Up to 2000 feet/600 meters	Up to 2000 feet/600 meters
WARRANTY	2 years	6 months
SPECIAL FEATURES	<ul style="list-style-type: none"> • Enhanced Sensor Diagnostics • Sensor Will Not Fall Asleep 	<ul style="list-style-type: none"> • Enhanced Sensor Diagnostics • Sensor Will Not Fall Asleep

Changes are periodically made to the information within this document and incorporated without notice into subsequent revisions. Net Safety Monitoring Inc. assumes no responsibility for any errors that may be contained within this document. Please refer to manuals for complete specifications.



Millennium II Multi-Channel Gas Detector



Phoenix Triple IR Multi-spectrum Flame Detector



FlameWatch Combination Video Flame Detector



Millennium II BASIC Low Power Gas Detector



Millennium APM Industrial Air Particle Smoke Detector



Gas Shield II Light Industrial Toxic Gas Detection



PlantSafe 8000 SIL2 PLC Fire & Gas Safety Systems



Sales Gas Monitor Continuous Monitoring for H₂S Content

FLAME DETECTION • COMBUSTIBLE & TOXIC GAS DETECTION • SAFETY SYSTEMS • SURVEILLANCE • SMOKE DETECTION

2721 Hopewell Place NE, Calgary, Alberta, Canada T1Y 7J7 | 1-866-FIREGAS (347-3427) | ph. (403) 219-0688 | fx. (403) 219-0694 | www.net-safety.com

MILLENNIUM II SENSORS

"SMART" Sensor Technology

TOXIC SENSORS

ELECTROCHEMICAL H₂S

PERFORMANCE	Part Number: ST322(A/S)-100-ASSY
• Response Time	T50 ≤ 7 sec T90 ≤ 22 sec (50ppm range)
• Accuracy	50ppm range +/- 2ppm full scale
• Range of Detection	0-100 ppm
• Zero drift	2ppm full scale over 6 months
• Repeatability	Greater of 1ppm or 5% full scale
ENVIRONMENTAL	
• Temperature	-40°C to +75°C (-40°F to 167°F)
• Relative Humidity	0-99% RH non condensing
ENCLOSURE	
• Metallurgy	Aluminum or 316 SS
CERTIFICATIONS	CSA ANSI ATEX INMETRO GOST-R — Ex/AEx/EEEx/BR-Ex/1Ex d IIB+H2 - Class 1, Division 1, Grps BCD; Class 1, Zone 1 Temperature Rating: T4/T5 IP 66/67 (filter) NEMA Type 4x
SENSOR SEPARATION	Up to 2000 feet/600 meters
WARRANTY	2 years
SPECIAL FEATURES	<ul style="list-style-type: none"> • Enhanced Sensor Diagnostics • Sensor Will Not Fall Asleep

TOXIC SENSORS

ELECTROCHEMICAL O₂

PERFORMANCE	Part Number: ST340(A/S)-25-ASSY
• Response Time	T95 <15 sec
• Range of Detection	0 to 25% Oxygen
• Zero Drift	1% full scale over six months
• Resolution	0.1%
• Pressure Range	Atmospheric ±10%
• Pressure Coefficient	0.02% signal/mBar
ENVIRONMENTAL	
• Temperature	-40°C to +75°C (-40°F to 167°F)
• Relative Humidity	0-99% RH non condensing
ENCLOSURE	
• Metallurgy	Aluminum or 316 SS
CERTIFICATIONS	CSA ANSI ATEX INMETRO GOST-R — Ex/AEx/EEEx/BR-Ex/1Ex d IIB+H2 - Class 1, Division 1, Grps BCD; Class 1, Zone 1 Temperature Rating: T4/T5 IP 66/67 (filter) NEMA Type 4x
SENSOR SEPARATION	Up to 2000 feet/600 meters
WARRANTY	6 months
SPECIAL FEATURES	<ul style="list-style-type: none"> • Enhanced Sensor Diagnostics

Changes are periodically made to the information within this document and incorporated without notice into subsequent revisions. Net Safety Monitoring Inc. assumes no responsibility for any errors that may be contained within this document. Please refer to manuals for complete specifications.

Distributed by:

ISO 9001:2008



FLAME DETECTION • COMBUSTIBLE & TOXIC GAS DETECTION • SAFETY SYSTEMS • SURVEILLANCE • SMOKE DETECTION

2721 Hopewell Place NE, Calgary, Alberta, Canada T1Y 7J7 | 1-866-FIREGAS (347-3427) | ph. (403) 219-0688 | fx. (403) 219-0694 | www.net-safety.com