



PRODUCT DATASHEET

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SC311 Infrared Combustible Gas Sensors

Millennium II Series Sensors

The SC311 delivers the latest technology advancements in infrared sensing of flammable gases in a rugged package designed for the most extreme industrial environments. Hydrocarbon gas LEL detection is fast, reliable and highly accurate with only periodic bump testing recommended and a simple annual calibration sequence. A full 5 year warranty is included with a typical sensor life of 8–10 years.

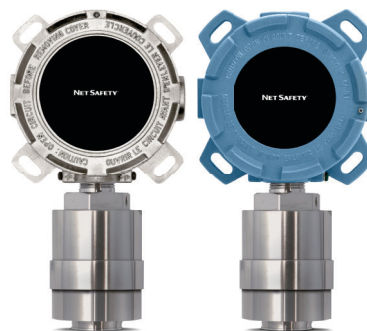
- Lowest power consumption available
- Long range (+2,000 ft.) sensor separation
- Industry leading 5 year sensor warranty
- Field selectable gas curves available
- Immune to poisoning - standard gases detected include methane, propane, butane, and ethylene

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.

Sensor Designed for Durability & Performance

High resolution, dual-beam optics are employed in the sensor design which eliminates reflective surfaces preventing fouling, fogging or misalignment. Not only does this provide enhanced overall performance but it also means low power consumption which equals cost savings and more reliable coverage.



ST3 Sensors shown with JB-MPD-A/S.

- Very fast response and highly accurate
- Designed to perform in the most extreme industrial environments

Failsafe Operation & Advanced Diagnostics

Continuous self-check for several performance parameters as well as environmental compensation for temperature, pressure and humidity maintains a high level of sensor performance and reliability.

Specifications

Table 1 - SC311 Infrared Combustible Gas Sensor

Hydrocarbon Combustible Gases [% LEL] Infrared P/N: SC311(A/S)-100-ASSY	
Performance	
Response Time	T50 ≤ 4.3 s T60 ≤ 7 s T90 ≤ 11 s
Accuracy	±5 % LEL
Detection Range	0–100 % LEL Gases Detected*: Methane, Propane, n-Butane, Iso-Pentane, n-Pentane, Ethane, Iso-Butane, Ethylene, Hexane (Field Selectable Curves) *other gases available - contact factory
Zero Drift	< 5 % full scale per year
Repeatability	±2 % LEL full scale
Electromagnetic Compatibility (EMC)	IEC 61000-4-3
Environmental	
Temperature	-40 °F to +167 °F (-40 °C to +75 °C)
Relative Humidity	0–95 % RH non condensing
Ingress Protection (IP) Rating	IP64
Enclosure	
Enclosure Material	Aluminum (AL6061) or stainless steel (SS316)
Certifications	North American Class I, Division 1, Groups BCD T5 Class I, Zone 1, AEx/Ex d IIB +H2 T5 -40 °C ≤ Ta ≤ +75 °C IECEX Ex d IIB+H2 T5 Gb IECEX FMG 12.0007X INMETRO Ex d IIB+H2 T4 Gb IP66/67
Sensor Separation	Up to 2,000 feet/600 meters (18 AWG cabling)
Transmitter Required	Millennium II Series (M21, M22, M2B)
Warranty	Five years

Accessories and Ordering Information

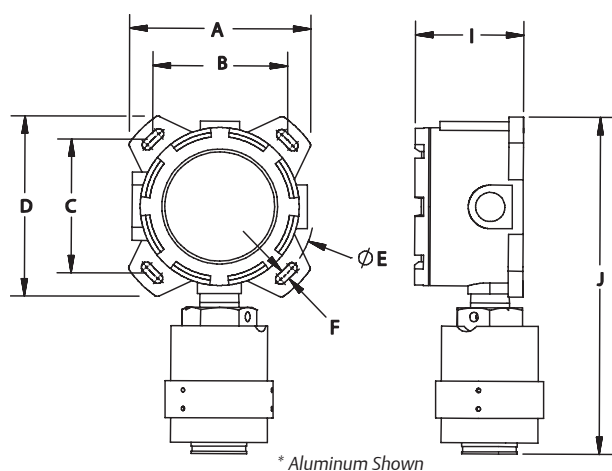
Table 2 - SC311 Infrared Combustible Gas Sensor

JB-MPD-A	Termination Box - Digital Output - Stainless Steel
JB-MPD-S	Termination Box - Digital Output - Stainless Steel
CCS-1	Calibration Cup/Rain Shield/Splash Guard/Dust Filter with DF-1
CC-INLINE	Inline Calibration Adaptor, allows slip stream of gas to be brought to sensor and vented back into main stream

Table 3 - Ordering Information

SC311A-100-ASSY (Aluminum Housing)	Hydrocarbon based Combustible Gases, 0–100 % LEL
SC311S-100-ASSY (Stainless Steel Housing)	Hydrocarbon based Combustible Gases, 0–100% LEL

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		

HA HIGH ACCURACY

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	Liquid Analysis		Flame and Gas Detection
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