

Arsine Gas Sensor

Product Data Sheet Model #SB-4AsH3-1-F

2025. Ver 1.0

Applications & Features

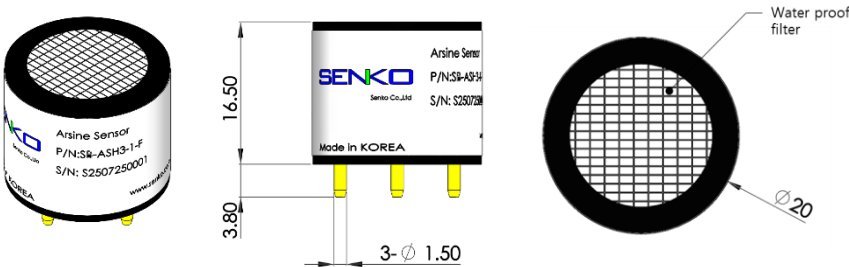
- Portable and fixed gas detectors
- Semiconductor industry
- High stability
- Fast response and recovery
- Low response to changes in RH conditions



Specifications

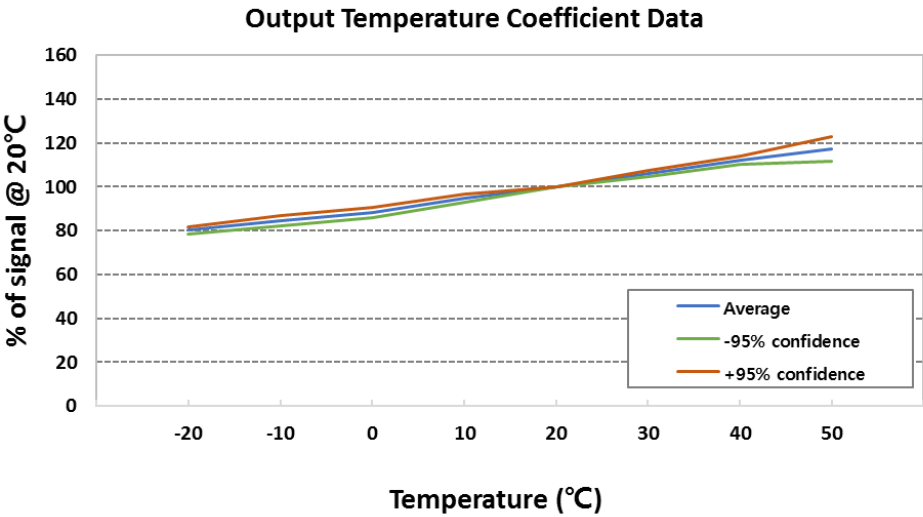
Performance Characteristics	
Output Signal	1100 ± 350 nA / ppm
Typical Baseline Range (pure air, @ 20°C)	≤ ±0.03 ppm AsH ₃ equivalent
Baseline Shift (-20°C ~50°C)	≤ ±0.1 ppm Typical
Response Time (T90)	< 60 seconds
Measurement Range	0 - 1 ppm
Maximum Overload	5 ppm
Linearity	Linear
Repeatability	< ±2% of signal
Recommended Load Resistor	10 ohms
Resolution (Electronics Dependent)	< 0.02 ppm typical
Bias Voltage	Not required
Environmental	
Temperature Range Continuous	-20 °C to +50 °C
Pressure Range	800 to 1200 mbar
Operating Humidity Range	15% to 90 % RH
Lifetime	
Long Term Output Drift	< 5 % per annum
Recommended Storage Temp	0 °C to 20 °C
Expected Operating Life	> 24 months in air
Standard Warranty	12 months from date of dispatch
Intrinsic Safety Data	
Maximum at 10 ppm	15 µA
Maximum o/c Voltage	<1.0 V
Maximum s/c Current	<0.1 A

Dimension



Due to ongoing research and product improvement, specifications are subject to change without notice

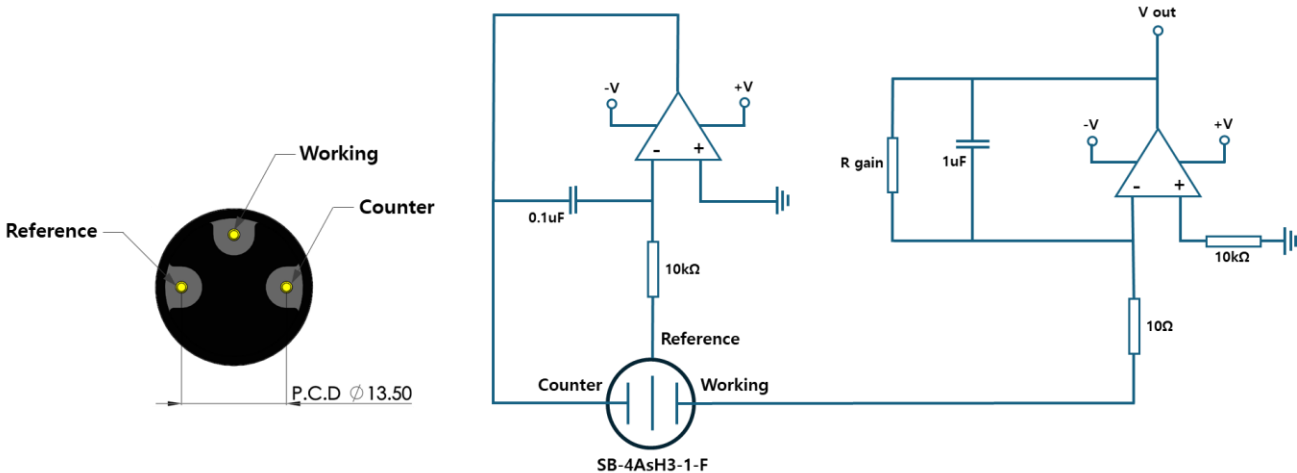
Temperature Effects



Cross Sensitivity

Gas	Concentration [ppm]	Reading [ppm]	Gas	Concentration [ppm]	Reading [ppm]
Carbon monoxide	100	0.0	Chlorine	10	< -0.4
Hydrogen	500	0.0	Hydrogen fluoride	10	0.0
Carbon dioxide	5000	0.0	Nitric dioxide	10	< -3.0
Isopropyl alcohol	20	0.0	Hydrogen cyanide	10	0.0
Phosphine	5	< 7.6	Nitric oxide	100	0.0
Silane	50	< 14.1	Sulfur dioxide	20	0.0
Diborane	5	< 1.8	Hydrogen sulfide	50	< 18.4
Hydrogen chloride	10	< 0.6	Ammonia	100	0.0

Standard Operating Circuit



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