

# RKI Sensor Specification

## Silane (SiH<sub>4</sub>)

**Features:** Fast warm-up time  
Good zero stability  
Quick response time

**Part Number:**  
**Sensor Application:**

ES/ESM/ESU-23AH-SIH4  
GD-K8A, GD-K7D2, GD-K71D,  
Eagle, GD-K77D, GD-70D

Technical Specifications			
<b>Measuring Principle</b>	Amperometric 3-electrode sensor	<b>Accuracy</b>	+/- 10% of reading or +/- 5% of full scale (whichever is greater)
<b>Range of Measurement</b>	0 – 15 ppm	<b>Repeatability</b>	+/- 5% of reading
<b>Resolution</b>	1% of full scale	<b>T<sub>90</sub> Response time (20°C, 2 min. exposure)</b>	90 seconds

Operating Conditions			
<b>Temperature Range</b>	-20°C to +45°C	<b>Life Expectancy</b>	2-3 Years
<b>Humidity Range</b>	10-95% RH, Non Condensing	<b>Warranty</b>	1 Year

## Known Gas Interferences

Gas	PPM Gas Applied	Reading
Acetone ((CH <sub>3</sub> ) <sub>2</sub> CO)	1.0% Vol.	0.05
Acetylene (C <sub>2</sub> H <sub>2</sub> )	74.0	5.0
Ammonia (NH <sub>3</sub> )	150.0	0.0
Arsine (AsH <sub>3</sub> )	.87	5.0
Butyl Acid (CH <sub>3</sub> COO(CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub> )	1.0% Vol.	0.0
Carbon Dioxide (CO <sub>2</sub> )	99.9% Vol.	0.06
Carbon Monoxide (CO)	300.0	0.11
Chlorine (Cl <sub>2</sub> )	3.4	-5.0
Diborane (B <sub>2</sub> H <sub>6</sub> )	12.0	5.0
Disilane (Si <sub>2</sub> H <sub>6</sub> )	2.4	5.0
Ethanol (C <sub>2</sub> H <sub>5</sub> OH)	1.0% Vol.	0.06
Ethyl Acetate (CH <sub>3</sub> CO <sub>2</sub> H <sub>5</sub> )	0.4% Vol.	1.0
Ethylene (C <sub>2</sub> H <sub>4</sub> )	2.3% Vol.	5.0
Fluorine (F <sub>2</sub> )	3.0	-1.0
Germane (GeH <sub>4</sub> )	3.0	5.0
Hydrogen (H <sub>2</sub> )	11% Vol.	5.0
Hydrogen Bromide (HBr)	23.0	5.0

Gas	PPM Gas Applied	Reading
Hydrogen Chloride (HCl)	25.0	5.0
Hydrogen Cyanide (HCN)	10.0	2.0
Hydrogen Fluoride (HF)	110.0	5.5
Hydrogen Selenide (H <sub>2</sub> Se)	1.0	5.0
Hydrogen Sulfide (H <sub>2</sub> S)	0.82	5.0
I.P.A. ((CH <sub>3</sub> ) <sub>2</sub> CHOH)	1.0% Vol.	0.06
Methanol (CH <sub>3</sub> OH)	1.0% Vol.	0.01
Nitric Acid (HN <sub>3</sub> )	10.0	-3.3
Nitric Oxide (NO)	270.0	5.0
Nitrogen Dioxide (NO <sub>2</sub> )	4.3	-5.0
Ozone (O <sub>3</sub> )	3.7	-5.0
Phosphine (PH <sub>3</sub> )	0.5	10.6
Sulfur Dioxide (SO <sub>2</sub> )	6.1	5.0
Toluene (C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub> )	1.0% Vol.	0.07
Trichloroethylene (CHCl:CCl <sub>2</sub> )	1% Vol.	0.0
Xylene (C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>3</sub> )	0.4% Vol.	0.0

Part # Prefix	Applicable Instruments
ES	GD-K8A, GD-K7D2, Eagle
ESM	GD-K71D, GD-K77D
ESU	GD-70D