

# RKI Sensor Specification

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

## Hydrogen Chloride (HCl)

**Part Number:** ES-23E-HCL  
**Sensor Application:** GD-K8A, GD-K7D2

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)	2 % vol	1.6 ppm
Arsine (AsH <sub>3</sub> )	0.14	0.7 ppm
Carbon Dioxide (CO <sub>2</sub> )	99.9 % vol	0 ppm
Carbon Monoxide (CO)	287	0.1 ppm
Chlorine (Cl <sub>2</sub> )	10.0	-0.1 ppm
Diborane (B <sub>2</sub> H <sub>6</sub> )	5.4	0.7 ppm
Disilane (Si <sub>2</sub> H <sub>6</sub> )	15.6	9.5 ppm
Fluorine (F <sub>2</sub> )	15.0	-3.1 ppm
Germanium Tetrahydride (GeH <sub>4</sub> )	1.6	0.5 ppm
Hydrogen (H <sub>2</sub> )	2.0 % vol	0.4 ppm
Hydrogen Bromide (HBr)	7.9	6.9 ppm
Hydrogen Fluoride (HF)	10	0.4 ppm

Gas	PPM Gas Applied	Reading
Hydrogen Selenide (SeH <sub>2</sub> )	1.0	6.0 ppm
Hydrogen Sulfide (H <sub>2</sub> S)	2.6	0.2 ppm
Isopropyl Alcohol (IPA) ((CH <sub>3</sub> ) <sub>2</sub> CHOH)	1.5 % vol	0.2 ppm
Methanol (CH <sub>3</sub> OH)	5.2 % vol	0.1 ppm
Nitric Oxide (NO)	98.4	21.2 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	16.7	1.3 ppm
Ozone (O <sub>3</sub> )	6.0	-0.8 ppm
Phosphine (Ph <sub>3</sub> )	1.0	5.3 ppm
Silane (SiH <sub>4</sub> )	14.1	2.0 ppm
Sulfur Dioxide (SO <sub>2</sub> )	50.7	9.6 ppm
Toluene (C <sub>7</sub> H <sub>8</sub> )	0.75 % vol	2.1 ppm