

# RKI Sensor Specification

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

**Ammonia (NH<sub>3</sub>)**  
**Part Number:** ES-23R-NH3  
**Sensor Application:** EAGLE, Fixed Systems

Technical Specifications			
<b>Measuring Principle</b>	Amperometric 3-electrode sensor	<b>Accuracy</b>	+/- 10 % of reading
<b>Range of Measurement</b>	0 – 75 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			
Temperature Range	-20°C to +45°C	<b>Life Expectancy</b>	2-3 Years
Humidity Range	10-95% RH, Non Condensing	<b>Warranty</b>	1 Year

## Known Gas Interferences

Gas	PPM Gas Applied	Reading
Arsine (AsH <sub>3</sub> )	0.51	- 0.1
Carbon Dioxide (CO <sub>2</sub> )	2500 ppm @ 3 min.	-0.4
	16% vol. @ 20 min.	1.2
Carbon Monoxide (CO)	100.00	0.00
Diborane (B <sub>2</sub> H <sub>6</sub> )	5.34	0.90
Diethyl Triamine (H <sub>2</sub> N(CH <sub>2</sub> CH <sub>2</sub> NH) <sub>2</sub> H)	30.00	0.00
Ethylamine ((CH <sub>3</sub> ) <sub>2</sub> NH)	30.00	23.00
Hydrogen (H <sub>2</sub> )	2% vol. @ 3 min.	1.80
	99.9% vol. @ 8 hours	73.20

Gas	PPM Gas Applied	Reading
Hydrogen Chloride (HCl)	20.00	-10.0
Hydrogen Sulfide (H <sub>2</sub> S)	33.00	1.60
Isopropyl Alcohol (IPA) ((CH <sub>3</sub> ) <sub>2</sub> CHOH)	1% vol.	1.00
Nitrogen Dioxide (NO <sub>2</sub> )	96.00	-43.7
Phosphine (Ph <sub>3</sub> )	0.59	-0.1
Silane (SiH <sub>4</sub> )	13.90	-0.2
Sulfur Dioxide (SO <sub>2</sub> )	52.00	-17.0