

# RKI Sensor Specification

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

**Formic Acid (HCOOH)**  
**Part Number:** ES/ESM/ESU-K233M  
**Sensor Application:** 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
Acetic Acid (CH <sub>3</sub> COOH)	16	4.8
Acetone ((CH <sub>3</sub> ) <sub>2</sub> CO)	1.0% Vol.	0.0
Acetylene (C <sub>2</sub> H <sub>2</sub> )	101	0.0
Arsine (AsH <sub>3</sub> )	1.1	0.0
Ammonia (NH <sub>3</sub> )	250	0.0
Bromine (Br <sub>2</sub> )	0.8	1.2
Carbon Dioxide (CO <sub>2</sub> )	5.0% Vol.	0.0
Carbon Monoxide (CO)	3080	0.0
Chlorine (Cl <sub>2</sub> )	0.8	1.8
Diborane (B <sub>2</sub> H <sub>6</sub> )	5.0	-1.0
Disilane (Si <sub>2</sub> H <sub>6</sub> )	14.9	-0.2
Germane (GeH <sub>4</sub> )	10.3	0.0
Hydrogen (H <sub>2</sub> )	2.0% Vol.	0.0
Hydrogen Chloride (HCl)	4.1	4.9
Hydrogen Cyanide (HCN)	5.1	-0.1

Gas	PPM Gas Applied	Reading
Hydrogen Fluoride (HF)	6.0	9.2
Hydrogen Selenide (H <sub>2</sub> Se)	5.7	-0.2
Hydrogen Sulfide (H <sub>2</sub> S)	28.8	-0.2
Iodine (I <sub>2</sub> )	1.2	2.4
Isopropyl Alcohol ((CH <sub>3</sub> ) <sub>2</sub> CHOH)	1.0% Vol.	0.0
Methane (CH <sub>4</sub> )	99.9% Vol.	0.0
Methanol (CH <sub>3</sub> OH)	1.0% Vol.	0.0
Nitric Acid (HNO <sub>3</sub> )	5.0	4.2
Nitrogen Dioxide (NO <sub>2</sub> )	49	3.3
Nitric Oxide (NO)	100	0.0
Nitrogen Trifluoride (NF <sub>3</sub> )	101	0.0
Ozone (O <sub>3</sub> )	0.7	1.1
Phosphine (PH <sub>3</sub> )	2.6	0.0
Silane (SiH <sub>4</sub> )	27.5	-0.1
Sulfur Dioxide (SO <sub>2</sub> )	5.0	3.8

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