

# RKI Sensor Specification

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

## Diethylamine (C<sub>4</sub>H<sub>11</sub>N)

**Part Number:** ES-23RV-C4H11N  
**Sensor Application:** Fixed Systems

| Technical Specifications    |                                 |   |   |
|-----------------------------|---------------------------------|---|---|
| <b>Measuring Principle</b>  | Amperometric 3-electrode sensor | <b>Accuracy</b>   | +/- 10% of reading or<br>+/- 5% of full scale<br>(whichever is greater) |
| <b>Range of Measurement</b> |                                 | <b>Repeatability</b>  | +/- 5% of reading   |
| <b>Resolution</b>           | 1% of full scale                | <b>T<sub>90</sub> Response time<br/>(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  |
|--|-----------------|----------|
| Ammonia (NH <sub>3</sub> )   | 23 ppm          | 30 ppm   |
| Arsine (AsH <sub>3</sub> )   | 0.51 ppm        | -0.1 ppm |
| Carbon Dioxide (CO <sub>2</sub> )  | 2,500 ppm       | -0.5 ppm |
| Carbon Monoxide (CO)   | 100 ppm         | 0.0 ppm  |
| Di-amylamine<br>(CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> NH(CH <sub>2</sub> ) <sub>4</sub> CH <sub>3</sub> ) | 5 ppm           | 1.3 ppm  |
| Diborane (B <sub>2</sub> H <sub>6</sub> )  | 5.34 ppm        | 1.2 ppm  |
| Diethylenetriamine<br>(NH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> ) <sub>2</sub> NH                             | 30 ppm          | 0 ppm    |
| Hydrogen (H <sub>2</sub> )   | 2% vol          | 2.3 ppm  |
| Hydrogen (H <sub>2</sub> )   | 99.9% vol       | 95.2 ppm |
| Hydrogen Chloride (HCl)  | 20 ppm          | -13 ppm  |

| Gas   | PPM Gas Applied | Reading    |
|---|-----------------|------------|
| Hydrogen Sulfide (H <sub>2</sub> S)                               | 33 ppm          | 2.1 ppm    |
| Isopropyl Alcohol (IPA)<br>((CH <sub>3</sub> ) <sub>2</sub> CHOH) | 1% vol          | 1.3 ppm    |
| Isopropyl Alcohol (IPA)<br>((CH <sub>3</sub> ) <sub>2</sub> CHOH) | 9.4% vol        | 0.7 ppm    |
| Methanol (CH <sub>3</sub> OH)                                     | 1% vol          | 0 ppm      |
| Nitrogen Dioxide (NO <sub>2</sub> )                               | 96 ppm          | - 56.8 ppm |
| Phosphine (Ph <sub>3</sub> )                                      | 0.59 ppm        | -0.2 ppm   |
| Silane (SiH <sub>4</sub> )  | 13.9 ppm        | -0.3 ppm   |
| Sulfur Dioxide (SO <sub>2</sub> )                                 | 52 ppm          | -22.1 ppm  |
| Tri-amylamine (C <sub>5</sub> H <sub>11</sub> ) <sub>3</sub> N    | 5 ppm           | 0.7 ppm    |
| Trimethylamine (CH <sub>3</sub> ) <sub>3</sub> N                  | 6 ppm           | 4.5 ppm    |
| t-butylamine (CH <sub>3</sub> ) <sub>3</sub> CNH <sub>2</sub>     | 5 ppm           | 3.5 ppm    |