

# RKI Sensor Specification

## LEL Combustible

**Features:** Fast warm-up time  
 Good zero stability  
 Quick response time  
 Sensitive to all Flammable gases & vapors

**Part Number:** 61-0145RK  
**Sensor Application:** Fixed Systems

Technical Specifications			
<b>Measuring Principle</b>	Catalytic Oxidation	<b>Accuracy</b>	+/- 5 % of reading or +/- 2% LEL (whichever is greater)
<b>Range of Measurement</b>	0 – 100% LEL	<b>Repeatability</b>	+/- 2% of reading
<b>Resolution</b>	1% of full scale	<b>T<sub>90</sub> Response time (20°C, 2 min. exposure)</b>	< 30 seconds

Operating Conditions			
Temperature Range	-40°C to +60°C	<b>Life Expectancy</b>	2 -5 Years
Humidity Range	0-100% RH, Non Condensing	<b>Warranty</b>	1 Year

## Relative Response Information

The response factors below are based on calibration gas as listed at column heading. These factors should be used for rough approximation only. For best accuracy, calibrate with target gas if practical.

To get appropriate setting, multiply surrogate gas concentration by appropriate conversion factor to get desired setting.

	Surrogate Gas Concentration			
	LEL Methane	Hexane	Isobutane	Surrogate cal gas and response setting
Acetone	1.89	0.74	1.00	15 % LEL Hex = 11 % LEL acetone
Benzene	2.85	1.12	1.51	15 % LEL Hex = 17 % LEL benzene
Butyl acrylate	*	*	*	
Butyl acetate	4.34	1.70	2.30	15 % LEL Hex = 25 % LEL butyl acetate
2-Butyl alcohol	4.49	1.76	2.38	15 % LEL Hex = 26 % LEL 2-butyl alcohol
1- Butyl alcohol	6.28	2.47	3.33	15 % LEL Hex = 37 % LEL 1-butyl alcohol
CycloHex	2.77	1.09	1.47	15 % LEL Hex = 16 % LEL cyclohexane
Cumene	5.89	2.31	3.12	15 % LEL Hex = 35 % LEL cumene
Ethylene dichloride	5.55	2.18	2.94	15 % LEL Hex = 33 % LEL ethylene dichloride
Ethyl alcohol	2.04	0.80	1.08	15 % LEL Hex = 12 % LEL ethyl alcohol (ethanol)
Ethyl chloride	1.72	0.67	0.91	15 % LEL Hex = 10 % LEL ethyl chloride
Ethyl acrylate	3.57	1.40	1.89	15 % LEL Hex = 21 % LEL ethyl acrylate
Hexane	2.55	1.00	1.35	Use Hex
Hydrogen	1.19	0.47	0.63	Use hydrogen
Isobutane	1.89	0.74	1.00	Use Isobutane
Isopropanol	2.19	0.86	1.16	Use Isopropanol
Methane	1.00	0.39	0.53	Use methane

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Methanol	1.72	0.67	0.91	15 % LEL Hex = 10 % LEL methyl alcohol (methanol)
Surrogate Gas Concentration				
<b>LEL Methane    Hexane    Isobutane    Surrogate cal gas and response setting</b>				
Methyl acetate	1.68	0.66	0.89	15 % LEL Hex = 10 % LEL methyl acetate
Methyl acrylate	1.92	0.76	1.02	15 % LEL Hex = 11 % LEL methyl acrylate
Methyl ethyl ketone	2.94	1.16	1.56	15 % LEL Hex = 17 % LEL methyl ethyl ketone (MEK)
Methyl isobutyl ketone	2.94	1.16	1.56	15 % LEL Hex = 17 % LEL methyl isobutyl ketone (MIBK)
“Mixed xylenes “	2.94	1.16	1.56	15 % LEL Hex = 17 % LEL xylene
Nonane	4.28	1.68	2.27	15 % LEL Hex = 25 % LEL nonane
Pentane	3.00	1.00	1.56	15 % LEL Hex = 15 % LEL pentane
Propane	1.68	0.66	0.89	Use propane
Styrene	4.09	1.61	2.17	15 % LEL Hex = 24 % LEL styrene
Toluene	2.00	0.79	1.06	15 % LEL Hex = 12 % LEL toluene
Vinyl acetate monomer	3.55	1.39	1.88	15 % LEL Hex = 21 % LEL vinyl acetate

\*- Vapor pressure too low for significant LEL reading.

\*\* - Testing above performed with sensor current at 148mA