



# EXPLOSION PROOF GAS SENSOR/TRANSMITTER

Gas Detection For Life

S Series



## Features

- Explosion proof housing
- Patented water repellent sensor coating
- Operates independent of a controller
- Available for LEL, H<sub>2</sub>S, CO, O<sub>2</sub>, and ppm HC
- IR sensors available for LEL & CO<sub>2</sub>
- H<sub>2</sub> Specific LEL version available
- Long life sensors (2 + years typical)
- Competitively priced
- UL or CSA approved

## Applications

- Petrochemical Plants
- Refineries
- Gas Plants
- Offshore Drilling Platforms
- Water & wastewater treatment plants
- Pulp & paper mills
- Gas, telephone, & electric utilities
- Parking garages
- Manufacturing facilities
- Steel
- Automotive
- Chemical storage buildings

The RKI S series gas sensor/transmitters are highly reliable and cost effective basic 4-20 mA transmitters for the detection of common gas hazards. The S series transmitters are available for LEL (catalytic), LEL (IR) CH<sub>4</sub>, LEL (IR) HC, O<sub>2</sub>, H<sub>2</sub>S, CO, or CO<sub>2</sub> (IR). The electronics are encased inside a potted package to avoid damage from mechanical abuse or corrosion, and this assembly is installed inside an explosion-proof enclosure. All sensors are explosion-proof with flame arrestors and approved for use in hazardous atmospheres. There is also an optional version for oxygen for use in non-hazardous atmospheres.

The only tools required to calibrate the S series are a voltmeter, screwdriver, and cal gas. The zero and calibration functions are performed by adjusting potentiometers on the amplifiers. The amplifier has test jacks for connecting to a voltmeter for calibration purposes, and the sensor response is viewed on the voltmeter as a 100 mV to 500 mV signal. Field calibration can be performed easily and quickly by one person.

The S series transmitters can be used either indoors or outdoors. The flame arrestors utilize a patented coating which make them water repellent, and splash guards are also available for use in very wet environments.

The transmitter operates from 24 VDC (11VDC to 30 VDC), and provides a 4-20mA signal which can be connected to a wide variety of controllers.

# S Series

	LEL	O2	H2S	CO	Infrared		
					CO2	CH4	HC
<b>Part #</b>	65-2400RK 65-2400RK-05	65-2513RK 65-2516RK 65-2504RK*	65-2422RK-05	65-2432RK-05 (65-2435RK) (H2 Compensated)	65-2391RK-03	65-2390RK-CH4	65-2390RK-HC
<b>Measuring Range</b>	0-100% LEL	0-25% Vol.	0-100 ppm	0-300 ppm	0-5% Vol.	0-100% LEL	
<b>Max Current Draw</b>	200 mA (power wires) 25 mA (signal wires) 3 wires	25 mA (2 wire system)			60 mA (power wires) 25 mA (signal wires) 3 wires		
<b>Outputs</b>	4 - 20 mA signal						
<b>Response Time</b>	30 seconds to 90% of concentration	20 seconds to 90% of concentration	45 seconds to 90% of concentration	35 seconds	30 seconds to 90% of concentration		
<b>Operating Environment</b>							
<b>Location</b>	Indoor/outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D.	Indoor/outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D. (65-2516RK)	Indoor or outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D.				
<b>Temperature</b>	-40 to 185° F	-4 to 113° F			-4 to 122° F		
<b>Humidity</b>	0 - 99% RH, non condensing			0 - 99% RH, (15 - 90% RH) non condensing	0 - 99% RH, non condensing		
<b>Housing</b>	Aluminum explosion proof enclosure						
<b>Sensors</b>							
<b>Type</b>	Catalytic Combustion	Galvanic Cell	Electrochemical		Infrared		
<b>Life Expectancy</b>	1 to 2 years with normal intermittent exposure to flammable gas	2 years normal service	2 years normal service when intermittently exposed to H2S	2 to 3 years normal service	5 + years normal service		
<b>Controls</b>							
<b>Zero</b>	Sets transmitter output to 4 mA with 0% LEL output from combustible sensor	Sets transmitter output to 4 mA with an inert gas (zero) output from O2 sensor	Sets transmitter output to 4 mA with zero output from H2S sensor	Sets transmitter output to 4 mA with zero output from CO sensor	Sets transmitter output to 4 mA with zero output from CO2 sensor	Sets transmitter output to 4 mA with 0% LEL output from combustible sensor	
<b>Span</b>	Sets transmitter output to 20 mA with 100% LEL output from combustible sensor	Sets transmitter output to 17.44 mA with 20.9% Vol. O2 (fresh air) output from O2 sensor	Sets transmitter output to 20 mA with 100 ppm output from H2S sensor	Sets transmitter output to 20 mA with 300 ppm output from CO sensor	Sets transmitter output to 20 mA with 5% volume output from CO2 sensor	Sets transmitter output to 20 mA with 100% LEL output from combustible sensor	
<b>Operating Voltage</b>	11 VDC to 30 VDC						
<b>Approvals</b>	65-2400RK UL 65-2400RK-05 C CSA US	65-2516RK C CSA US	C CSA US		C UL US		
<b>Warranty</b>	One year materials and workmanship						

Specifications subject to change without notice. \*Partial pressure sensor for helium applications. Consult factory for detailed info. Made in the USA



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ISO 9001

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