



4-20mA 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, H₂S, CO, O₂, and ppm HC
- Long life sensors (2 + years typical)
- Competitively priced
- Peak and Average readouts
- Easy-to-read back-lit LCD display
- Audible and visible alarms
- Lunch-break mode
- Intrinsically safe, U.L. Classified

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 very cost effective basic 4-20 mA transmitters for detection of common gas hazards. The “S” series transmitters are available for LEL, Oxygen, H₂S, CO, or for 0 - 500 ppm Hydrocarbon detection (for various fuels or solvents). The electronics are encased inside a potted package to avoid damage from mechanical abuse or corrosion, and the amplifier is installed inside an explosion-proof enclosure. Sensors for LEL, H₂S, CO, and ppm HC are explosion-proof with flame arrestors. The Oxygen sensor utilizes an internal I.S. barrier, so all 5 versions are designed for use in 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 connection of a voltmeter for calibration purposes, and the sensor response is viewed on the voltmeter as a 100mV to 500mV 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 (10.5VDC to 30 VDC), and provides a 4-20mA signal which can be connected to a wide variety of controllers.

"S" Series

Part #	LEL 65-2400RK	O ₂ 65-2504RK	H ₂ S 65-2422RK	CO 65-2432RK	HC 65-2460RK	
Min Operating Voltage	11 VDC					
Max Operating Voltage	30 VDC					
Max Current Draw	200 mA (power wires) 25 mA (signal wires) 3 or 4 wires	25 mA (2 wire system)			100 mA (power wires) 25 mA (signal wires) 3 wires	
Signal Output	4 mA at 0% LEL 20 mA at 100% LEL	4 mA at 0 % Oxygen 20 mA at 25% Oxygen	4 mA at 0 ppm H ₂ S 20 mA at 100 ppm H ₂ S	4 mA at 0 ppm CO 20 mA at 300 ppm CO	4 mA at 0 ppm 20 mA at 500 ppm Hexane Linear	
Response Time	30 seconds to 90% of concentration	20 seconds to 90% of concentration	45 seconds to 90% of concentration	30 seconds to 90% of concentration		
Operating Environment						
Location	Indoor or outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D.	Indoor or outdoor. Explosion proof housing and intrinsically safe sensor.	Indoor or outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D.			
Temperature	-40 to 185° F	30 to 120° F	0 to 120° F		30 to 120° F	
Humidity	0 - 99% RH, non condensing				5 - 95% RH, non condensing	
Housing	Aluminum Explosion proof enclosure					
Sensor						
Type	Catalytic Combustion	Galvanic Cell	Electrochemical		Metal Oxide Semiconductor	
Life Expectancy	1 to 2 years normal service when inter- mittently exposed to flammable gas in air mixtures	2 years normal service	2 years normal service when intermit- tently exposed to H ₂ S	2 to 3 years normal service	5 to 10 years typical	
Controls						
Sensor Current	Factory set and sealed	-			Factory set and sealed	
Zero	Sets transmitter out- put to 4 mA with 0% LEL output from combustible sensor	Sets transmitter out- put to 4 mA with an inert gas (zero) out- put from O ₂ sensor	Sets transmitter out- put to 4 mA with zero output from H ₂ S sensor	Sets transmitter out- put to 4 mA with zero output from CO sensor	Sets transmitter output to 4 mA with zero ppm output from sensor	
Span	Sets transmitter out- put to 20 mA with 100% LEL output from combustible sensor	Sets transmitter out- put to 17.44 mA with 20.9% VOL O ₂ (fresh air) output from O ₂ sensor	Sets transmitter out- put to 20 mA with 100 ppm output from H ₂ S sensor	Sets transmitter out- put to 20 mA with 300 ppm output from CO sensor	Sets transmitter output to 20 mA with 500 ppm Hexane (typical) output from sensor	
Tools Needed	Screwdriver and voltmeter used to make adjustments					

Specifications subject to change without notice.

Made in the USA

RKI Instruments, Inc.



INSTRUMENTS

33248 Central Ave.
Union City, CA 94587

Toll Free: (800) 754-5165
Phone: (510) 441-5656
Fax: (510) 441-5650

mail4rki@rkiinstruments.com
www.rkiinstruments.com

Authorized Distributor: