

# DIRECT CONNECT SENSORS



INSTRUMENTS

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35 Vantage Point Drive // Rochester, NY 14624 // Call 1.800.800.5001

NH3 Sensor



Explosion Proof LEL



Explosion Proof O2



IR LEL



## Features

- Available for LEL, H<sub>2</sub>, O<sub>2</sub>, CO, H<sub>2</sub>S, and CO<sub>2</sub> (Class I Div 1 groups B, C, D)
- Available Toxic gases include NH<sub>3</sub>, SO<sub>2</sub>, HCN, and more
- Long life sensors (2 + years typical)
- Water repellent patented sensor-coating (except toxics)
- Explosion proof construction for toxic sensors (Class I, Div. 1 for enclosure, Class I, Div. 2 for sensor)

The RKI direct connect series gas sensors are highly reliable and very cost effective for the detection of common gas hazards. The direct connect series are available for LEL, H<sub>2</sub> Specific LEL, Oxygen, H<sub>2</sub>S, CO, and for a variety of toxic gases. The sensors for LEL, Oxygen, H<sub>2</sub>S, CO<sub>2</sub>, and Carbon Monoxide are explosion-proof with flame arrestors, and approved for use in hazardous areas (Class I, Groups B, C, D). An optional non-explosion proof version is available for oxygen, H<sub>2</sub>S, CO, and CO<sub>2</sub> in non-hazardous atmospheres.



The direct connect sensors can be used in two different ways. The sensors can be mounted directly to the controllers as a complete stand alone system, or they can be mounted to explosion proof junction boxes for remote detection.

The toxic sensors are electrochemical type plug-in sensors, which provide high specificity, fast response, and long life. The plug-in design allows quick replacement in the field with no tools required. Toxic sensors are designed for use in a Class I, Div. 2 explosion proof area. Sensors available for NH<sub>3</sub>, SO<sub>2</sub>, PH<sub>3</sub>, AsH<sub>3</sub>, and HCN.



The direct connect sensors can be used either indoors or outdoors. The flame arrestors for the explosion-proof versions utilize a patented coating which make them water repellent. Also, splash guards are available for use in very wet environments.

All of the direct connect sensors are designed to specifically interface with RKI controllers.

# Explosion Proof

	LEL CH4 LEL H <sub>2</sub>	Infrared			O <sub>2</sub>	CO	H <sub>2</sub> S
		CH <sub>4</sub>	HC	CO <sub>2</sub>			
 <b>Sensor With J-Box</b>	61-1000RK (UL) 61-1000RK-05 (CSA) LEL H2 - 61-1001RK	61-1003RK-CH4	61-1003RK-HC	61-1004RK-02 61-1004RK-03 61-1004RK-05 61-1004RK-10	65-2515RK	65-2437RK-05	65-2427RK-05
 <b>Sensor Only</b>	61-0140RK (UL) 61-0140RK-05 (CSA) LEL H2 - NC-6234-01	61-0190RK-CH4	61-0190RK-HC	61-0191RK-02 61-0191RK-03 61-0191RK-05 61-0191RK-10	65-2514RK	65-2433RK-05	65-2423RK-05
<b>Measuring Range</b>	0-100% LEL	0-100% LEL	0-100% LEL	0-5000 ppm (-02) 0-5.0% Vol. (-03) 0-50% Vol. (-05) 0-100% Vol. (-10)	0-25% Vol.	0-300 ppm	0-100 ppm
<b>Response Time (T-90)</b>	LEL - 30 Seconds / LEL H2 - 20 Seconds	30 Seconds	30 Seconds	30 Seconds	20 Seconds	35 Seconds	
<b>Operating Environment</b>							
<b>Location</b>	Indoor or outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D atmospheres.						
<b>Temperature</b>	-40 ~ 185° F	-4 ~ 122°F			-4 ~ 113° F		
<b>Humidity</b>	0 - 99% RH non condensing						
<b>Housing</b>							
<b>Housing J-Box</b>	Cast aluminum, explosion-proof						
<b>Sensor</b>	Stainless steel, explosion-proof						
<b>Sensor</b>							
<b>Type</b>	Catalytic	Infrared			Galvanic cell	Electrochemical	
<b>Life Expectancy</b>	2 to 3 Years with normal intermittent exposure to flammable gas. 3 years with normal intermittent exposure to H2.	5 + Years normal service			2 Years normal service	2 To 3 years normal service	
<b>Accuracy</b>	+/- 5% of full scale						
<b>Controllers</b>	Compatible with the following controllers: Beacon 110, Beacon 200, and Beacon 410						
<b>Approvals</b>	UL or CSA	C UL US			CSA NRTL		
<b>Warranty</b>	One year materials and workmanship						

# Non Explosion Proof

	CO <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub> S	CO	Toxics
 <b>Sensor With J-Box</b>	61-1007RK-02 61-1007RK-03 61-1007RK-05 61-1007RK-10	65-2497RK *65-2502RK	65-2498RK	65-2499RK	See Chart Below
 <b>Sensor Only</b>	61-0198RK-02 61-0198RK-03 61-0198RK-05 61-0198RK-10	65-2494RK *65-2510RK	65-2495RK	65-2496RK	
<b>Measuring Range</b>	0-5000 ppm 0-5% Vol. 0-50% Vol. 0-100% Vol.	0-25% Vol.	0-100 ppm	0-300 ppm	
<b>Response Time (T-90)</b>	30 seconds or less	20 seconds or less	35 seconds or less		60 seconds or less
<b>Operating Environment</b>					
<b>Location</b>	Indoor or outdoor				
<b>Temperature</b>	-4 ~ 122° F	-4 ~ 113° F			14 ~ 104° F
<b>Humidity</b>	0 - 99% RH non condensing				
<b>Housing</b>					
<b>Housing J-Box</b>	Cast aluminum, explosion-proof				
<b>Sensor</b>	Plastic or aluminum				
<b>Sensor</b>					
<b>Type</b>	Electrochemical				
<b>Life Expectancy</b>	5 Years plus normal service	2 Years normal service	2 to 3 Years with normal intermittent exposure to flammable gas.		
<b>Accuracy</b>	+/- 5% of full scale				
<b>Controllers</b>	Compatible with the following controllers: Beacon 110, Beacon 200, Beacon 410				
<b>Warranty</b>	One year materials and workmanship				

\* Partial pressure sensor for helium (He) applications

Toxic Sensor Transmitter Ordering Infomation			
Part Number With J-Box	Part Number Without J-Box	Gas	Range
65-2301RK-AsH3	65-2300RK-AsH3	Arsine (AsH3)	0 - 1.5 ppm
65-2301RK-NH3	65-2300RK-NH3	Ammonia (NH3)	0 - 75.0 ppm
65-2301RK-HCN	65-2300RK-HCN	Hydrogen Cyanide (HCN)	0 - 15 ppm
65-2301RK-PH3	65-2300RK-PH3	Phosphine (PH3)	0 - 1.00 ppm
65-2301RK-SO2	65-2300RK-SO2	Sulfur Dioxide (SO2)	0 - 6.00 ppm

# DIRECT CONNECT SENSORS

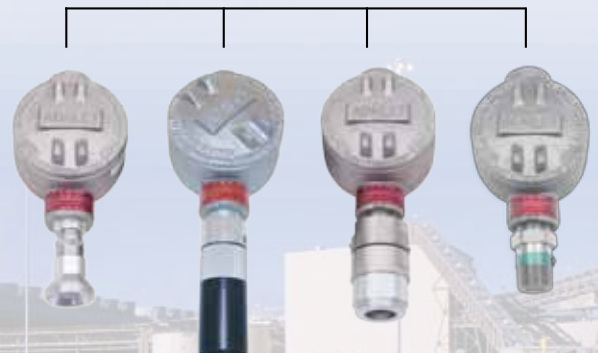


## Available Accessories

- Battery backup
- Calibration kits
- Calibration adaptors
- Splash guards
- Remote horns & lights
- Flow through adaptor
- Air aspirator adaptor / panel
- Dataloggers

## Direct Interface with Beacon 110 / 200 / 410 Controllers

Direct Connect Wiring Matrix				
Sensor	Number of Wires to Controller	Maximum Distance to Controller		
		18 AWG wire	16 AWG wire	14 AWG wire
LEL / CO <sub>2</sub>	4	500 ft.	1,000 ft.	2,000 ft.
Oxygen	2	500 ft.	1,000 ft.	2,000 ft.
H <sub>2</sub> S	2	500 ft.	1,000 ft.	2,000 ft.
CO	2	500 ft.	1,000 ft.	2,000 ft.
Toxics	2	500 ft.	1,000 ft.	2,000 ft.



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