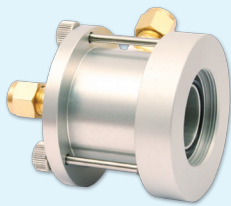


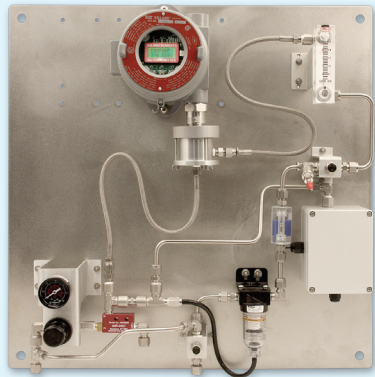
# AVAILABLE ACCESSORIES



Remote Mount Calibration Adaptor



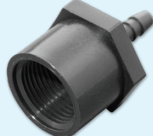
Flow through adaptors



Air aspirator adaptors / panels



Remote horns & lights



Calibration adaptors



Calibration kits

## Direct Interface with Beacon 110 / 200 / 410A / 800 Controllers

M2A Wiring Matrix				
	Number of Wires to Controller	Maximum Distance to Controller		
		18 AWG wire	16 AWG wire	14 AWG wire
M2A Transmitter	3	2500 ft.	5,000 ft.	8,000 ft.

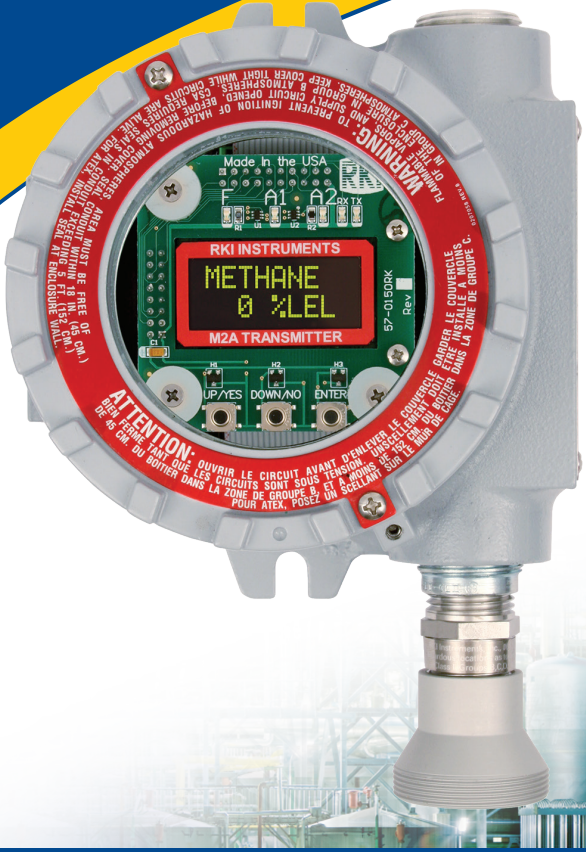
Made in the USA

Authorized Distributor:



Gas Detection For Life

# M2A STAND ALONE TRANSMITTER



- Operates with or without a controller
- Direct digital readout with OLED cold temperature display
- Available gases include
  - LEL, O2, H2S, CO, CO2, and 100% Vol CH4
  - Toxic gases include NH3, AsH3, Cl2, ClO2, HCN, & SO2
- Infrared sensor for combustibles and CO2
- 4-20 mA & digital Modbus outputs standard
- 2 fully programmable alarm relays & fail relay
- Non-intrusive calibration via magnetic wand
- Explosion proof construction
- Patented water repellent sensor cover
- User friendly setup, push buttons & OLED menus
- Long-life sensors (2 + years typical)

The RKI M2A™ is a state-of-the-art transmitter that can operate as an independent, stand-alone monitor or as part of an integrated system. The M2A connects with an analog or digital signal to virtually any controller, PLC, or DCS. Setup procedures are simplified with user friendly push buttons and OLED menus. It utilizes a magnetic wand technique for performing non-intrusive calibration. The M2A provides an automatic zero drift correction feature, which results in more stable readings and reduces the need for adjustments due to sensor aging.

The housing of the M2A does not need to be opened for zeroing or calibration, making it unnecessary to declassify the area for routine maintenance. It is designed so that a complete field calibration can be performed by one person. Sensor construction is rated Class I, Div. 1 Groups B, C, D for flammables, CO, H2S, O2, and CO2, and Class I, Div. 2 for all other toxics.

The transmitter provides a 4-20 mA output in addition to a Modbus digital output. It also has two levels of alarms with relays, plus a fail alarm with relay. A digital display of the gas concentration, as well as alarm and status lights, can be viewed through the front window.

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 Class I, Div. 2 hazardous locations. Sensors available for NH3, AsH3, Cl2, ClO2, HCN, PH3, and SO2


The M2A represents the latest leading edge technology in sensor / transmitters today.

World Leader In Gas Detection & Sensor Technology


RKI Instruments, Inc. | 33248 Central Ave. Union City, CA 94587 | Phone (800) 754-5165 | (510) 441-5656 | Fax (510) 441-5650  
www.rkiinstruments.com





Explosion Proof

	Part #	Combustibles		LEL	PPM	H2 Specific	O2 Oxygen	H2S Hydrogen Sulfide	CO Carbon Monoxide	CH4 Methane	HC Hydrocarbons	CO2 Carbon Dioxide
		UL	65-2640RK	65-2647RK	65-2641RK	65-2643RK-05	65-2645RK-05	65-2646RK-05	65-2649RK-CH4 65-2658RK-CH4	65-2649RK-HC	65-2660RK-02 65-2660RK-03 65-2660RK-05 65-2660RK-10	
		LEL	65-2640RK-05	65-2647RK-05	65-2641RK-05							
Sensors		Catalytic				Galvanic cell	Electrochemical		Infrared			
Measuring Ranges		0 - 100% LEL	0 - 9000 ppm CH4	0 - 100% LEL	0 - 25.0% Vol.	0 - 100 ppm	0 - 300 ppm	0 - 100% LEL 0 - 100% Vol.	0 - 100% LEL	-02 -03 -05 -10	0 - 5000 ppm 0 - 5% Vol. 0 - 50% Vol. 0 - 100% Vol.	
Resolution		1% LEL	20 ppm	1% LEL	0.1% Vol.	1 ppm		1% LEL / 1% Vol.		20 ppm / 0.01% Vol / 0.1% Vol. / 1% Vol.		
Lower Detectable Limit (LDL)		2% of full scale				0.1% Vol.	2% of full scale					
Max Current Draw (24VDC)		160 mA with alarm 1 and alarm 2 active and all relays energized				125 mA with alarm 1 and alarm 2 active and all relays energized			160 mA with alarm 1 and alarm 2 active and all relays energized			
Response Time (T-90)		35 Seconds or less							30 Seconds or less			
Life Expectancy		2 to 3 years with normal service		3 to 5 years with normal service	2 to 3 years with normal service				5 years plus with normal service			
Accuracy (which ever is greater)		± 5% of reading or ± 2% of full scale			± 0.5% Vol. O2	± 5% of reading or ± 2 ppm H2S	± 5% of reading or ± 5 ppm CO	± 5% of reading or ± 2 % of full scale				
Weather Resistant		Patented water repellent sensor coating										
Alarms												
Alarm Settings		Two fully programmable alarm set points, increasing / decreasing, latching / self-resetting, on delays, off delays, normally energized or de-energized										
Alarm Indication		Visual LEDs. Alarm 1, Amber; Alarm 2, Red; Fail, Red										
Relays		5 amp form 'C' contacts for alarm 1, alarm 2, and fail										
Physical												
Dimensions		Height: 8.5" (215 mm), Width: 5.2" (132 mm), Depth: 4.5" (114 mm)										
Display		Alphanumeric OLED display. 8 characters per line; 2 lines for gas concentration readout, plus user-friendly calibration and setup										
Enclosure		Explosion proof for Class I, Div 1, Groups B, C, D.										
Enclosure Rating		NEMA 4X, explosion proof, watertight, cast aluminum with o-ring seal and epoxy powder coating										
Controls		Magnet used for calibration functions. Calibrates without opening the housing. Internal push-button controls also available for calibration and setup										
Operating Environment												
Operating Temperature		-40°F to 167°F -40°C to 75°C			-4°F to 113°F -20°C to 45°C	-40°F to 104°F -40°C to 40°C	23°F to 104°F -5°C to 40°C	-40°F to 122°F -40°C to 50°C				
Relative Humidity		5 - 95% RH non-condensing										
Location		Indoor or outdoor. Explosion proof for Class I, Div. 1, Groups B, C, D.										
Operating Voltage		10 VDC - 30 VDC										
Outputs												
Analog		Linear 4-20 mA signal, into 1000 ohms impedance max (24DC), 0 - 500 ohms max (12VDC) corresponding to 0 - full scale										
Digital		Modbus RTU output standard, fully configurable, 2-wire RS-485, 1200 to 19.2k baud										
Approvals		65-2640RK UL	65-2641RK UL	C CSA US				C UL US				
		65-2640RK-05 C CSA US	65-2641RK-05 C CSA US									
Controllers		Beacon 110, Beacon 200, Beacon 410A, Beacon 800 as well as most DCS / PLC systems										
Warranty		One year material and workmanship										

Non Explosion Proof

	<b>O2</b> Oxygen	<b>H2S</b> Hydrogen Sulfide	<b>CO</b> Carbon Monoxide	<b>Toxics</b> See Chart Below	<b>CO2</b> Carbon Dioxide
 <b>Part#</b>	65-2666RK *65-2644RK	65-2662RK	65-2663RK	See Chart Below	65-2661RK-02 65-2661RK-03 65-2661RK-05 65-2661RK-10
<b>Sensors</b>	Galvanic cell	Electrochemical			Infrared
<b>Measuring Ranges</b>	0-25% Vol.	0-100 ppm	0-300 ppm	See Chart Below	-02    0 - 5000    ppm
					-03    0 - 5%    Vol.
					-05    0 - 50%    Vol.
<b>Resolution</b>	0.1% Vol.	1 ppm		See Chart Below	20 ppm / 0.01% Vol. / 0.1% Vol. / 1%Vol.
<b>Lower Detectable Limit (LDL)</b>	0.1% Vol.	2% of full scale			
<b>Response Time (T-90)</b>	35 Seconds or less			60 Seconds or less	30 Seconds or less
<b>Max Current Draw (24VDC)</b>	125 mA with alarm 1 and alarm 2 active and all relays energized				160 mA with alarm 1 and alarm 2 active and all relays energized
<b>Life Expectancy</b>	2 to 3 years with normal service				5 years plus
<b>Accuracy</b> (which ever is greater)	± 0.5% Vol. O2	± 5% of reading or ± 2 ppm H2S	± 5% of reading or ± 5 ppm CO	± 10% of reading or ± 5% of full scale	± 5% of reading or ± 2% of full scale
<b>Alarms</b>					
<b>Alarm Settings</b>	Two fully programmable alarm set points, increasing / decreasing, latching / self-resetting, on delays, off delays, normally energized or de-energized,				
<b>Alarm Indication</b>	Visual LEDs. Alarm 1=Amber; Alarm 2=Red; Fail=Red				
<b>Relays</b>	5 Amp form 'C' contacts for alarm 1, alarm 2, and fail				
<b>Physical</b>					
<b>Dimensions</b>	Height: 8.5" (215 mm), Width: 5.2" (132 mm), Depth: 4.5" (114 mm)				
<b>Display</b>	Alphanumeric OLED display. 8 characters per line; 2 lines for gas concentration readout, plus user-friendly calibration and setup				
<b>Sensor Rating</b>	Non explosion proof construction, designed for Class I, Div. 2, Groups B, C, D (no certification)				
<b>Housing J-Box</b>	NEMA 4X, explosion proof, watertight, cast aluminum with o-ring seal and epoxy powder coating				
<b>Controls</b>	Magnet used for calibration functions. Calibrates without opening the housing. Internal push-button controls also available for calibration and setup				
<b>Sensor</b>	Aluminum / Plastic (non explosion proof)				
<b>Operating Environment</b>					
<b>Operating Temperature</b>	-4°F to 113°F -20°C to 45°C	-40°F to 104°F -40°C to 40°C	23°F to 104°F -5°C to 40°C	14°F to 104°F -10°C to 40°C	-40°F to 122°F -40°C to 50°C
<b>Relative Humidity</b>	5 - 95% RH non-condensing				
<b>Location</b>	Indoor or outdoor				
<b>Operating Voltage</b>	10 VDC - 30 VDC				
<b>Outputs</b>					
<b>Analog</b>	Linear 4-20 mA signal, into 1000 ohms impedance max (24DC), 0 - 500 ohms max (12VDC) corresponding to 0 - full scale				
<b>Digital</b>	Modbus RTU output standard, fully configurable, 2-wire RS-485, 1200 to 19.2k baud				
<b>Controllers</b>	Beacon 110, Beacon 200, Beacon 410A, Beacon 800 as well as most DCS / PLC systems				
<b>Warranty</b>	One year materials and workmanship				

\*Partial pressure sensor for helium (He) applications. Consult factory for details.

	M2A Toxic Transmitter Sensor Ordering Information				
	Part Number With J-Box	Gas	Range	Resolution	Sensor Type
	65-2648RK-NH3	Ammonia (NH3)	0 - 75.0 ppm	0.1 ppm	ESM -01
	65-2648RK-AsH3	Arsine (AsH3)	0 - 75.0 ppm	0.1 ppm	ESM -01
	65-2670RK-CL2	Chlorine (Cl2)	0 - 3.00 ppm	0.01 ppm	CT-7
	65-2670RK-CL210	Chlorine (Cl2)	0 - 10.0 ppm	0.1 ppm	CT-7
	65-2670RK-CLO2	Chlorine Dioxide (ClO2)	0 - 1.00 ppm	0.01 ppm	CT-7
	65-2648RK-HCN	Hydrogen Cyanide (HCN)	0 - 15.0 ppm	0.1 ppm	ESM -01
	65-2648RK-PH3	Phosphine (PH3)	0 - 1.00 ppm	0.01 ppm	ESM -01
	65-2648RK-SO2	Sulfur Dioxide (SO2)	0 - 6.00 ppm	0.01 ppm	ESM -01
ESM-01					
CT-7					