

# M2 STAND ALONE TRANSMITTER

FO22-0910



## Features

- Operates independent of a controller
- Direct digital readout on backlit LCD
- Available for combustible gases, oxygen, carbon dioxide, and toxic gases
- 4-20 mA & digital Modbus outputs standard
- Non-intrusive calibration via magnetic wand
- 2 fully programmable alarm relays & fail relay
- Explosion proof housing
- Patented water repellent sensor cover (except non explosion proof toxics)
- User friendly setup, push buttons & LCD menus
- Approved versions for explosion proof sensors
- Long-life sensors (2 + years typical)

The RKI M2™ is a state-of-the-art transmitter that can operate as an independent, stand-alone system or as part of a system connected with an analog or digital signal to virtually any controller, PLC, or DCS. Setup procedures are simplified with user friendly push buttons and LCD menus. It utilizes a magnetic wand technique for performing non-intrusive calibration. The M2 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 M2 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 for flammables, CO, H<sub>2</sub>S, O<sub>2</sub>, and CO<sub>2</sub>, 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 M2 represents the latest leading edge technology in sensor / transmitters today.

World Leader In Gas Detection & Sensor Technology

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# Explosion Proof

Sensors	LEL	O2	H2S	CO	CO2	CH4	HC
Types	Catalytic	Galvanic cell	Electrochemical		Infrared		
 Part#	65-2610RK 65-2610RK-05 65-2611RK (H2 Specific) 65-2611RK-05	65-2613RK-05	65-2615RK-05	65-2616RK-05	65-2630RK-02 65-2630RK-03 65-2630RK-05 65-2630RK-10	65-2619RK-CH4 65-2628RK-CH4	65-2619RK-HC
Measuring Ranges	0 - 100 % LEL	0 - 25.0% Vol	0 - 100 ppm	0 - 300 ppm	-02 0 - 5000 ppm -03 0 - 5% Vol -05 0 - 50% Vol -10 0 - 100% Vol	0 - 100% LEL 0 - 100% Vol	0 - 100% LEL
Weather Resistant	Patented water repellent sensor coating						
<b>Outputs</b>							
Analog	4-20 mA signal, into 500 ohms impedance max, corresponding to 0 - full scale						
Digital	Modbus RTU output standard, fully configurable, 2-wire RS-485, 1200 to 19.2k baud						
<b>Alarms</b>							
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						
<b>Physical</b>							
Dimensions	Height: 8.5" (215 mm), Width: 5.2" (132 mm), Depth: 4.5" (114 mm)						
Display	Alphanumeric display with backlighting. 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 4, 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						
<b>Operating Environment</b>							
Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C)						
Relative Humidity	5 - 95% RH non-condensing						
Location	Indoor or outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D.						
<b>Operating Voltage</b>							
Accuracy	+/- 5% of full scale						
Approvals	65-2610RK-05 65-2611RK-05 C CSA US	65-2610RK 65-2611RK UL	65-2613RK-05 C CSA US	C CSA US		C UL US	
Warranty	One year material and workmanship						

# Non Explosion Proof

Sensors	H2S	O2	CO	Toxics	CO2
	Hydrogen Sulfide	Oxygen	Carbon Monoxide		Carbon Dioxide
Sensor With J-Box	65-2632RK	65-2613RK *65-2614RK	65-2633RK	See Chart Below	65-2631RK-02 65-2631RK-03 65-2631RK-05 65-2631RK-10
Types	Electro-chemical			Electro-chemical	Infrared
Measuring Ranges	0-100 ppm	0-25% Vol.	0-300 ppm	See Chart Below	-02 0-5000 ppm -03 0-5% Vol. -05 0-50% Vol. -10 0-100% Vol.
Response Time (T-90)	35 Seconds or less			60 Seconds or less	30 Seconds or less
<b>Outputs</b>					
Analog	Linear 4-20 mA signal, into 500 ohms impedance max, corresponding to 0 - full scale				
Digital	Modbus RTU output standard, fully configurable, 2-wire RS-485, 1200 to 19.2k baud				
<b>Alarms</b>					
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				
<b>Housing</b>					
Dimensions	Height: 8.5" (215 mm), Width: 5.2" (132 mm), Depth: 4.5" (114 mm)				
Display	Alphanumeric display with backlighting. 8 characters per line; 2 lines for gas concentration readout, plus user-friendly calibration and setup				
Sensor Rating	non explosion proof construction, Class I, Div. 2, Groups B, C, D				
Housing J-Box	NEMA 4, 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				
Sensor	Aluminum / Plastic (non explosion proof)				
<b>Operating Environment</b>					
Operating Temperature	-4°F to 122°F (-20°C ~ 50°C)				
Relative Humidity	5 - 95% RH non-condensing				
Location	Indoor or outdoor.				
Life Expectancy	2 to 3 years with normal intermittent exposure to flammable gas. IR sensors 5 years plus				IR Sensors 5 years plus
Controllers	Compatible with all RKI Beacon controllers, as well as most DCS / PLC systems: Beacon 110, Beacon 200, Beacon 410, Beacon 800, and Pioneer 4W and Pioneer 16R				
Operating Voltage	19 VDC - 30 VDC				
Accuracy	+/- 5% of full scale				
Warranty	One year materials and workmanship				

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

	M2 Toxic Transmitter Sensor Ordering Information		
	Part Number With J-Box	Gas	Range
	65-2618RK-Ash3	Arsine (Ash3)	0 - 1.5 ppm
	65-2618RK-NH3	Ammonia (NH3)	0 - 75.0 ppm
	65-2618RK-PH3	Phosphine (PH3)	0 - 1.00 ppm
	65-2618RK-HCN	Hydrogen Cyanide	0 - 15 ppm
	65-2618RK-SO2	Sulfur Dioxide (SO2)	0 - 6.00 ppm

# M2 STAND ALONE TRANSMITTER



## Available Accessories

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

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

M2 Wiring Matrix				
	Number of Wires to Controller	Maximum Distance to Controller		
		18 AWG wire	16 AWG wire	14 AWG wire
M2 Transmitter	3	2500 ft.	5,000 ft.	8,000 ft.



Authorized Distributor:



10000363



ISO 9001

Gas Detection For Life