**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, CI2, CI02, 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 M2A represents the latest leading edge technology in sensor / transmitters today.

---

**AVAILABLE ACCESSORIES**

- Remote Mount Calibration Adaptor
- Flow through adaptors
- Air aspirator adaptors / panels
- Remote horns & lights
- Calibration adaptors
- Calibration kits
- Calibration adaptors
- Calibration kits

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

<table>
<thead>
<tr>
<th>Number of Wires to Controller</th>
<th>Maximum Distance to Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 AWG wire</td>
<td>2500 ft. 5,000 ft. 8,000 ft.</td>
</tr>
</tbody>
</table>

**M2A Wiring Matrix**

- 3 wires to controller

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, CI2, CI02, HCN, PH3, and SO2.

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

---

**Private Label Program**

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

### Measuring Ranges

<table>
<thead>
<tr>
<th>Volume %</th>
<th>Lower Detectable Limit (LDL)</th>
<th>1% LEL</th>
<th>0 - 100 ppm</th>
<th>0 - 300 ppm</th>
<th>0 - 100% LEL</th>
<th>0 - 100% Vol.</th>
<th>Response Time (T-90)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEL</td>
<td>0%</td>
<td>0.01%</td>
<td>0.1%</td>
<td>1%</td>
<td>20 ppm</td>
<td>35 Seconds or less</td>
<td></td>
</tr>
<tr>
<td>LEL</td>
<td>0%</td>
<td>0.01%</td>
<td>0.1%</td>
<td>1%</td>
<td>20 ppm</td>
<td>35 Seconds or less</td>
<td></td>
</tr>
<tr>
<td>Vol</td>
<td>0%</td>
<td>0.01%</td>
<td>0.1%</td>
<td>1%</td>
<td>20 ppm</td>
<td>35 Seconds or less</td>
<td></td>
</tr>
<tr>
<td>Vol</td>
<td>0%</td>
<td>0.01%</td>
<td>0.1%</td>
<td>1%</td>
<td>20 ppm</td>
<td>35 Seconds or less</td>
<td></td>
</tr>
</tbody>
</table>

### Life Expectancy

- Combustibles: 5 to 9 years with normal service
- Oxygen: 5 - 9 years with normal service
- Carbon Monoxide: 5 - 9 years with normal service

### Physical

- Display: Alphanumeric OLED display, 8 characters per line
- Dimensions: Height: 8.5" (215 mm), Width: 5.2" (132 mm), Depth: 4.5" (114 mm)
- Operating Temperature: -4°F to 122°F
- Operating Humidity: 5% RH non-condensing

### Operating Environment

- Location: Indoor or outdoor

### Outputs

- Digital Modbus RTU output, fully configurable, 2-wire RS-485, 1000 to 19.2 kbit

### Operating Voltage

- 10 VDC - 30 VDC

### Controllers

- Beacon 110, Beacon 200, Beacon 410A, Beacon 800 as well as most DCS / PLC systems

### Warranty

- One year material and workmanship

### Sensors

- Indoor push-button controls also available for calibration and setup

### Alarms

- Two fully programmable alarm set points, increasing / decreasing, self-resetting, on delays, off delays, normally energized or de-energized

### ESM - 01

- +65-2641RK-05
- +65-2647RK-05
- +65-2666RK

### Part Number With J-Box

- +65-2644RK
- +65-2648RK
- +65-2660RK
- +65-2661RK
- +65-2663RK
- +65-2665RK

## Non Explosion Proof

### Measuring Ranges

<table>
<thead>
<tr>
<th>Volume %</th>
<th>Resolution</th>
<th>Lower Detectable Limit (LDL)</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEL</td>
<td>0.1%</td>
<td>0%</td>
<td>2% of full scale</td>
</tr>
<tr>
<td>Vol</td>
<td>0.1%</td>
<td>0%</td>
<td>2% of full scale</td>
</tr>
</tbody>
</table>

### Life Expectancy

- Combustibles: 30 Seconds or less
- Oxygen: 30 Seconds or less

### Physical

- Display: Internal push-button controls also available for calibration and setup
- Dimensions: Height: 8.5" (215 mm), Width: 5.2" (132 mm), Depth: 4.5" (114 mm)
- Operating Temperature: -4°C to 50°C
- Operating Humidity: 5% - 95% RH non-condensing

### Operating Environment

- Indoor or outdoor

### Outputs

- Analog Linear 4-20 mA signal, into 1000 ohms impedance max (24VDC), 0 - 500 ohms min (12VDC) corresponding to 0 - full scale

### Controllers

- Beacon 110, Beacon 200, Beacon 410A, Beacon 800 as well as most DCS / PLC systems

### Warranty

- One year material and workmanship