Environmental
Remediation Equipment Inc.™

M2A STAND ALONE TRANSMITTER

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.

Features

- 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)

ESM-01	CT-7	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

	LEL General Purpose	LEL H2 Specific	O2 Oxygen	H2S Hydrogen Sulfide	CO Carbon Monoxid	CH4 Methane	HC Hydrocarbons	CO2 Carbon Dioxide	
Sensors	Catalytic		Galvanic cell	Electrochemical		Infrared			
Measuring Ranges	0 - 100 % LEL		0 - 25.0% Vol.	0 - 100 ppm	0 - 300 ppm	0 - 100% LEL 0 - 100% Vol.	0 - 100% LEL	-02	0 - 5000 ppm
								-03 -05	0 - 5% Vol. 0 - 50% Vol.
								-10	0 - 100% Vol.
Resolution	1% LEL		0.1% Vol.	1 ppm		1% LEL / 1% Vol.		20 ppm / 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 % LEL		± 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	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 65-2640RK-05 C CSA US C UL US C CSA US	65-2641RK UL 65-2641RK-05 C CSA US	C CSA US			C UL US			
Controllers	Beacon 110, Beacon 200, Beacon 410A, Beacon 800 as well as most DCS / PLC systems								
Warranty	One year material and workmanship								

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

Available Accessories

Remote Mount
Calibration Adaptor

Flow through adaptors

Air aspirator adaptors / panels

Remote horns & lights

Calibration adaptors

Calibration kits