



# FOUR CHANNEL WALL MOUNT CONTROLLER

Gas Detection For Life

Beacon™ 410 Model



## Features

- Simultaneously monitor up to 4 channels
- Digital display of all 4 channels
- LEL/O<sub>2</sub>/CO<sub>2</sub>/toxic direct connect sensors
- Accepts any 4-20 mA transmitter, 2 or 3 wire
- 3 programmable alarm levels per channel
- Up to 3 configurable alarm relays per channel
- Zero follower automatically compensates sensor drift
- 4-20 mA analog & Modbus digital output standard
- 115 / 220 VAC or 24 VDC operation
- Audible alarm with silence feature
- Alarm reset switch
- Built in trouble alarm with relay
- Weather proof NEMA 4X enclosure
- Optional strobe & battery backup available

## Industry Applications

- Petrochemical plants
- Refineries
- Water & wastewater treatment plants
- Pulp & paper mills
- Gas, telephone, & electric utilities
- Parking garages
- Manufacturing facilities
- Steel
- Automotive
- HVAC

The Beacon 410 is a highly configurable, microprocessor-based, flexible and easy to use 4 channel gas monitor. It simultaneously displays the gas type, readings, and status for 4 channels of gas detection. It can monitor any combination of direct connect sensors (LEL combustibles, oxygen, CO<sub>2</sub>, and toxic gas sensors, as well as any 4-20mA transmitters.

Each channel has 3 fully configurable alarm points. A built-in silenceable audible alarm alerts you to alarm conditions. Each channel also has 2 dedicated fully configurable relays and there is a bank of common relays as well. The common relays can optionally be configured as additional channel relays allowing up to 3 alarm relays per channel.

Each channel provides a 4-20mA output signal. A digital Modbus interface for remote logging of data via a Modbus network is standard. A Min-Max feature retains high & low peak readings for review at any time.

Field calibration is made simple by the easy to use Calibration Mode. A fully configurable high visibility strobe is available as an option. The unit can be powered from 115/220 VAC, an external 24 VDC source, or a 24 VDC backup battery. A trickle charging battery backup feature is also available as an option.

All features and functions of the Beacon 410 are controlled by easy to use menus on the backlit LCD display. The form-C (SPDT) relay contacts are rated at 10A, 250V, reducing or eliminating the need for additional slave relays. All features of the Beacon 410 are built into the unit so you never need to purchase or maintain any "add-on" cards or components.

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World Leader In Gas Detection & Sensor Technology  
www.rkiinstruments.com

# Beacon™ 410 Model

## Physical

Dimensions	Height: 12.5" (318 mm) x Width: 11" (279 mm) x Depth: 6.4" (136 mm)
Enclosure	NEMA 4X non-metallic for indoor and outdoor locations
Conduit Connection	3/4" NPT conduit hubs, 4 provided, for sensor, power, & relay wiring
Wiring Termination	Screw type terminal block, 14 gauge max
Power	115 VAC & 220 VAC, or 24 VDC nominal, battery backup option available
Controls	Display PCB Control Switches: <ul style="list-style-type: none"><li>• UP/YES push button switch</li><li>• ESCAPE push button switch</li><li>• External reset switch</li><li>• DOWN/NO push button switch</li><li>• ENTER push button switch</li><li>• On/Off toggle switch</li></ul>

## Environmental

Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Storage Temperature	-4°F to 158°F (-20°C to 70°C)
Enclosure Rating	NEMA-4X enclosure, chemical and weather resistant. Suitable for indoor and outdoor installations.

## Inputs

Direct Wired Sensors	LEL, Oxygen, Carbon Dioxide, and toxic gas sensors. Remote amp not required for less than 500 feet
4-20 mA Sensors	Accepts any 4-20 mA transmitter (24 VDC, 2 or 3 wire). A wide variety of RKI/Riken sensors are available with 4-20 mA signals. Wiring distances up to 8,000 feet
Sampling Methods	Diffusion and sample draw heads available

## Outputs

Relays	Two flexible, programmable Form-C (C, NO, NC) relays per channel, plus five common relays (Fail, Alarm-1, Alarm-2, Alarm-3, Alarm-Any). Common relays may optionally be assigned to function as additional channel alarm relays, providing for up to three alarm relays per channel. 10A contact rating.
4-20 mA	Signal output, 4-20 mA (maximum load impedance 500 ohms), per channel
RS-485	Modbus format RS-485 serial output of all channel data, including gas reading and alarm status.
Display	4 x 20 backlit LCD display
Audible	Built-in audible alarm, 94 dB, mounted on enclosure Coded output: pulsing = gas alarm, steady = fail
Visual	1. Alarm LED's (on Display PCB) <ul style="list-style-type: none"><li>• Alarm 1, yellow</li><li>• Alarm 2, orange</li><li>• Alarm 3, red</li><li>• Fail, yellow</li></ul> 2. Green Pilot LED to indicate AC power connected (on Display PCB) 3. An optional 24 VDC NEMA 4X strobe mounted to top of case.

## Approvals

Warranty	One year materials and workmanship
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Specifications subject to change without notice.

Made in the USA



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