



# FOUR CHANNEL WALL MOUNT CONTROLLER

Gas Detection For Life

Beacon™ 410A Model



## Features

- Simultaneously control up to 4 gas monitoring channels
- OLED 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
- Up to 3 programmable alarm levels per channel
- Up to 3 configurable alarm relays per channel
- 4-20 mA analog & Modbus digital output standard
- 115 / 220 VAC or 24 VDC operation
- Audible alarm with silence feature
- RFI / EMI Resistant
- Alarm reset switch
- Built in trouble alarm with relay
- Weather and corrosion resistant NEMA 4X enclosure

## Applications

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

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

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

*Optional Strobe Light*

A fully configurable, high visibility strobe is available as an option. The unit can be powered from 115/220 VAC, or an external 24 VDC source. A trickle charging battery backup feature with battery assembly is also available as an option.

All features and functions of the Beacon 410A are controlled by easy to use menus on the OLED display. All features including form-C relay contacts of the Beacon 410A 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**  
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# Beacon™ 410A Model

## Physical

|                      |                                                                                                                                                                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions           | Height: 12.5" (31.8 cm) x Width: 11" (27.9 cm) x Depth: 6.4" (13.6 cm)                                                                                                                                                                                                               |
| Enclosure            | NEMA 4X Fiberglass / polyester with lexan window 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                                                                                                                                                                                                                 |
| Optional Accessories | Strobe light, and Battery Backup Assembly                                                                                                                                                                                                                                            |
| 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   | -40°F to 158°F (-40°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              | 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, 250V.   |
| 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 | Four line OLED display                                                                                                                                                                                                                                                                                           |
| Audible | Built-in audible alarm, 94 dB, mounted on enclosure<br>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)<br>3. An optional 24 VDC NEMA 4X strobe mounted to top of case. |

## Approvals

|          |                                                         |
|----------|---------------------------------------------------------|
| Warranty | CSA Certified to CSA C22.2 No. 61010-1-12 and UL61010-1 |
|          | One year materials and workmanship                      |



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