

Beacon 410A

4 Channel Wall Mount Controller

- Simultaneously control up to 4 gas monitoring channels
- OLED display of all 4 channels
- LEL / O2 / CO2 / 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

OVERVIEW

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, O2, CO2, 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. 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



APPLICATIONS

- Petrochemical plants
- Refineries
- Water & wastewater treatment plants
- Gas, telephone, & electric utilities
- Parking garages
- Manufacturing facilities
- HVAC
- Laboratories



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 For More
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Physical					
Dimensions	Height 318 mm Width 279 mm Depth: 136 mm				
Enclosure	NEMA 4X Fibreglass / polyester with lexan window for indoor and outdoor locations.				
Conduit connection	19mm NPT conduit hubs, 4 provided, for sensor, power and 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"> • UP/YES push button switch • DOWN/NO push button switch • ESCAPE push button switch • ENTER push button switch • External reset switch • On/Off toggle switch 				
Environmental					
Operating temp	-20°C to 50°C				
Storage temp	-40°C to 70°C				
Relative humidity	0 to 95% RH (non-condensing)				
Enclosure rating	NEMA-4X enclosure, waterproof, chemical and weather resistant. Suitable for indoor and outdoor installations.				
Inputs					
Direct wired sensors	LEL, Oxygen, Carbon Monoxide and Toxic Gas Sensors. Remote amp not required for less than 150 meters				
4-20 mA	Accepts any 4-20 mA transmitters (24 VDC, 2 or 3 wire). A wide variety of RKI/Riken sensors are available with 4-20 mA signals. Wiring distances up to 5,000 metres.				
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. Coded output: Pulsing = gas alarm, Steady = fail				
Visual	1. Alarm LED's (on Display PCB) <ul style="list-style-type: none"> • Alarm 1, yellow • Alarm 2, orange • Alarm 3, red • Fail, yellow 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				
Warranty	One year materials and workmanship.				
Partial List of Detectable Gases					
Many other gases or ranges available. Contact Control Equipment for gases or ranges not listed					
Ammonia (NH3)	0 – 75.0 ppm	Combustibles	0 – 100% LEL	Nitrogen Dioxide (NO2)	0 – 15.0 ppm
Arsine (AsH3)	0 – 0.2 ppm	Diborane (B2H6)	0 – 30.0 ppm	Nitrogen Trifluoride (NF3)	0 – 30.0 ppm
Boron Trichloride (BCl3)	0 – 15.0 ppm	Fluorine (F2)	0 – 5/15 ppm	Oxygen (O2)	0 – 25.0%
Carbon Dioxide (CO2)	0 – 1.0 %	Hydrogen (H2)	0 – 2000 ppm	Ozone (O3)	0 – 1.0 ppm
Carbon Monoxide (CO)	0 – 300 ppm	Hydrogen Chloride (HCl)	0 – 15.0 ppm	Phosphine (PH3)	0 – 1.0 ppm
Chlorine (Cl2)	0 – 3.0 ppm	Hydrogen Fluoride (HF)	0 – 9.0 ppm	Silane (SiH4)	0 – 15.0 ppm
Chlorine Dioxide (ClO2)	0 – 1.0 ppm	Hydrogen Sulfide (H2S)	0 – 100.0 ppm	Sulphur Dioxide (SO2)	0 – 30.0 ppm
Chlorine Trifluoride (ClF3)	0 – 1.0 ppm	Nitric Oxide (NO)	0 – 100.0 ppm	TEOS (Si(OC2H5)4)	0 – 15/30 ppm