

# SINGLE CHANNEL CONTROLLER

Gas Detection for Life

Beacon 110 Model



## Features

- Low cost versatile solution
- Compact, weatherproof, NEMA 4X enclosure
- Accepts RKI LEL/O<sub>2</sub>/H<sub>2</sub>S/CO direct connect sensors
- 115/220 VAC or 24 VDC operation
- Long life sensors (2+ years typical)
- Accepts any 4-20 mA transmitter
- Audible alarm with reset button
- Two programmable alarm levels
- Built-in trouble alarm with relay
- Relay rating 10 amps, form C
- Provides 4-20 mA output



## Applications

- Laboratories
- Petrochemical plants
- Refineries
- Water & wastewater treatment plants
- Pulp & paper mills
- Manufacturing facilities
- HVAC
- Gas, telephone, & electric utilities



The Beacon 110 is a powerful, low cost fixed system controller for one point of gas detection. It is microprocessor controlled, versatile, simple to install and operate, and priced to be the industry's best value single gas detection controller. It is capable of accepting RKI sensors directly for Oxygen, Hydrogen Sulfide or Carbon Monoxide. The Beacon 110 can also accept any 4-20 mA transmitter (2 or 3 wire, 24 VDC) which make it a very handy controller for single channel toxic applications. Sensors can be mounted directly at the Beacon 110 housing, or can be wired remote from the controller.

The 10 amp rated relays are strong enough to directly power external alarms and horns. The digital display has back-lighting and simultaneous readout of the gas type and concentration.

The Beacon 110 is also housed in a NEMA 4X rated case for a weather tight seal. This case design complies with lock out / tag out standards and can be fully secured. An external reset switch allows the alarm to be silenced from outside of the controller housing. The Beacon 110 ships complete with a wall mounting kit for easy installation.

RKI offers the industry's widest selection of standard and toxic gas detection sensors, which can be utilized with the Beacon 110, providing gas monitoring protection for almost any application.



RIKEN KEIKI

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Physical	
<b>Dimensions:</b>	Height: 216 mm Width: 178 mm Depth: 109 mm
<b>Enclosure:</b>	Wall mounting grey polycarbonate with hinged cover.
<b>Conduit Connection:</b>	3/4" NPT conduit hubs, 2 provided, 1 for sensor wiring and 1 for power and relay wiring.
<b>Wiring Termination:</b>	Screw type terminal block 14 gauge max.
Environmental	
<b>Operating Temp:</b>	-20°C to 50°C
<b>Storage Temp:</b>	-20°C to 70°C
<b>Relative Humidity:</b>	0 – 100% RH
<b>Enclosure Rating:</b>	NEMA-4X enclosure, waterproof, chemical and weather resistant.
Inputs	
<b>4-20 mA</b>	Accepts any 4-20 mA transmitters (24 VDC, 2 or 3 wire). Wiring distances up to 1,500 metres.
<b>Sampling methods:</b>	Diffusion and sample draw heads available. Carbon Monoxide (CO) 0 - 300 ppm, Combustibles 0 -100% LEL, Nitrogen Dioxide (NO2) 0 - 15.0 ppm (Refer to list of detectable Gases for additional ranges).
Outputs	
<b>Relays:</b>	3 Relays - 10 amp rating, SPDT isolated contacts. 2 for gas alarm levels and 1 trouble relay. Relays fully programmable for: increasing or decreasing alarms, latching or self reset, normally energized or normally de-energized, time delay for alarm on and alarm off.
<b>24 VDC:</b>	24 VDC (400 mA max) output provided to operate sample drawing adaptors or other accessories
<b>Display:</b>	2 x 8 Alphanumeric display with backlighting.
<b>Audible:</b>	Built-in audible alarm, 94 dB, mounted on enclosure. Coded output: Pulsing = gas alarm, Steady = fail
<b>Visual:</b>	3 Visual LED alarms on front cover for alarm indications and malfunction.
<b>Power:</b>	240 VAC or 24 VDC. Optional – 115 VAC. Battery backup option available.
<b>Warranty:</b>	Two years 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

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