



# Beacon™ 110 Model



Gas detection should not be complicated. The Beacon 110 is gas detection simplified.

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 LEL level combustibles, Oxygen, CO<sub>2</sub>, and toxic gas sensors. The Beacon 110 can also accept any 4-20 mA transmitter (2 or 3 wire, 24 VDC). Sensors can be mounted directly at the Beacon 110 housing, or can be wired remote from the controller. The 10 amp rated relay contacts allow direct control of external alarms and horns. The digital display has backlighting 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, all of which can be utilized with the Beacon 110, providing gas monitoring protection for almost any application.

## Features

- Low cost versatile solution
- Compact, weatherproof, NEMA 4X enclosure
- 115/220 VAC or 24 VDC operation
- Long life sensors (2+ years typical)
- Accepts RKI LEL/O<sub>2</sub>/CO<sub>2</sub>/toxic direct connect sensors
- 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
- Optional Strobe

## Industry Applications

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





**Physical**

**Dimensions:** Height: 8.5" 216 mm Width: 7.0" 178 mm Depth: 4.3" 109 mm

**Enclosure:** Wall mounting grey fiberglass with hinged cover

**Conduit Connection:** 3/4" NPT conduit hubs, 2 provided. 1 for sensor wiring and 1 for power & relay wiring

**Wiring Termination:**

Screw type terminal block, 14 gauge max.

**Power:** Universal 115 VAC & 220 VAC, or 24 VDC nominal, battery backup option available

**Controls:** 3 internal push buttons for setup, programming, and calibration. 1 external push button for alarm reset.

**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)

**Relative Humidity:** 0 - 95% RH (non-condensing)

**Enclosure Rating:** NEMA-4X enclosure, chemical, and weather resistant

**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:** Three relays - 10 amp rating (at 115 VAC), SPDT isolated contacts. 2 relays for gas alarms and 1 trouble relay. Relays fully programmable for: increasing or decreasing alarm, latching or self reset, normally energized or normally de-energized, time delay for alarm on and alarm off.

**4-20 mA:** Signal output, 4-20 mA (maximum load impedance 500 ohms), per channel

**24 VDC:** 24 VDC (400 mA max) output provided to operate sample drawing adapters or other accessories

**Display:** 2 x 8 Alphanumeric display with backlighting

**Audible:** Built-in audible alarm, 94 dB, mounted on enclosure  
Coded output: pulsing = gas alarm, steady = fail

**Visual:** 3 LED's on the front cover for alarm status indication, and malfunction. Optional top-mount strobe

**Warranty:** One year materials and workmanship

**Partial List Of Detectable Gases**

Ammonia (NH <sub>3</sub> )	0 - 75.0 ppm
Arsine (AsH <sub>3</sub> )	0 - 0.20 ppm
Boron Trichloride (BCl <sub>3</sub> )	0 - 15.0 ppm
Carbon Dioxide (CO <sub>2</sub> )	0 - 1.0%
Carbon Monoxide (CO)	0 - 300 ppm
Chlorine (Cl <sub>2</sub> )	0 - 3.0 ppm
Chlorine Dioxide (ClO <sub>2</sub> )	0 - 1.00 ppm
Chlorine Trifluoride (ClF <sub>3</sub> )	0 - 1.00 ppm
Combustibles	0 -100% LEL
Diborane (B <sub>2</sub> H <sub>6</sub> )	0 - 30.0 ppm
Fluorine (F <sub>2</sub> )	0 - 6.0 ppm
Hydrogen (H <sub>2</sub> )	0 - 2,000 ppm
Hydrogen Chloride (HCl)	0 - 15.0 ppm
Hydrogen Fluoride (HF)	0 - 9.0 ppm
Hydrogen Sulfide (H <sub>2</sub> S)	0 - 100.0 ppm
Nitric Oxide (NO)	0 - 100.0 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	0 - 15.0 ppm
Nitrogen Trifluoride (NF <sub>3</sub> )	0 - 30.0 ppm
Oxygen (O <sub>2</sub> )	0 - 25.0%
Ozone (O <sub>3</sub> )	0 - 1.0 ppm
Phosphine (PH <sub>3</sub> )	0 - 1.0 ppm
Silane (SiH <sub>4</sub> )	0 - 15.0 ppm
Sulfur Dioxide (SO <sub>2</sub> )	0 - 30.0 ppm

**RK-72-2110RK**

BEACON™ 110 Single Channel Controller (No Sensor)

**RK-72-2110RK-01**

BEACON™ 110 Single Channel Controller W/ Battery Charger (No Sensor)

**RK-72-2110RK-02**

BEACON™ 110 Single Channel Controller W/ Strobe Light (No Sensor)

**RK-72-2110RK-03**

BEACON™ 110 Single Channel Controller W/ Battery Charger & Strobe Light (No Sensor)

