

Single Channel Wall Mount Controller

Beacon 110

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

The Beacon 110 from Air Liquide is a powerful, low cost fixed system controller for one point of gas detection. It is microprocessor-controlled, versatile and simple to install and operate. It is capable of accepting Direct Connect and S2 sensors directly for LEL level combustibles, O₂, CO₂ and toxic gas sensors. The Beacon 110 can also accept any 4-20mA transmitter (2 or 3 wire, 24 VDC). Sensors can be mounted directly at the Beacon 110 housing, or can be wired remotely 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.

Housed in a NEMA 4X rated case for a weather-tight seal, this case design complies with most 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.

Air Liquide 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.



Benefits/Features

- Low cost versatile solution
- Accepts direct wire sensors for LEL, O₂, H₂S, CO, CO₂, toxic direct connect sensors
- Digital display of gases and concentrations
- Accepts any 4-20mA transmitter
- Provides 4-20mA output
- Two programmable alarm levels
- Audible alarm with reset button
- Compact, weatherproof NEMA 4X enclosure
- 115/220 VAC or 24 VDC operation
- Built-in trouble alarm with relay
- Relay rating 10 amps, Form C
- Long life sensors available (2+ years typical)
- Optional strobe
- CSA certified to CSA C22.2 No. 1010 and UL 61010-1
- One year materials and workmanship warranty

Specifications

Physical

Dimensions 8.5" H x 7" W x 4.3" D
(216 mm x 178 mm x 109 mm)

Enclosure: Wall-mounting grey fiberglass with hinged cover

Conduit Connection: Two 3/4" NPT conduit hubs provided (for sensor wiring and for power and relay wiring)

Wiring Termination: Screw-type terminal block, 14 gauge max

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

Controls: Three internal push buttons for setup, programming and calibration. One 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)

Enclosure Rating: NEMA-4X enclosure, chemical and weather-resistant, suitable for indoor and outdoor installations

Inputs

Direct Wired Sensors: LEL, O₂, CO₂ and toxic gas sensors; remote amp not required for less than 500 feet

4-20mA Sensors: Accepts any 4-20mA transmitter (24 VDC, 2 or 3 wire) — a wide variety of sensors are available with 4-20mA 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. Two relays for gas alarms and one trouble relay. Relays are 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

4-20mA: Signal output (max load impedance 500 ohms) per channel

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, 94dB, mounted on enclosure. Coded output: pulsing = gas alarm, steady = fail

Visual: Three LEDs on the front cover for alarm status indication and malfunction. Optional top-mount strobe



Single Channel Wall Mount Controller (cont'd.)

Beacon 110

Industry Applications

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

Ordering Information

When ordering a Beacon 110 system, please specify the following components:

1. Controller: Be sure to order correct -01, -02 or -03 version if intended to be used with a standby battery or if a strobe light is needed
2. Detector Assembly (one only): See note below
3. Battery back-up assembly if Beacon 110 with battery charger is ordered
 49-8103RK Standby battery assembly, 24 VDC, 1.2 AMP hours
 49-8104RK Standby battery assembly, 24 VDC, 12 AMP hours

Please note:

The Beacon 110 can accept Direct Connect sensors for LEL combustibles, oxygen, hydrogen sulfide, and carbon monoxide as well as a few other gases (see Direct Connect Sensors). The Beacon 110 can also accept any 4-20mA transmitter.

Model Number	Description
72-2110RK	Single channel controller (no sensors)
72-2110RK-01	Single channel controller with battery charger (no sensors or back-up battery)
72-2110RK-02	Single channel controller with strobe light (no sensors)
72-2110RK-03	Single channel controller with battery charger and strobe light (no sensors or back-up battery)