fixed installation type – Beacon 100, Beacon 200, and Beacon 800

Gas Detection Systems

Description

Gas detection should not be complicated. The Beacon™ Series is gas detection simplified. The Beacon™ Series are powerful, low cost fixed system controllers for one, two, or up to eight points of gas detection. They are microprocessor controlled, versatile, simple to install and operate, and priced to be the industry's best value single and multiple gas detection controllers.

The wide variety of sensor heads available for the Beacon Series can provide protection for many of the gases commonly used in industry or laboratories today. A comprehensive list of available detectors is provided below.

Sensors can be mounted directly at the Beacon™ housing, or can be wired remote from the controller. The digital displays have backlighting and simultaneous readout of the gas type(s) and concentration(s). The bottom mounted wiring hubs make wiring easy.An external reset switch allows alarms to be silenced from outside the controller housing.

With 10 or 12 amp rated relays, the Beacon Series can be wired directly to a variety of devices like horns, buzzers, or lights eliminating the need for costly external relays from the controller to devices.

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

Features

- Low cost versatile solution!!
- Compact, weatherproof, NEMA 4X enclosure
- 115 VAC or 12 VDC operation
- Long life sensors (2+ years typical)
- Accepts LEL/O 2 /H 2 S/CO direct wire sensors (Beacon 100 & 200)
- Accepts any 4-20 mA transmitter
- Audible alarm with reset button
- Three programmable alarm levels
- Built-in trouble alarm with relay
- Relay rating 10 or 12 amps, form C
- Provides 4-20 mA output

Industry Applications

- Laboratories
- Semiconductor manufacturing facilities
- Petrochemical plants & refineries
- Water & wastewater treatment plants
- Pulp & paper mills
- Gas, telephone, & electric utilities
- Parking garages
- Manufacturing facilities

About Sensors

The sensor is the actual device that is sensing the gas. Three sensor types are available for use with the Beacon Series Controller: direct wire, gas diffusion, and sample draw. Sensors typically last 2 to 4 years, but can last for a longer or shorter time depending on the nature of the application.

Direct Wire Detectors

Direct wire detectors are hard wired diffusion sensors to the controller and do not require a transmitter. They are, therefore, more economical than detectors requiring a transmitter. Direct wire detectors can only be used with the Beacon 100 & 200 controllers. While the choice of gases is limited for hard wire detectors they can be an economical choice when available. In general, the use of a transmitter is preferred for distances over 300' to 500' to simplify calibration.

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Ordering Information

When ordering a Beacon system please specify the following components:
1. Controller part number
2. Detector assemblies required

Model	Description
72-2101 RK	Beacon 100 single point controller
72-2102 RK	Beacon 200 two point controller
72-2108 RK	Beacon 800 eight point controller

Diffusion Detectors

Diffusion detectors rely on the natural flow of air to bring the sample to the detection head. These are an excellent choice for gas cabinets or other forced flow environments where the detector is situated in a constant air flow from the potential gas release to the detector. All diffusion type detectors used with the Beacon Series have transmitters.

Sample Draw Detectors

Sample draw detectors have an integral pump, which draws the surrounding air to the detector. The are a preferred choice when used in larger areas where there is no specific point at which one can expect a gas leak. All sample draw detectors used with the Beacon Series have transmitters.

Transmitters

Most sensors require a transmitter to amplify the sensor signal, and to convert the gas sensor signals into a standardized output, such as 4-20 mA, for transmitting the signal to a controller. The transmitter is usually in close proximity to the sensor, and zero and span adjustments must be done at the transmitter. Note that some sensors and controllers do not require the use of a transmitter for LEL or Oxygen detection (Beacon 100 & Beacon 200), and also one is not needed for short distance wiring of H2S or CO sensors for the Beacon 100 & 200. All transmitters used with the Beacon Series are operated from 24 VDC, and utilize either 2 or 3 wires. In general, even if a sensor can be used with out a transmitter, the use of a transmitter is often preferred for distances over 300' to 500' to simplify calibration.