

# GAS DETECTION SYSTEMS

## Fixed Installation Type –

## Beacon 110, Beacon 200, Beacon 410A, and Beacon 800



### 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 110, 200, and 410A 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.

### SAMPLE DRAW DETECTORS

Sample draw detectors have an integral pump, which draws the surrounding air to the detector. They are the 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.

### HOW TO ORDER

When ordering a Beacon system please specify the following components:

1. Controller part number (see list below)
2. Detector assemblies required. Provide gas, detection range from the list below so that we can provide the best combination for your application.

### 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.

### 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 110, 200, and Beacon 410A), and also one is not needed for short distance wiring of H<sub>2</sub>S or CO sensors for the Beacon 110, 200, and Beacon 410A. 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.

| Model     | Description                        |
|-----------|------------------------------------|
| 72-2110RK | Beacon 110 single point controller |
| 72-2102RK | Beacon 200 two point controller    |
| 72-2104A  | Beacon 410A four point controller  |
| 72-2108RK | Beacon 800 eight point controller  |

| Measurable Gases                       | Standard Range | Diffusion Detector Assembly | Sample Draw Detector Assembly | Sensors For |     |      |     |
|--|----------------|-----------------------------|-------------------------------|-------------|-----|------|-----|
|  |                |                             |                               | 110         | 200 | 410A | 800 |
| Ammonia NH <sub>3</sub>                | 0 - 75 ppm     | GD-K88AI-NH3                | GD-70D-NH3                    | X           | X   | X    | X   |
| Carbon Dioxide CO <sub>2</sub>         | 0-5000 ppm     | 61-1007RK-02                | -                             | X           | X   | X    | -   |
| Carbon Dioxide CO <sub>2</sub>         | 0-5000 ppm     | 65-2397RK                   | -                             | X           | X   | X    | X   |
| Carbon Monoxide (XP) CO                | 0 - 300 ppm    | 65-2336RK                   | -                             | X           | X   | X    | X   |
| Chlorine CL <sub>2</sub>               | 0 - 3 ppm      | GD-K88AI-CL2                | GD-70D-CL2                    | X           | X   | X    | X   |
| Combustibles (XP) LEL                  | 0 - 100 %      | 61-1000RK                   | -                             | X           | X   | X    | -   |
| Combustibles (4-20mA) (XP) LEL         | 0 - 100 %      | 65-2405RK                   | -                             | X           | X   | X    | X   |
| Hydrogen (Direct) H <sub>2</sub>       | 0 - 2000 ppm   | 65-2442RK-2000              | -                             | X           | X   | X    | -   |
| Hydrogen (Specific) H <sub>2</sub> LEL | 0 - 100%       | 61-1001RK                   | -                             | X           | X   | X    | -   |
| Hydrogen Chlorine HCL                  | 0 - 15 ppm     | GD-K88AI-HCL                | GD-70D-HCL-15                 | X           | X   | X    | X   |
| Hydrogen Sulfide H <sub>2</sub> S      | 0 - 1 ppm      | -                           | GD-70D-H <sub>2</sub> S-01    | X           | X   | X    | X   |
| Hydrogen Sulfide H <sub>2</sub> S      | 0 - 100 ppm    | 65-2331RK                   | -                             | X           | X   | X    | X   |
| Nitrogen Dioxide NO <sub>2</sub>       | 0 - 15 ppm     | GD-K88AI-NO2                | GD-70D-NO2-15                 | X           | X   | X    | X   |
| Oxygen (4-20mA) O <sub>2</sub>         | 0 - 25 %       | 65-2322RK                   | -                             | X           | X   | X    | X   |
| Oxygen (Direct) O <sub>2</sub>         | 0 - 25 %       | 65-2497RK                   | -                             | X           | X   | X    | -   |
| Sulfur Dioxide SO <sub>2</sub>         | 0 - 6 ppm      | GD-K88AI-SO2                | GD-70D-SO2                    | X           | X   | X    | X   |

Detectors for many other gases are available. Tell us your requirements.