iAssign® Beacons Provide
LOCATION AND ACCESS CONTROL

Bluetooth technology used extensively in consumer products and applications is migrating into the industrial safety community in the form of Bluetooth Beacons. The iAssign® Beacon is an industrial grade Bluetooth device that provides location and access information to Industrial Scientific's Ventis® Pro5 portable gas monitors.

The iAssign Beacon can be programmed with the Android iAssign app to broadcast location information at four settings levels: one, five, 20, and 30 meters. These settings levels are designed to provide the desired level of precision to the location broadcast. A beacon set to the 30-meter range and appropriately named will provide location coverage for an area of approximately 30,000 square feet. Beacons with lower range settings will provide more discrete location information. For example, the area shown in Figure 1, the 4th floor of a building with rough dimensions of 450 feet by 300 feet is broadly covered by beacons with 30-meter settings in six zones. A worker carrying a Ventis Pro5 gas monitor with the local Bluetooth function enabled that enters Zone 1 will receive the signal from the beacon located in Zone 1 and will have the Zone 1 location tagged with the data recorded by the monitor. As the worker migrates through the building to Zone 2, the monitor receives the signal from the Zone 2 beacon and tags that location to the monitor accordingly. If a beacon with a lower range setting, 5 meters for example, is placed within the stairwell of Zone 6 and the worker enters the stairwell in Zone 6, the monitor will receive the information from both the Zone 6 beacon and the stairwell beacon, and based on signal strength, will tag the monitor with the location information from the stairwell beacon. Beacons can be nested in similar fashion using the range settings to provide the level of location discrimination necessary for the particular application.

Access Control

iAssign Beacons can also be programmed to provide access control with an access control setting from 0 (unrestricted) to 10 (fully restricted). If a worker with a Ventis Pro Series monitor has been assigned an access level of 5, and he enters an area covered by a beacon with an access control setting of greater than 5, the monitor will alarm and display a message reading "Access Denied." In the example shown in Figure 1, if a worker with an assigned access level of 3 enters the stairwell in Zone 6, which has an access level setting of 8, his monitor will alarm warning him that his access to the stairwell is restricted. This feature can be used to control access to areas where a certain level of training or security clearance may be required.
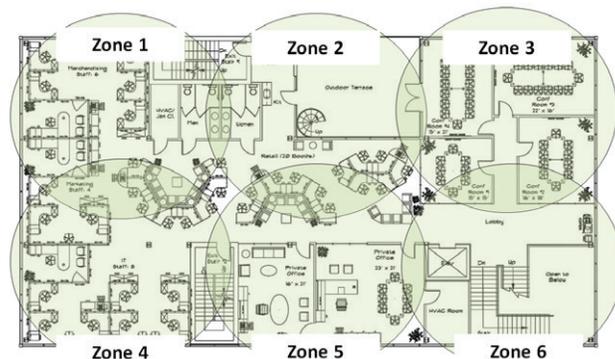

Figure 1

Built for Tough Environments

The iAssign Beacon is built for use in the toughest and most hazardous industrial environments. The beacon is housed in a rugged polycarbonate housing and carries an ingress protection rating of IP65. iAssign Beacons operate at temperature ranges from -40 °C to 50 °C and are certified for use in Class I, Division 1 or Class 1, Zone 0 hazardous locations. An iAssign Beacon will provide up to 4 years of continuous operation on just two AA lithium disposable batteries.

Getting Started

The following steps will help you easily begin recording location information in your gas monitors with iAssign Beacons:

1. Download the iAssign App from the Google Play Store to your Android mobile device
2. Determine the desired level of location accuracy or access control
3. Use the iAssign app to program the location name, range setting, and access level to your beacons
4. Program the beacons' operating modes to Normal
5. Install your beacons in the desired locations across your facility
6. Begin recording data throughout your workplace

For assistance with incorporating beacons into your facility or worksite, contact the Industrial Scientific Applications Engineering team at applicationengineering@indsci.com.

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