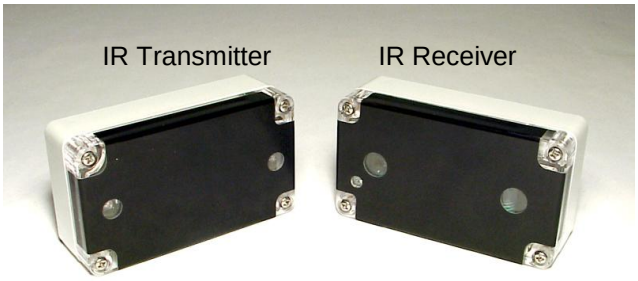
Battery Operated Directional People Counter with an Integrated RF Transmitter

Features

- Dual IR Beams for Directional People Counting
- Battery operated for a truly wireless installation
- Radio interface operates with all Point Six Receivers
- Battery life up to 4 years
- Unique serial number embedded in radio data packets
- Optional flush-mount wall box kit
- 25 ft. IR transmission range
- Up to 1300 Ft. radio range
- Counts beam interruptions
- CRC-16 error checked radio data packets
- 4.53" X 2.56" X 1.57" polycarbonate enclosures
- Complies with part 15 of the FCC rules
- Patent pending
- User replaceable battery packs



Description

The Point Sensor IR Directional Counter-900 is a battery operated infrared beam interruption sensor with a 900 MHz radio transmitter. The sensor consists of two parts; the IR transmitter and the IR receiver. The IR receiver has an integrated radio transmitter for truly wireless installation and operation. The IR transmitters produce 96 pulses of high intensity IR each second across a maximum distance of 25 feet. The nature of these IR pulses is such that the IR receiver can distinguish them from any other source of IR. This characteristic allows the IR sensor to operate in almost any environment without interference from ambient lighting. The "IN and "OUT" logic is built into the product making the radio transmission data very easy to interpret. All counts are totalized and stored in memory. Once every 120 seconds the totalized counts are transmitted via the integrated radio.

The IR Point Sensor is designed to require very little energy; the internal 3.6 Volt Lithium thionyl chloride battery pack will operate the IR receiver for up to 4 years in normal operation. The IR transmitter can operate on the 3.6 Volt internal Lithium thionyl chloride battery pack for 4 years.

The product is ideally suited for applications where running cables is cost prohibitive or not practical. Typical applications include: shopping centers, casinos, retail and hotels.

Operation

The IR receiver and IR transmitter can be placed in a **Shipping Mode** to lower energy usage and to prevent Radio transmissions during shipping. Touching the prox switch for a period of time greater than 8 seconds and then releasing will enter Shipping Mode. IR receiver and IR transmitter shipping mode is indicated by a rapid flashing of the LED when the prox switch is touched for less than 3 seconds.

Shipping mode is terminated by entry into **Online Mode.** Online mode is entered from Shipping Mode by touching the prox switch until the LED stops flashing for both the IR transmitter and IR receiver. In online mode with the IR Beams properly aligned, the IR Point Sensor will begin counting the "In" and "Out" beam interruptions.

The internal 24-bit counters and the optional LCD Display will perform a **Counter Reset** each time the prox switch on the IR receiver is touched for more than 3 seconds.

Every 120 seconds the receiver will transmit a data packet using the onboard 900 MHz radio. Data packets consist of:

"**DirectionCtr" (65/64)**

IDSSSSSSSSaaaaaabbbbbbCCCCKK<CR>

Note: All fields are in ASCII Hex

"ID"
The device type field: Directional Counter has device type **65** hex. A **64** hex when in service mode.

"SSSSSSSS"
The MS-30 bits of these 4-bytes are the serial number of the Directional Counter. The LS-2 bits are the status flags**.** The meaning of the status flags are:

Bit 1	**Bit 0**	**State**
0	0	Blocked
0	1	Okay
1	0	Undefined
1	1	Undefined

"aaaaaa"
This 24-bit field is the direction "A" counter stored LS-byte first. **Count s in Direction "A"**.

"bbbbbb"
This 24-bit field is the direction "B" counter stored LS-byte first. **Count s in Direction "B"**.

"CCCC"
This field is the CRC-16 error check as was originally received and checked. This CRC is over the first 11 bytes of the packet starting with the device type and ending with but not including CRC-16.

"KK"
This field is the mod 256 sum of all the binary data values as represented by the ASCII hex values in the response but does not include the <CR>.

Note: "Blocked" is when the sensor's beam has been blocked for typically 10 seconds.

Example Packet

6510732581FF0000FE0000464516

SN = 10732580; state = Okay; CountA = 255; CountB = 254

Operating Parameters

PARAMETER	MIN	TYP	MAX	UNITS
Battery life IR receiver	-	4.0	-	Years
Battery life IR transmitter	-	4.0	-	Years
IR range	.5	-	25	feet
Radio range	-	600	-	feet
IR receiver pushbutton to reset time	-	3	-	seconds
IR receiver pushbutton to ship mode	-	8	-	seconds
IR transmitter pushbutton to wake time	-	3	-	seconds
IR transmitter pushbutton to ship mode	-	8	-	seconds
Enclosure 4.53”X2.56”X1.57” Polycarbonate	-	-	-	-

Installation Illustration