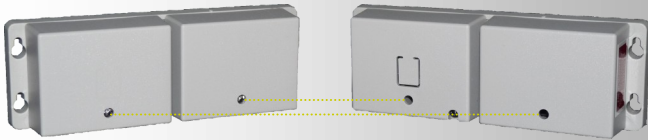


Point Sensor IR Directional Counter 3005-92

FEATURES

- Dual IR Beams for Directional Counting
- Battery life up to 2.5 years
- Unique serial number embedded in radio data packets
- Integrated mounting flange
- 15 ft. or 25 ft. IR transmission range
- Up to 600 Ft. radio range
- Counts beam interruptions
- CRC-16 error checked radio data packets
- 6.3" X 1.7" X 1.2" ABS enclosures
- Complies with part 15 of the FCC rules
- User replaceable batteries



DESCRIPTION

The Point Sensor IR Directional Counter is a battery operated infrared beam interruption sensor with a 418/433 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 user configurable distance of 15 or 25 feet. The user can select the power mode by adjusting the internal switches on the IR transmitter. 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 30 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 batteries will operate the IR receiver for up to 2.5 years in normal operation. The IR transmitter can operate on four 3.6 Volt internal Lithium thionyl chloride batteries for 2.5 years in low power mode (15 foot IR span) and 1.5 years in high power mode (25 foot IR span).

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.

PARAMETER	MIN	TYP	MAX	UNITS
Battery life IR receiver	-	2.5	-	Years
Battery life IR transmitter	1.5	-	2.5	Years
Battery type: Lithium Thionyl Chloride 3.6vdc	-	-	-	-
IR Range	.5	-	25	Feet
Radio Range	-	600	-	Feet
IR receiver pushbutton down to reset time	-	3	-	Seconds
IR receiver pushbutton down to ship mode	-	8	-	Seconds
IR transmitter pushbutton down to wake time	-	2	-	Seconds
IR transmitter pushbutton down to ship mode	-	8	-	Seconds
Enclosure 2.5" x 2.0" x 1.0: ABS Plastic	-	-	-	-
FCC Certified: M5ZIRPC2	-	-	-	-

Point Six Wireless
Unique, High Value Wireless Solutions

Installation and Operation Instructions

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. Holding the pushbutton down 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 pushbutton is pressed for less than 3 seconds.

Shipping mode is terminated by entry into Online Mode. Online mode is entered from Shipping Mode by pushing and holding the pushbutton 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 will perform a Counter Reset each time the push button on the IR receiver is pushed and held for more than 3 seconds.

Every 30 to 37 seconds or within 10 seconds of a beam status change the receiver will transmit a data packet using the onboard 418/433 MHz radio.

**FCC ID: M5ZIRPC2
MADE IN USA**

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES, OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESERED OPERATION

FCC Radio Frequency Interference Statement

Power Sensor IR Directional Counter

FCC ID: M5ZIRPC2

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15, Subpart B, of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause interference to radio communications.

The limits are designed to provide reasonable protection against such interference in a residential situation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the affected radio or television
- Increase the separation between the equipment and the affected receiver.
- Connect the equipment and the affected receiver to power outlets on separate circuits.
- Consult the dealer or an experienced radio/TV technician for help.

MODIFICATIONS

Changes or modifications not expressly approved by **Point Six Wireless** could void the user's authority to operate the equipment.

Wireless Transmitter Packet-Data Specification

“DirectionCtr” (65/64)

IDSSSSSSSSaaaaabbbbbCCCCCKK<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. Counts in Direction “A”.

“bbbbbb”

This 24-bit field is the direction “B” counter stored LS-byte first. Counts 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

Installation Illustration

