

**15 INFRARED BEAMS/PHOTOCELLS  
POCKET INSTALLATION GUIDE**



# 1. Introduction

The **i5** infrared beams are designed to provide optimum safety by detecting the presence of a person or vehicle traversing the path of a moving gate or door. The beams can be interfaced with most automation equipment. They can also be used to enhance the security of the automation by enabling the Intruder Detection Alarm function inherent in many of our later gate operator controllers, as well as external alarms and buzzers by means of either a normally-open or normally-closed potential-free contact.

## 2. Safety Instructions



1. All installation, repair, and service work to this product must be done by a suitably qualified person.
2. Do not in any way modify the components of the system.
3. Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger.
4. Dispose of all waste products like packaging materials, according to local regulations.
5. Centurion Systems Pty Ltd does not accept any liability caused by improper use of the product, or for use other than that for which the automated system was intended.
6. This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the service life/operation of the product and/or be a source of danger.
7. Anything not expressly specified in these instructions is not permitted.

### 3. Icons used in this guide



This icon denotes variations and other aspects that should be considered during installation



**This icon indicates warning, caution or attention! Please take special note of critical aspects that MUST be adhered to in order to prevent injury**

### 4. Operation

The i5 infrared beam/photocells consists of a transmitter and receiver unit mounted on opposite sides of an entrance. The transmitter sends a modulated infrared beam to the receiver module. When the beam is interrupted the receiver changes the state of an internal relay. The contacts of the relay are potential-free and can be wired as normally-open or normally-closed.

### 5. Technical specifications

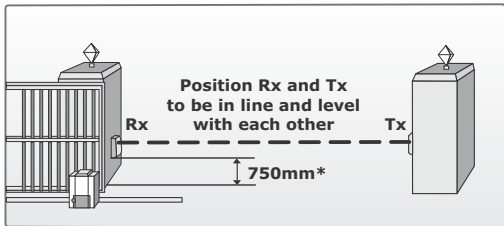
Power supply	12V - 30V DC/AC
Power consumption	Transmitter - 21mA, Receiver - 43mA @ 12V
Maximum distance	40m
Alignment	Automatic - 9m <sup>2</sup> @ 10m#
Output contact rating	5A @ 220V AC (non inductive)
Operating temperature	-15°C to 55°C
Operating humidity	0% - 90% (non condensing)
Degree of protection	IP54

## 6. Installation

1. The first step when installing the i5 infrared beams/photocells is to obtain maximum alignment.

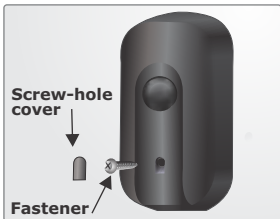


The transmitter and receiver are typically mounted directly opposite one another, but some leeway is given in the form of a wide beam being cast should absolute alignment not be possible

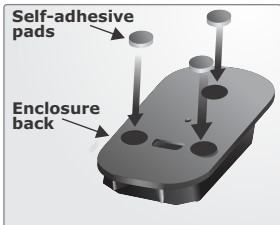
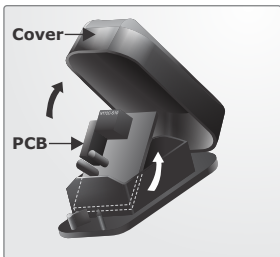


We recommend the height of 750mm, but the height of the beam must be tailored to suit the specific requirements of the installation

### Remove cover and prepare for mounting

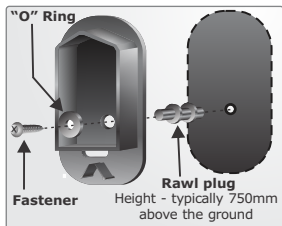


2. Unclip screw-hole cover piece.
3. Unscrew cover retaining fastener.
4. Lift off cover.
5. Unclip PCB and remove.
6. Place self-adhesive pads onto back of enclosure



## Mounting

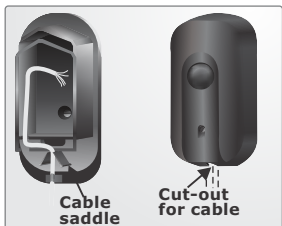
7. Mark position of unit.
8. Use 5mm masonry bit to drill hole in wall.
9. Mount using fastener provided.



## Wiring Route

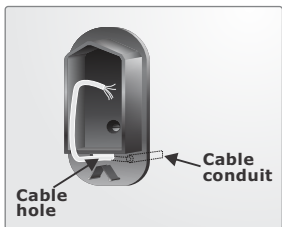
### Option 1: External wire

- 10a. Route the cables through the cable cut-out as shown in the illustration providing 12-24 V DC/AC to both the receiver and transmitter.



### Option 2: Reticulated wire

- 10b. The cable can also be routed through the hole in the moulding of the back of the enclosure.



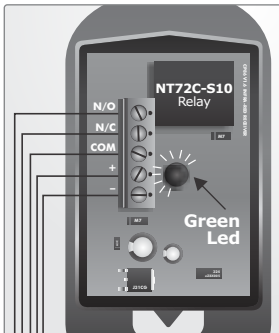
## PCB connections



It is very important to align the transmitter and the receiver beams. Under certain conditions (distance >10m) it may be necessary to fit the cover to achieve alignment

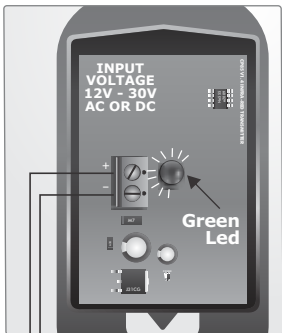
### Receiver

11. Terminate wires on to the receiver PCBs prior to clipping back into enclosure as shown in the wiring diagram.



## Transmitter

12. Terminate wires on to the transmitter PCBs prior to clipping back into enclosure as shown in the wiring diagram.
13. Replace the cover and screw back the fastener and the screw-hole cover.



## Indicators

- Both the receiver and transmitter are fitted with a green **LED** indicator
- The **LED** in the transmitter illuminates when the power supply is **ON**, and the receiver **LED** illuminates when the beams are aligned
- A separate wire should be used to obtain **COMMON**, as this ensures the beams/photocells are tested accurately by the Beam Test function inherent in many of our later gate operator controllers







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