



# IRB-325™

## Infrared Photocell

UL325 Compliant Non-monitored



## Operating Instructions



This product is an accessory or part of a system. Always read and follow the manufacturer's instructions for the equipment you are connecting this product to. Comply with all applicable codes and safety regulations. Failure to do so may result in damage, injury or death!

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## Product Overview

The IRB-325 conforms to the UL325 standard when used with the powder coated steel hoods. Registration reference number 9901994. The IRB-325 photocell is used as an external entrapment protection device type B1 non-contact sensor for use with automatic gate and door openers.

The IRB-325 transmitter and receiver have a line of site range of up to 65 feet. The IRB-325 operates on 12 VDC to 24 VAC and draw 150 mA maximum.

The IRB-325 receiver is activated whenever anything interrupts the beam from the transmitter, triggering the relay output to change state and send a signal to the operator that there has been an interruption.



**WARNING:**

This product is UL 325 compliant with a non-monitored output.

## Technical Specifications

Power Supply	12 Volts Dc to 24Volts AC
Power Supply Tolerance	+/- 20%
Current Draw	150 mA maximum
Housing Material	UL and CSA Type 4, 4X, 3, 3R, 12, 13 rating and powder coat steel hood
Relay Type	Type C Rating 1A @ 30 VDC
Temperature Range	-40° F to 170° F
Connector	Screw terminal isolated contact (2) transmitter (5) receiver
Power Indicator	Green LED
Detect Indicator	Red LED
Dimensions	H=5.03 in, W=3.06 in, D=3.02 in
Range	6 feet to 65 feet line of sight

## Controls, Indicators and Connections

### Transmitter

Power	LED
Green SMT glows when power is applied	

Connections	Screw terminal
2 position for power source	

### Receiver

Power	LED
Green SMT glows when power is applied	

Connections	Screw terminal
5 position for power and controls	

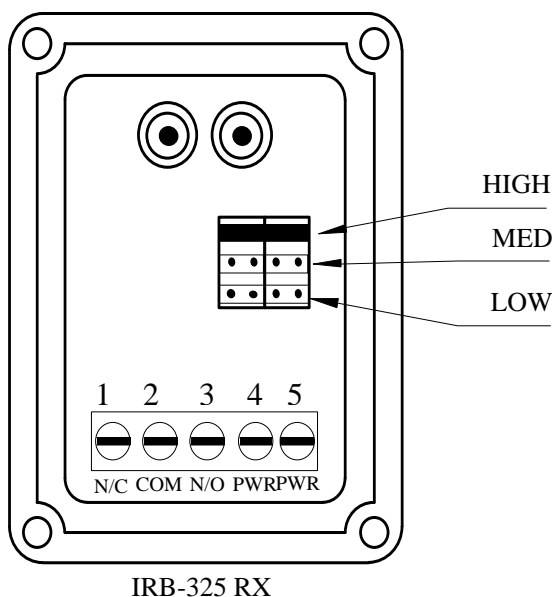
Detect	LED
(2) Red SMT LEDs glow on detection	

The IRB-325 is an external entrapment device Type B1 non-contact sensor for use with automatic gate operators. If the IRB-325 is used as the primary entrapment protection device it must be monitored for presence and fault condition. The IRB-325 does not produce a monitored output.

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## Installation

1. Disconnect the IRB-325 from power before installing or servicing the device.
2. Always follow the instructions of the gate operator manufacturer regarding installation of type B1 sensors on the gate operator. The instructions of the gate operator manufacturer always supersede any instructions given in this or any other instructions by EMX Industries Inc.
3. The IRB-325 has to be powered by 12V – 24V AC/DC 150mA power supply.
4. Do not connect the IRB-325 output to loads higher than 1A @ 30V AC/DC.
5. Connect power to terminals 1 and 2 on IRB-325 transmitter marked “TX” polarity is not important.
6. Connect power to terminals 4 and 5 marked “power input” on the IRB-325 receiver, marked “RX” polarity is not important.
7. For operators that require normally closed contact for entrapment protection, connect terminals 1 (NC) and 2 (COM) to the designated terminals in the gate operator.
8. For operators that require normally open contact for entrapment protection, connect terminals 2 (COM) and 3 (NO) to the designated terminals in the gate operator.
9. Install the IRB-325 according to instructions from the gate operator manufacturer. The intent of External Entrapment Protection Device Type B1 non-contact sensor is to protect a person from being accidentally injured by the moving gate.
10. The IRB-325 is housed in a NEMA 4X enclosure. To insure the integrity of the enclosure make sure the covers are attached and closed tight with the help of four plastic screws provided. The wiring to the IRB-325 Enclosure has to enter via watertight strain relief or watertight conduit connector.
11. The IRB-325 must be powered by Class 2 circuits only, wiring must be segregated from other circuits or insulation must be provided that is suitable for the highest voltage for those circuits.



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## Operational settings

**WARNING:** To reduce the risk of sever injury or death

1. Read and follow all operation instructions.
2. Always follow gate operator manufacturer installation instructions regarding installation of Type B1 sensor to the operator.
3. Disable the gate so it is unable to move.
4. With the IRB-325 mounted in place and powered, make sure the transmitter “TX” is in line of sight of the receiver “RX”.
5. Introduce an obstruction in form of a hand between the IRB-325 transmitter and receiver. Two Red LED’s on the receiver have to turn on. Check the operator control board that the safety input is actuated.
6. Remove the obstruction and the Red LED’s in receiver will turn off.
7. Should the IRB-325 fail to recognize the obstruction lower the sensitivity by moving jumpers J1 and J2 to a lower position.
8. Should the two Red LED’s be turned on while there is no obstruction increase the sensitivity by moving jumpers J1 and J2 to a higher position.

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## TROUBLE SHOOTING GUIDE

Symptom	Possible cause	Solution
Does not detect interruption	Sensitivity too high Signal is reflecting off another surface	Move jumpers J1 and J2 to a lower position Check area for highly reflective surfaces
Red detect LED stays on	Sensitivity too low Transmitter does not have power Receiver does not "see" transmitter	Move jumpers J1 and J2 to a higher position Check power source for transmitter Make sure transmitter and receiver have line of sight alignment
Receiver activates but does not transmit signal to operator	Faulty connection between receiver and operator control input	Check wires and terminal connections to make sure they are good

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## Ordering Information

IRB-325 Infrared photocell includes transmitter and receiver

### Accessories

IRB-325-HD Set of 2 powder coated steel protective hoods required for UL-325

IRB-325-PT Mounting post 2 in x 2 in x 2 ft black powder coat

IRB-325-SP Watertight strain relief for use with interconnection cords.

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IRB-325-SP



IRB-325-PT

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