



# IRB-RET

## UNIVERSAL UL325 RETROREFLECTIVE PHOTOEYE KIT

The IRB-RET provides a universal solution for entrapment protection. One photoeye covers the entire spectrum of possible requirements for monitored and non-monitored photoeyes, simplifying inventory management and product training.

The IRB-RET is an external entrapment protection device type B1, non-contact sensor for use with automatic gates and doors. The device is a UL325-2018 compliant and suitable for use with both operators that require monitored entrapment protection and those that do not require monitored operation.

There are six monitoring interfaces:

- |                                   |   |
|-----------------------------------|---|
| 1. Normally Closed:               | Cycles power to the transmitter while monitoring the receiver contacts for proper operation       |
| 2. 10K Resistive Termination:     | Provides a measurable 10K ohm resistance across the normally open (NO) contact when unobstructed  |
| 3. Two-wire Pulse (2 Frequency):  | Provides 300Hz "heartbeat" unobstructed, 0Hz obstructed over power supply lines                   |
| 4. Two-wire Pulse (3 Frequency):  | Provides 300Hz "heartbeat" unobstructed, 2Hz obstructed, and 0Hz failure over power supply lines  |
| 5. Four-wire Pulse (2 Frequency): | Provides 300Hz "heartbeat" unobstructed, 0Hz obstructed over separate connection                  |
| 6. Four-wire Pulse (3 Frequency): | Provides 300Hz "heartbeat" unobstructed, 2Hz obstructed, and 0Hz failure over separate connection |

The long range and retroreflective features combined with the installer mode switch settings provide a flexible solution to all external entrapment protection needs. A robust, NEMA 4X enclosure provides the durability required for high-reliability entrapment protection applications. The design minimizes fogging and false triggering caused by small objects and allows for easy alignment.

# IRB-RET



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## Competitive Advantage

The major advantage of the IRB-RET is its flexibility. This photoeye covers the whole spectrum of UL situations.

- Monitored application per UL325-2018 as applied to overhead door and gate operators
- Non-monitored UL325 for gate operators prior to 2018 requirements
- Non-UL installation

**Distributors and dealers need only one photoeye to cover all these applications.**



IRB-RET-HD



REFLECTOR-O-EX /  
REFLECTOR-O-HD



MOUNTING BRACKET



PHOTOEYE VAULT

## Technical Data

<b>Operating Range</b>	Up to 60 ft. (18.3m)
<b>Sensitivity Adjustment</b>	Potentiometer
<b>Power Indicator</b>	Green LED
<b>Detect Indicator</b>	Red LED
<b>Mode Selection Switch</b>	3 modes, relay output, pulsed (3 frequency), pulsed (2 frequency)
<b>Pulse Output</b>	2 wire/4 wire
<b>Relay Output Operation</b>	Light on/dark on selection
<b>Relay Output</b>	Form C contacts (NO, COM, NC)
<b>Resistive Termination</b>	10k Ohm across NO contact
<b>Power Protection</b>	Thermal fuse
<b>Transmitter Power Cycle</b>	>300mS (for use in configuration 0 Monitored)
<b>Power Supply</b>	6-40VDC, 12-24VAC @60Hz (configuration 0-relay only)
<b>Current (config. 1 and 2)</b>	15mA (12VDC, includes TX and RX wired in parallel)
<b>Current (config. 0)</b>	60mA (relay activated)
<b>Operating Temperature</b>	-40°F to 140°F (-40°C to 60°C)
<b>Environmental</b>	NEMA 4X
<b>Dimensions (L x W x H)</b>	3.1" (79mm) x 2.7" (69mm) x 6.6" (168mm)
<b>Weight</b>	0.7 lbs.
<b>Connections</b>	9 screw terminals

## Ordering Information

- IRB-RET KIT Retroreflective photoeye kit, includes photoeye with hood, reflector with hood, and mounting bracket with hardware
- PHOTOEYE VAULT Steel protection bollard for photoeye that accommodates hood (optional accessory, sold separately)

WARRANTY EMX INC. the product described herein for a period of 2 years under normal use and service from the date of sale to our customer. The product will be free from defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser from incorrect connections, or lightning damage. There is no warranty of merchantability. There are no warranties expressed, implied or any affirmation of fact or representation which extend beyond the description set forth herein. EMX Inc. sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at EMX's option of a part or parts not so conforming to the warranty. In no event shall EMX Inc. be liable for damages of any nature, including incidental or consequential damages, including but, not limited to any damages resulting from non-conformity defect in material or workmanship. Rev 2.0 12/29/2020

