

# IRB-RET

UNIVERSAL UL325-2016 RETROREFLECTIVE PHOTOEYE

## Applications

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 UL325-2016 recognized component suitable for use with both operators that require monitored entrapment protection and those that do not require monitored operation.

There are five monitoring interfaces:

1. Normally closed: Cycle power to the transmitter while monitoring the receiver contacts for proper operation
2. Two-wire pulsed (2 freq): Provides 300Hz "heartbeat" unobstructed, 0Hz obstructed over power supply lines
3. Two-wire pulsed (3 freq): Provides 300Hz "heartbeat" unobstructed, 2Hz obstructed and 0Hz failure over power supply lines
4. Four-wire pulsed: Provides 300Hz "heartbeat" unobstructed, 0Hz obstructed over separate connection
5. Resistive termination: Provides a measurable resistance when unobstructed

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 provides 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 UL325-2016 as applied to overhead doors operators
- Non-monitored UL325 as it stands now for the gate operators  
*(new requirements for monitored devices are scheduled to go into effect in January 2016)*
- Non-UL installation

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

## Accessories



MOUNTING BRACKET



REFLECTOR-O-EX



REFLECTOR-O-HD

## Technical Data

<b>Operating range</b>	Up to 60 ft. (18.3 m)
<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>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...35 VDC, 12...24VAC (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...170°F (-40°C...77°C)
<b>Environmental</b>	NEMA 4X
<b>Dimensions (L x W x H)</b>	3.1"W 2.7"D 6.6"H
<b>Weight</b>	0.7 lbs.
<b>Connections</b>	7 terminal

## Ordering Information

- IRB-RET Retroreflective photoeye, includes REFLECTOR-O-EX and mounting bracket with hardware
- REFLECTOR-O-HD Gray protective hood for reflectors

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 1.2 11/23/15

