

# Patriot Traveling Infrared Sensor

## Applications

- **Rolling  
Steel  
Doors**

## The **D-I-Y** Sensing Edge System

This Do-It-Yourself Sensing Edge System is designed to provide a Non-Contact safe guarding solution for motorized overhead doors.

The system includes a controller, emitter eye and a receiver eye which easily mounts to and travels with the leading edge of the door. When the infrared beam becomes blocked by an obstruction, the operator is sent a signal to stop and reverse the motion of the door, thus eliminating any dead zones.

The Patriot controller includes self-monitored circuitry so that a loss of power, short, or blocked IR signal will signal the motor to stop and/or reverse to an open position.



### TECHNICAL SPECIFICATIONS:

Detection Technology	Infrared through-beam
Infrared Wavelength	940nm
Maximum Range	30 feet standard 50 feet specify-L (MIR-T1-L)
Response Time	<1sec
Working Temperature	-4°F to 131°F (-20°C to 55°C)
Power Input Range	10 – 30 VAC, 14 – 42 VDC
Current Consumption	129mA @ 24V AC <sup>1</sup> 48mA @ 24V AC <sup>2</sup>
Relay Rating	1A@ 24VDC / 0.5A@115VAC
Enclosure Type	NEMA4 <sup>3</sup> (IP65)
Enclosure Size	4-5/8" X 1-3/4" X 1-3/4"
Controller Weight	5.1 oz (142 gram)
Certification	UL325 (Pending)

#### Notes:

- 1- Average current consumption under no fault (relay energized ) condition.
- 2- Average current consumption under fault (relay-de-energized) condition.
- 3- Wire diameter must be between 0.185" to 0.310"

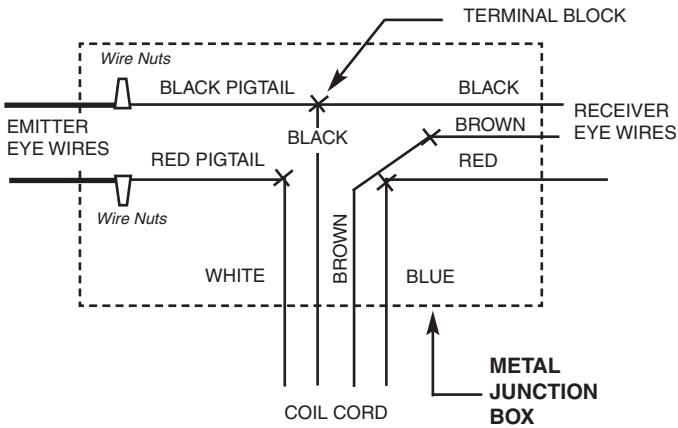
### FUNCTIONAL BENEFITS:

- Thru Beam technology minimizes false reflective signals.
- Travels with the door
- Easy to Align
- No need to stock special sizes - works up to 30 feet wide or, specify L for up to 50 ft wide.
- No shop assembly required - Simply install in the field.
- NEMA4 enclosure provides added protection from water spray, dirt and dust.
- Self Monitoring circuitry - a loss of power creates a "safe" mode.
- Onboard diagnosis assists with troubleshooting.



# MIR-Z1 Non-Contact Sensing System

## Junction Box Easy Reference Wiring Diagram #2



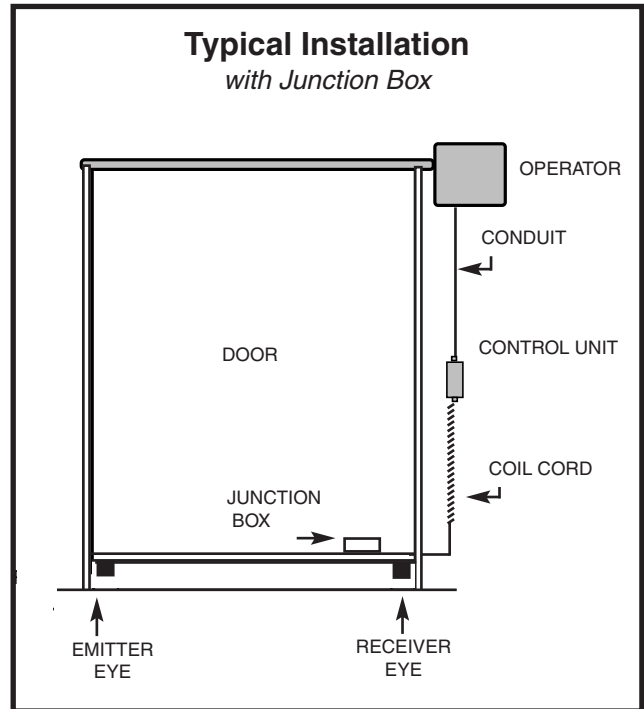
### EASY WIRING CONNECTIONS

#### Emitter Eye Wiring:

(2 Conductor Black Lead Wire)  
BLACK wire to BLACK wire  
RED wire to RED wire

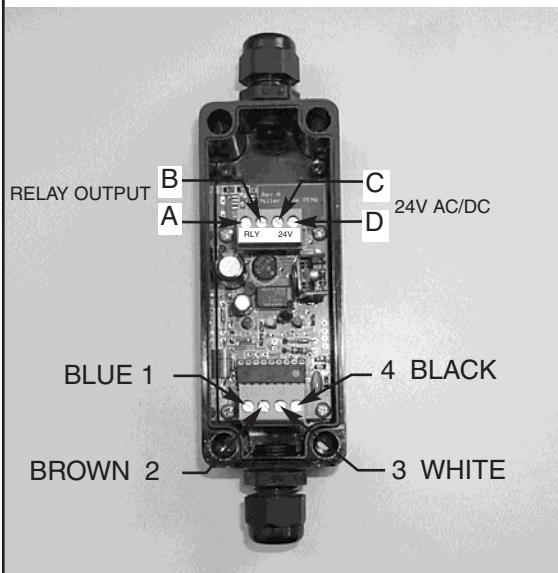
#### Control Unit Wiring:

A,B,C,D - Require Installer Connections  
1,2,3,4 - Pre-Wired Factory Connections



**NOTE:** Door overtravel may vary due to the response time of the operator being used. Reference operator manufacturer specifications.

### Control Unit Wiring Diagram #3



### LED OPERATION STATUS / DIAGNOSTICS

LED COLOR	OK STATUS	FAULT	FIX
RED	OFF=RELAY OPEN	ON=RELAY CLOSED	
YELLOW	OFF	ON=BROKEN WIRE or EYE	REPLACE EYES
GREEN	FLASHING	OFF=NO 24VAC or DEFECTIVE CHIP	VERIFY POWER, IF OK REPLACE CONTROL UNIT

NOTE: LED indicators are located on the board inside the Control Unit

**NOTE: DO NOT** drill any holes in the transmitter box. Use only mounting holes provided, any additional holes in control unit will cause water to enter and a loss of warranty.

### Care and Maintenance

Clean with lint-free damp cloth or soft bristle brush. During normal operation, Green LED will flash.



REV. 1 5-28-08