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:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection Technology</td>
<td>Infrared through-beam</td>
</tr>
<tr>
<td>Infrared Wavelength</td>
<td>940nm</td>
</tr>
<tr>
<td>Maximum Range</td>
<td>30 feet standard</td>
</tr>
<tr>
<td></td>
<td>50 feet specify-L (MIR-T1-L)</td>
</tr>
<tr>
<td>Response Time</td>
<td>&lt;1sec</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>-4°F to 131°F (-20°C to 55°C)</td>
</tr>
<tr>
<td>Power Input Range</td>
<td>10 – 30 VAC, 14 – 42 VDC</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>129mA @ 24V AC¹</td>
</tr>
<tr>
<td></td>
<td>48mA @ 24V AC²</td>
</tr>
<tr>
<td>Relay Rating</td>
<td>1A @ 24VDC / 0.5A@115VAC</td>
</tr>
<tr>
<td>Enclosure Type</td>
<td>NEMA4¹ (IP65)</td>
</tr>
<tr>
<td>Enclosure Size</td>
<td>4-5/8” X 1-3/4” X 1-3/4”</td>
</tr>
<tr>
<td>Controller Weight</td>
<td>5.1 oz (142 gram)</td>
</tr>
</tbody>
</table>

### 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-T1 Non-Contact Sensing System

Typical Installation
with Junction Box

EASY WIRING CONNECTIONS

**Emitter Eye Wiring:**
(2 Conductor Lead Wire)
BLACK wire to BLACK wire
WHITE wire to WHITE 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.

LED OPERATION STATUS / DIAGNOSTICS

<table>
<thead>
<tr>
<th>LED COLOR</th>
<th>OK STATUS</th>
<th>FAULT</th>
<th>FIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>OFF=RELAY OPEN</td>
<td>ON=RELAY CLOSED</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td>FLASHING</td>
<td>OFF=NO 24VAC or DEFECTIVE CHIP</td>
<td>VERIFY POWER, IF OK REPLACE CONTROL UNIT</td>
</tr>
</tbody>
</table>

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.

EASY WIRING CONNECTIONS

Control Unit Wiring Diagram #3

Wire Nuts

Emitter Eye Wiring:

- BLACK PIGTAIL BLACK
- WHITE PIGTAIL WHITE
- BLUE BROWN
- RED BLACK

**Wire Connection Diagram:**

- BLACK PIGTAIL BLACK
- WHITE PIGTAIL WHITE
- BLUE BROWN
- RED BLACK

- Emitter Eye Wiring:
(2 Conductor Lead Wire)
BLACK wire to BLACK wire
WHITE wire to WHITE wire

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

- TERMINAL BLOCK
- METAL JUNCTION BOX
- COIL CORD

**NOTE:**

- Wire Nuts
- Junction Box Easy Reference Wired Diagram #2
- Control Unit Wiring Diagram #3

MIRT1-Spec-2012034

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