**900 MHZ RECEIVER & INDUSTRIAL TRANSMITTERS**

Digital receiver and industrial transmitter with frequency hopping, sequencing and extended hold functionality

**(US version)**

**DESCRIPTION**

1. receiver (10RD900)
2. antenna wire
3. blue activation LED
4. red learn LED
5. tri-color signal strength LED
6. DIP switches
7. no-delay learn button
8. delay learn button
9. delay learn potentiometer
10. NEMA 4 1-button transmitter
11. belt clip (10BELTCLIP)

**NEMA 4 HAND HELD TRANSMITTERS**

- 1 BUTTON (10TD900INDHH1)
- 2 BUTTON (10TD900INDHH2)
- 3 BUTTON (10TD900INDHH3)
- 4 BUTTON (10TD900INDHH4)

**IMPORTANT:**

This wireless receiver is not intended to be used DIRECTLY with maglocks or electric strikes due to possible damage caused by inductive load kickback.

Instead, this wireless receiver should be used to trigger a logic module (Br3) or isolation relay which then triggers the maglock or electric strike.
PRECAUTIONS

- Shut off all power going to header before attempting any wiring procedures.
- Maintain a clean & safe environment when working in public areas.
- Constantly be aware of pedestrian traffic around the area.
- Always stop pedestrian traffic through the doorway when performing tests that may result in unexpected reactions by the door.
- ESD (electrostatic discharge): Circuit boards are vulnerable to damage by electrostatic discharge. Before handling any board ensure you dissipate your body’s ESD charge.
- Always check placement of all wiring before powering up to ensure that moving door parts will not catch any wires and cause damage to equipment.
- Ensure compliance with all applicable safety standards (i.e. ANSI A156.10) upon completion of installation.
- DO NOT attempt any internal repair of the components. All repairs and/or component replacements must be performed by BEA, Inc. Unauthorized disassembly or repair:
  1. May jeopardize personal safety and may expose one to the risk of electrical shock.
  2. May adversely affect the safe and reliable performance of the product resulting in a voided warranty.

![Caution Icon]

- The device should not be used for purposes other than its intended use. All other uses cannot be guaranteed by the manufacturer of this device.
- The installer of the door system is responsible for carrying out a risk assessment and installing this device and the door system in compliance with applicable national and international regulations and standards on door safety.
- The manufacturer of this device cannot be held responsible for incorrect installations or inappropriate adjustments of this device.

INSTALLATION

Wiring

<table>
<thead>
<tr>
<th>TERMINAL:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>LABEL:</td>
<td>12-24 V</td>
<td>12-24 V</td>
<td>COM</td>
<td>NO</td>
<td>NC</td>
</tr>
<tr>
<td>WIRE COLOR:</td>
<td>red</td>
<td>black</td>
<td>white</td>
<td>green</td>
<td>yellow</td>
</tr>
<tr>
<td>SIGNAL:</td>
<td>+ voltage</td>
<td>- voltage</td>
<td>common</td>
<td>normally open</td>
<td>normally closed</td>
</tr>
<tr>
<td>DESCRIPTION:</td>
<td>power</td>
<td>relay contacts</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SETUP

DIP Switches

<table>
<thead>
<tr>
<th>DIP</th>
<th>STATUS</th>
<th>FUNCTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OFF</td>
<td>PUL</td>
<td>Pulse Relay: pressing transmitter activates and holds relay according to DIP 2 and 3</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>TOG</td>
<td>Toggle Relay: pressing transmitter once activates and holds relay indefinitely</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>OFF</td>
<td>0.5s</td>
<td>0.5 second hold time: relay remains active for 0.5 seconds after transmitter is...</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>10s</td>
<td>10 second hold time: relay remains active for 10 seconds after transmitter is...</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>OFF</td>
<td>REG</td>
<td>standard hold: relay acts according to DIP 1 and 2 (does not matter if transmitter is pressed/released or pressed/held)</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>EH</td>
<td>extended hold: relay remains active as long as transmitter is pressed and held once released, relay acts according to DIP 1 and 2</td>
</tr>
</tbody>
</table>

Hand Held Configuration

[Diagram of DIP switches set to ON 1 2 3]

Set DIP switches as desired.

[Diagram of Learn button being pressed and released]

Press and release desired learn button (red LED on receiver will illuminate)†.

[Diagram of transmitter being pressed twice]

Press transmitter twice (blue LED on receiver will illuminate).

NOTES:  †If Learn w/ Delay button is used, adjust potentiometer (1 s to 30 s).
Removing Transmitters

Single Transmitter

1. Press BOTH learn buttons until red LED flashes once (~2 s).

All Transmitters

1. Press BOTH learn buttons until blue LED illuminates (~10 s).

Press transmitter TWICE within 10 seconds.

Battery Replacement

Handheld (TD900INDHHx)

1. Remove back three (3) screws and disassemble.
2. Replace two (2) 3V (CR2032) batteries observing polarity and reassemble.

Low Battery Indicator - After transmitter button is pressed, low battery is indicated by three (3) transmitter LED blinks.

NOTE: All transmitters must ONLY be powered with provided batteries or equivalent.

SIGNAL STRENGTH INDICATION

Pressing and hold transmitter button for at least 5 seconds activates signal strength tri-color LED on receiver

- Green LED on: Strong signal
- Yellow LED on: Medium signal
- Red LED on: Weak signal

TROUBLESHOOTING

- red LED on receiver flickering; unable to program
- stuck push plate: disconnect push plates to determine which is stuck (LED should go out)
- faulty transmitter: if LED does not go out, remove transmitter batteries to determine which is faulty, replace transmitter
- weak signal: receiver antenna positioned poorly
- position antenna outside of door header
**TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency:</strong></td>
<td>908-918 MHz (frequency hopping)</td>
</tr>
<tr>
<td><strong>Emitted radio power:</strong></td>
<td>-25 dBm (TX)</td>
</tr>
<tr>
<td><strong>Power consumption:</strong></td>
<td>13 mA (Transmitter) 40mA (Receiver)</td>
</tr>
<tr>
<td><strong>Supply voltage:</strong></td>
<td>12-24 VAC/DC</td>
</tr>
<tr>
<td><strong>Contact rating:</strong></td>
<td>1.0 A @ 30 VDC 0.5 A @ 125 VAC 0.3 A @ 60 VDC</td>
</tr>
<tr>
<td><strong>Temperature range:</strong></td>
<td>14°F to 131°F (-10°C to 55°C)</td>
</tr>
<tr>
<td><strong>Programmable units per receiver:</strong></td>
<td>75</td>
</tr>
<tr>
<td><strong>LEDs:</strong></td>
<td>red (receiver learn) blue (relay activation)</td>
</tr>
<tr>
<td></td>
<td>tri-color (signal strength)</td>
</tr>
<tr>
<td><strong>Dimensions:</strong></td>
<td>2.5” (W) x 2.0” (D) x 0.75” (H) [RD900]</td>
</tr>
<tr>
<td></td>
<td>1.5” (W) x 3.0” (D) x 0.5” (H) [Transmitter]</td>
</tr>
<tr>
<td><strong>Transmitter Protection Rate</strong></td>
<td>NEMA4 / IP65</td>
</tr>
<tr>
<td><strong>Certification:</strong></td>
<td>FCC, IC</td>
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</tbody>
</table>

Specifications are subject to changes without prior notice. All values measured in specific conditions.

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**FCC / IC**

“This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.”

Changes or modifications not expressly approved by BEA Incorporated could void the user’s authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d’Industrie Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes: (1) l’appareil ne doit pas produire de brouillage, et (2) l’utilisateur de l’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

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**ANSI / AAADM Compliance**

Upon completion of the installation or service work, at a minimum, perform a daily safety check in accordance with the minimum inspection guidelines provided by AAADM. Provide each equipment owner with an owner’s manual that includes a daily safety checklist and contains, at a minimum, the information recommended by AAADM. Offer an information session with the equipment owner explaining how to perform daily inspections and point out the location of power/operation switches to disable the equipment if a compliance issue is noted. The equipment should be inspected annually in accordance with the minimum inspection guidelines. A safety check that includes, at a minimum, the items listed on the safety information label must be performed during each service call. If you are not an AAADM certified inspector, BEA strongly recommends you have an AAADM certified inspector perform an AAADM inspection and place a valid inspection sticker below the safety information label prior to putting the equipment into operation.