

## Hand-E-Wave™ Installation Instructions

### Application

Hand-E-Wave is a touchless microwave switch designed to provide a normally open or normally closed output when motion is detected within the detection zone. The switch can be configured to provide a 1 to 30 second timed output or a toggle (on/off) output.

### Powering the Unit

Hand-E-Wave can be powered with either +5VDC or 12 to 24VAC/DC. When first powered up, the lighted "Hand" symbol will alternate between Blue and Green illumination for approximately 5 seconds. On power up, allow at least 15 seconds for the unit to complete start up.

### Operate the Sensor

Move your hand within the detection zone to activate the sensor. The "Hand" symbol will change from Blue to Green and the audio will beep (if audio is enabled) to indicate

successful activation of the sensor and relay.

### Wiring

- 1) PWR: 12 to 24VAC/DC (**BLACK**)
- 2) PWR: 12 to 24VAC/DC (**RED**)
- 3) +5V DC Power In (**VIOLET**) - Do not Use if 1 & 2 are connected to Power Supply
- 4) Ground return for +5V DC if used (**TAN**) - Do not connect to pin 1 or 2
- 5) Normally Closed: NC Contact (**YELLOW**)
- 6) COM: Relay Common (**WHITE**)
- 7) Normally Open: NO Contact (**GREEN**)

### Detection Zone

Hand-E-Wave's detection zone may be adjusted from 2" to 24" (typical). Locate the **Detection Zone** potentiometer and rotate with a small standard screwdriver clockwise to increase the sensing field. Rotate counter clockwise to decrease the sensing field.

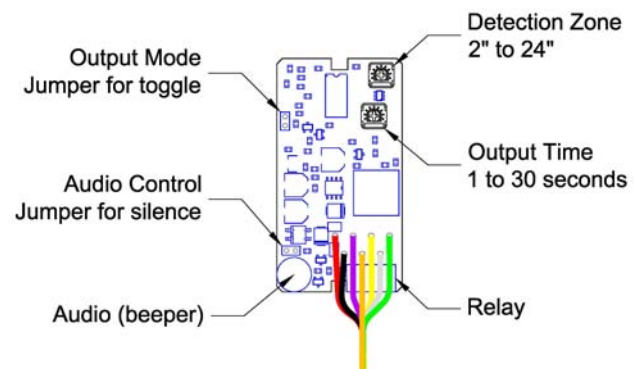
### Output Mode

**Timed Mode** is recommended for applications where a momentary or timed output is desired. In Timed mode, detection activates the relay for a set period of time (1 to 30 seconds) while there is movement in front of the sensor. To select timed mode, remove the **Output Mode** jumper (or place the jumper over ONE pin). To **SET** the output time, locate the **Output Time** potentiometer and rotate clockwise to increase the output time (up to 30 seconds). Rotate counter clockwise to decrease the output time. To trigger an automatic door opener, set the output time to 1 second.

**Toggle Mode** is recommended for ON/OFF switch applications. In toggle mode, detection activates the relay and a second detection deactivates the relay. To select toggle mode, place the jumper over BOTH pins of the **Output Mode**.

### Audio Control

Hand-E-Wave's audio feedback occurs when motion is detected within the detection zone. Audio can be enabled or disabled. To enable audio feedback, remove the **Audio Control** jumper (or place the jumper over ONE pin). To disable audio feedback, place the jumper over BOTH pins of the **Audio Control**.

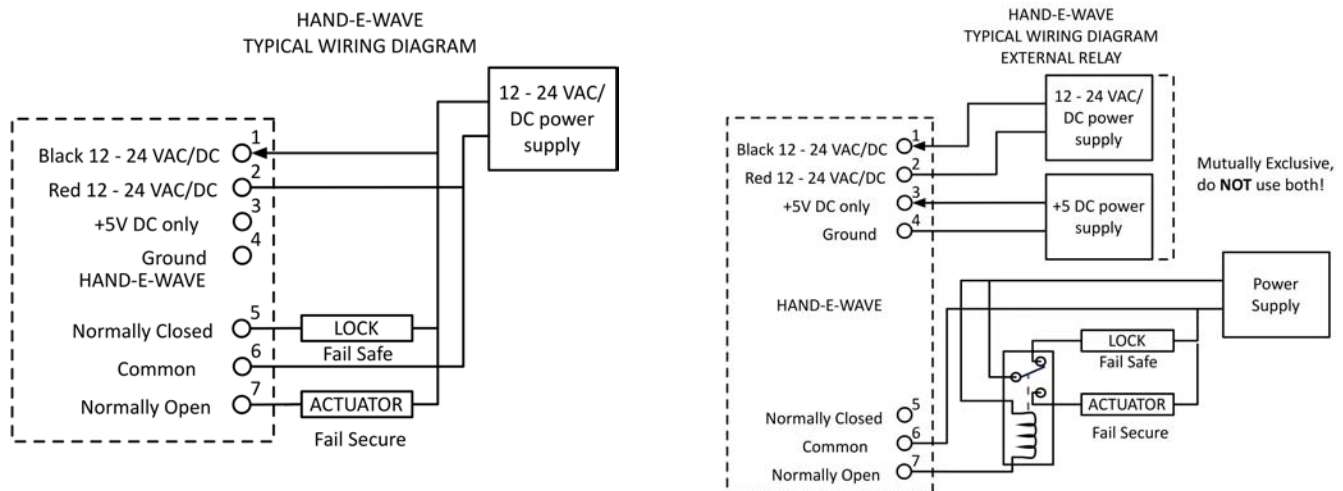


## Mounting

**HEW-1** is designed for narrow or mullion mount applications. For recessed installation, use template provided to mark and remove material. For surface mount installation, an optional spacer ring (PRXSR) is available.

**HEW-2** is designed to mount to a standard U.S. Single Gang switchbox. An optional back box (BAK BOX-SGS) is available for surface mount installation.

## TYPICAL INSTALLATIONS



## Regulatory Compliance - FCC

This device HEW has been tested and approved to be compliant with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following conditions:

1. This device may not cause harmful interferences, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

This device has been tested and approved to comply with Part 15B unintentional radiator requirements. The antenna of the module may not be removed, replaced nor modified. The antenna must not be co-located or operating in conjunction with any other antenna or transmitter. No additional antenna must be used. This device may not cause harmful interferences, and this device must accept any interference received, including interference that may cause undesired operation.

**WARNING:** CHANGES OR MODIFICATIONS TO THIS EQUIPMENT NOT EXPRESSLY APPROVED BY ESSEX MAY VOID THE FCC AUTHORIZATION TO OPERATE THIS EQUIPMENT.

## Patents Pending

Hand-E-Wave™ is a trademark of Essex Electronics, Inc.