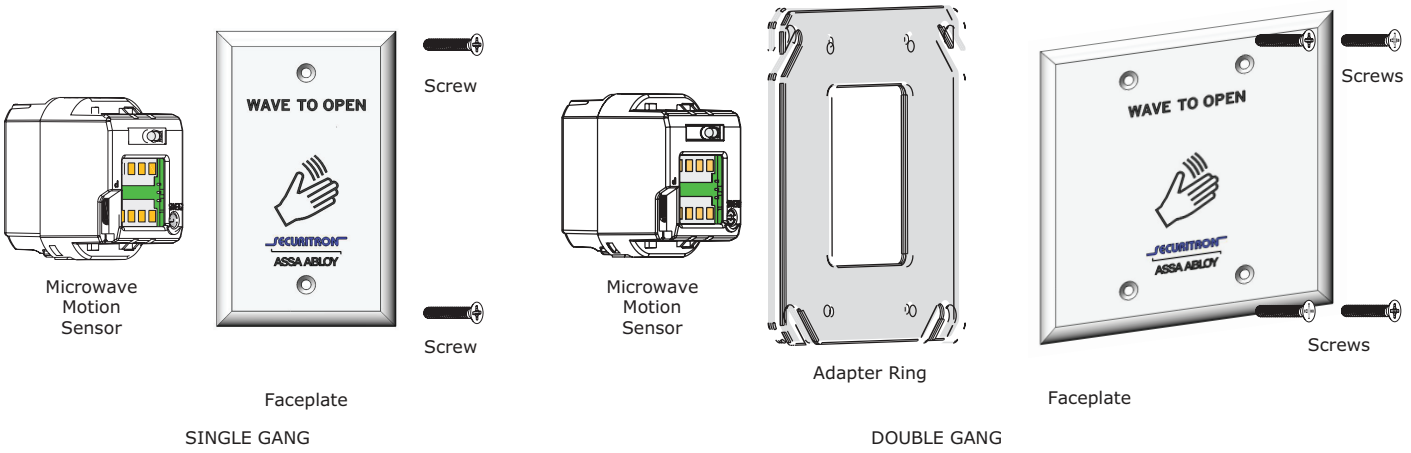
WSS Wave Sense™ Switch
Installation Instructions

1 Description



2 Package Contents

- Microwave sensor
- Weather-resistant gasket
- Mounting ring
- Faceplate
- Faceplate screws
- Instructions
- Adapter ring (double-gang model only)

Description	Specification
ELECTRICAL	INPUT 12 to 24VAC ±10% 12 to 24VDC +30%/-10% 50 to 60Hz
	<1.5W
OUTPUT Relay contact rating (max voltage) Relay contact rating (max current) Max switching power	Relay with switch-over contact (voltage free) 60VDC/125VAC 1A (resistive) 30W (DC)/60VA (AC)
DETECTION RANGE	4” to 24” (10cm to 60cm)(adjustable)
DETECTION MODE	Motion (bidirectional)
OUTPUT HOLD TIME	0.5s (in pulsed mode)
OPERATING TEMPERATURE	-4°F to +131°F (-20°C to +55°C)
IMMUNITY	Immune to electrical and radio frequency interference
WEIGHT	0.34 lbs. (0.15 kg.)
REGULATORY	Electromagnetic compatibility (EMC) according to 2004/108/EC FCC: G9B-MS08 IC: 4680A-MS08

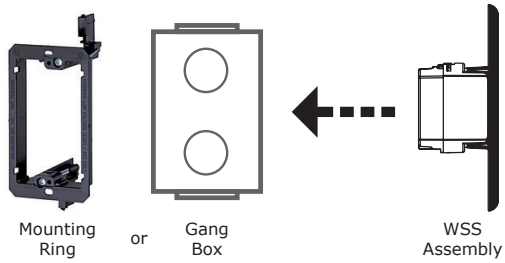
3 Precautions

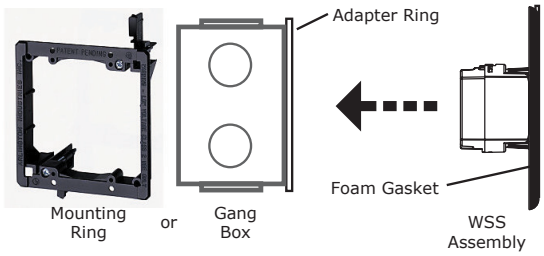
CAUTION

- ☐ Shut off power to power source before attempting any wiring procedures.
- ☐ Maintain a clean and safe environment when working in public areas.
- ☐ Constantly be aware of pedestrian traffic around the door area.
- ☐ Always stop pedestrian traffic through the doorway when performing tests that may result in unexpected reactions by the door.
- ☐ Observe proper protocols for circuit board handling to protect the unit from electrostatic discharge. Before handling any board ensure you dissipate your body's charge.
- ☐ Check placement of all wiring before powering to ensure that moving door parts do not catch wires and cause damage to equipment.
- ☐ Ensure compliance with all applicable safety standards (i.e. ANSI A156.10/A156.19) upon completion of installation.
- ☐ DO NOT attempt any repair of the sensor. Unauthorized disassembly or repair:
  1. May jeopardize personal safety and may expose one to the risk of electrical shock.
  2. Will void the product warranty.

4 Installation/Wiring/Setup

1 Installation

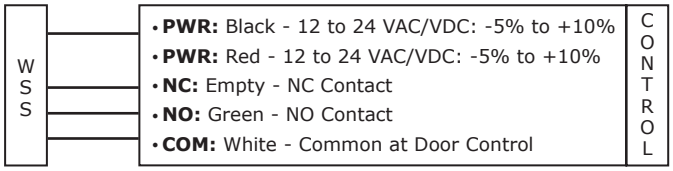


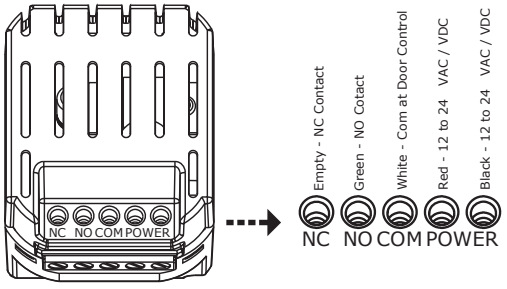


1. The WSS may be mounted using the included mounting ring or in a standard plastic or metal electrical gang boxes. Do not allow contact between the sensor and a metal gang box to prevent shorting the devices. Be sure to place the device so that motion from the door or other types of movement do not interfere with the detection zone.

2. Depending on the door installation, the weather resistant foam gasket or the plastic adapter ring may be used. The weather resistant foam is used as a protective barrier against the elements. The plastic adapter ring is designed to enable the double gang face plate to attach to various plastic and metal gang boxes.

2 Wiring



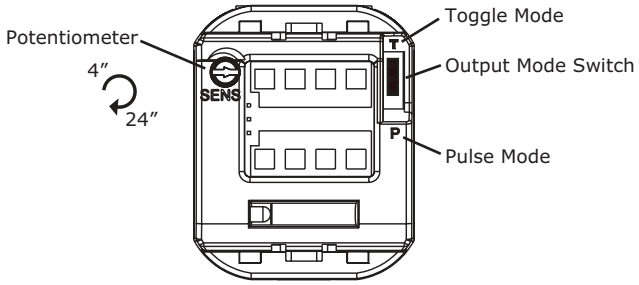


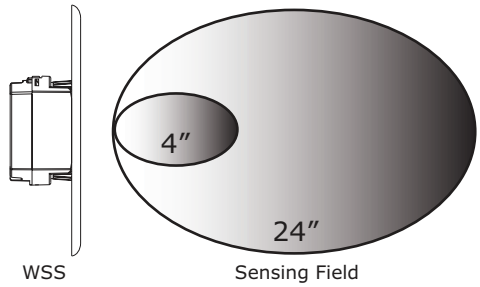
1. Wire the 4-conductor cable as shown above.

2. Attach the 4-conductor cable connector to the WSS as shown.

4 Installation/Wiring/Setup (Continued)

3 Setup





1. Adjust unit to desired setup. Two adjustments can be made to the sensor. The Potentiometer is used to adjust the size of the units' sensing field and the Output Mode switch is used to select Toggle or Pulse mode.

2. Rotate potentiometer clockwise to increase the sensing field. It may be adjusted from 4″ to 24″.

3. Adjust Output Mode by moving switch in the up position (Toggle Mode) or in the down position (Pulse Mode).

Toggle Mode: Recommended for switch applications. In Toggle mode a detection activates the relay and a second detection deactivates the relay.

Pulse Mode: Recommended for automatic door applications. In Pulse mode a detection activates the relay for a short period of time - depending on the duration of movement in front of door.

5 Troubleshooting

1 Troubleshooting Procedures

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Door does not open when swiping hand in front of sensor.	1. Bad or no power supply. 2. Detection range is too small. 3. Wrong connection.	1. Check power supply. If LED switches on or flashes, power connections are OK. 2. Adjust the detection range. Remove any metal plates in front of sensor. 3. Check wiring and relay connection.
Door remains permanently open.	1. Environmental conditions are influencing the sensor. 2. Wrong connection.	1. Remove any moving objects close to the sensor. 2. Check wiring and relay connection.
The door remains open after detection/activation	1. Wrong output mode. 2. Wrong connection	1. Switch the output mode to Pulse mode. 2. Check wiring and relay connection.

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ASSA ABLOY, the global leader in door opening solutions

FCC APPROVAL
This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.
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.
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 agianst harmful interference in a residential installation. This equipments 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 not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try 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
WARNING: CHANGES OR MODIFICATIONS TO THIS EQUIPMENT NOT EXPRESSLY APPROVED BY BEA INC. MAY VOID THE FCC AUTHORIZATION TO OPERATE THIS EQUIPMENT.