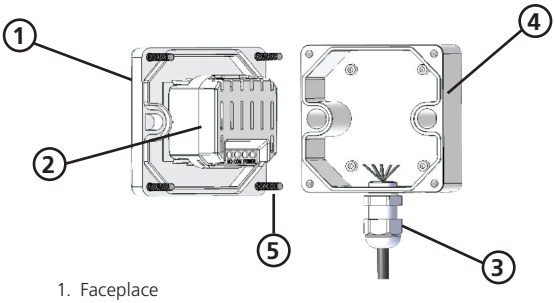
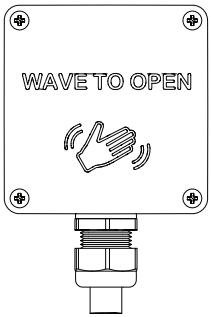
# 8310-815 TOUCHELSS ACTUATORS

NEMA 4, touchless, activation sensor

ENGLISH

## DESCRIPTION




1. Faceplace
2. Microwave motion sensor
3. Connector
4. Housing
5. Screw (x4)

## TECHNICAL SPECIFICATIONS

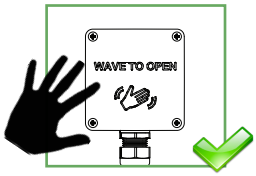
| | |
|---|---|
| Technology: | microwave, doppler radar (24.125 GHz) |
| Radiated frequency: | 24.125 GHz |
| Radiated power density: | 5 mW/cm$^2$ |
| Supply voltage: | 12 – 24 VAC ±10%<br>12 – 24 VDC +30% / -10% |
| Power consumption: | < 1.2W |
| Output<br>relay contact rating (max. voltage):<br>relay contact rating (max. current):<br>Max. switching power: | relay with switch-over contact (voltage-free)<br>60 VDC / 125 VAC<br>1A (resistive)<br>30W DC / 60 VAC |
| Detection range*: | 4 – 24" (adjustable) |
| Detection mode: | motion (bidirectional) |
| Output hold time: | 0.5 sec (in pulse mode) |
| Temperature range: | -4 – 131 °F (-20 – 55 °C) |
| Material: | ASA, PC |
| Enclosure rating: | NEMA 4 |
| Certification: | Electromagnetic compatibility (EMC) according to 2004/108/EC<br>FCC: G9B-MS08<br>IC: 4680A-MS08 |

* Detection range is dependent upon object size, object orientation, object speed, and environmental conditions.

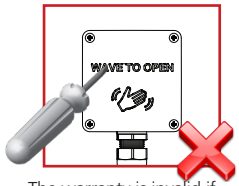
*Specifications are subject to change without prior notice.*
*All values measured in specific conditions.*

## PRECAUTIONS

Only trained and qualified personnel are recommended to install and set up the sensor.




Always test the proper operation of the installation before leaving the premises.



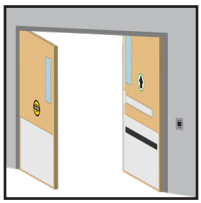

The warranty is invalid if unauthorized repairs are made or attempted by unauthorized personnel.

# 1 INSTALLATION

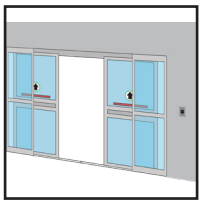
**TIPS**

- **Run conduit prior to installing sensor.**
- **Fully adjust sensor after entire installation is complete.**

**APPLICATIONS**



Swing Doors



Sliding Doors

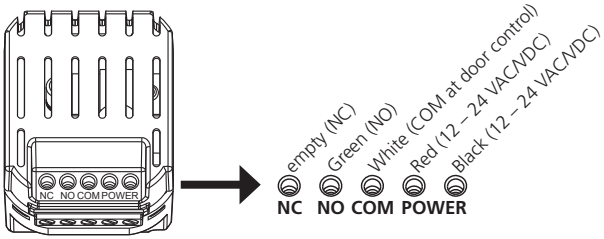
Industrial Doors

Cleanrooms

***NOTE:*** *Do not install the sensor within the swing path of the door.*

# 2 WIRING

1. Connect red (power) and black (power) to a 12– 24 VAC/VDC power source.
2. Connect white (COM) to the door control COM.
3. Connect green (NO) to the door control ACT (typically). The NC terminal is not used (typically).




**RETROFIT APPLICATION**

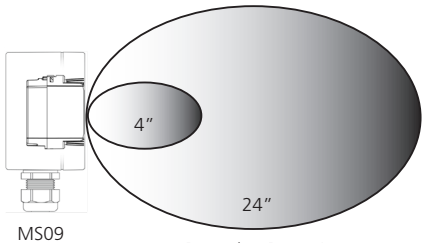
Connect the exiting 2 wires running through the wall (previously used for the activation relay of the hardwired, mechanical push plate) to the 8310-815 sensor's PWR (black) and PWR (red) terminals.

At the door control, move the 2 wires from the activation circuit to power (see Technical Specifications for power information).

## 3 SETTINGS & ADJUSTMENTS

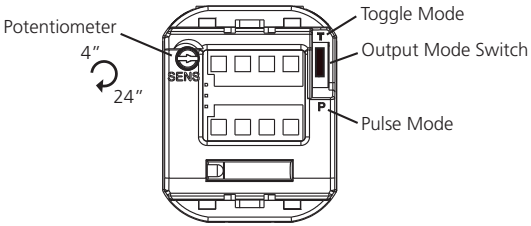
**DETECTION ZONE – potentiometer**
COUNTERCLOCKWISE – decrease (4" minimum)
CLOCKWISE – increase (24" maximum *)

**OUTPUT MODE – slide switch**
PULSE – switch down
TOGGLE – switch up




MS09

Detection Range*




* Detection range is dependent upon object size, object orientation, object speed, and environmental conditions.

### SENSOR FUNCTIONALITY

**PULSE MODE** – Recommended for automatic door applications. Output will pulse for 0.5 seconds.

**TOGGLE MODE** – Recommended for switch applications. In Toggle Mode, a detection activates the relay and a second detection deactivates the relay. The relay will hold indefinitely until a second detection occurs.

### WIRELESS FUNCTIONALITY

Use the Touchless Retrofit Transmitter to achieve a wireless application. Refer to the *900 MHZ Transmitters & Receivers* User's Guide (75.0023) for installation instructions.

### TROUBLESHOOTING

| | | |
|---|---|---|
| Sensor does not seem to detect | Bad or no power | Check power supply. |
| | Detection range too short | Adjust detection zone potentiometer. |
| | Incorrect wiring | Check wiring. |
| Sensor stays in detection | Environmental conditions | Remove moving objects from around sensor. |
| | Incorrect wiring | Check wiring (NO and NC). |
| | Wrong output mode | Switch output mode to pulse. |

### FCC

FCC: G9B-21019

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.

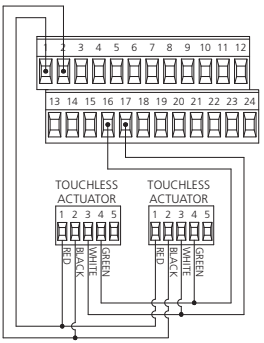
Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment 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.

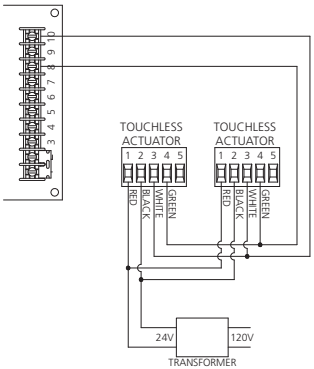
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique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

## APPENDIX: WIRING DIAGRAMS

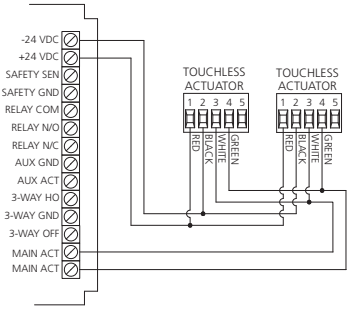
4630 / 4640 SERIES
ELECTRIC AUTO-EQUALIZER



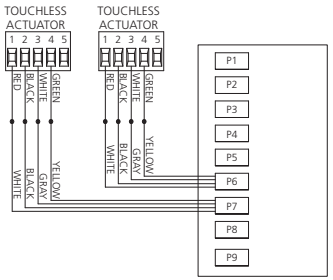

7900 SERIES
PNEUMATIC AUTO-EQUALIZER




9100 SERIES
BENCHMARK




SENIOR SWING - 2800 / 9500 SERIES
MID SWING - 2900 / 9700 SERIES




## INSTALLATION/SERVICE COMPLIANCE EXPECTATIONS

The sensor manufacturer cannot be held responsible for incorrect installations or inappropriate adjustments of the sensor/device; therefore, the sensor manufacturer does not guarantee any use of the sensor outside of its intended purpose.

The sensor manufacturer strongly recommends that installation and service technicians be AAADM-certified for pedestrian doors, IDA-certified for doors/gates, and factory-trained for the type of door/gate system.

Installers and service personnel are responsible for executing a risk assessment following each installation/service performed, ensuring that the sensor system installation is compliant with local, national, and international regulations, codes, and standards.

Once installation or service work is complete, a safety inspection of the door/gate shall be performed per the door/gate manufacturer recommendations and/or per AAADM/ANSI/DASMA guidelines (where applicable) for best industry practices. Safety inspections must be performed during each service call – examples of these safety inspections can be found on an AAADM safety information label (e.g. ANSI/DASMA 102, ANSI/DASMA 107).

Verify that all appropriate industry signage and warning labels are in place.

Do not leave problems unresolved. If a satisfactory solution cannot be achieved after troubleshooting a problem, please contact Allegion at 1-877-671-7011. If you must wait for the following workday to call Allegion, leave the door inoperable until satisfactory repairs can be made. Never sacrifice the safe operation of the automatic door or gate for an incomplete solution.

For more information, visit www.allegion.com.

ALLEGION™ LCN

Original Instructions | PLEASE KEEP FOR FURTHER USE - DESIGNED FOR COLOR PRINTING