



User Manual

DoorV™ Sensor

Part #77-S108 – Swing Door Model

Part #77-S138 – Roll Door Model

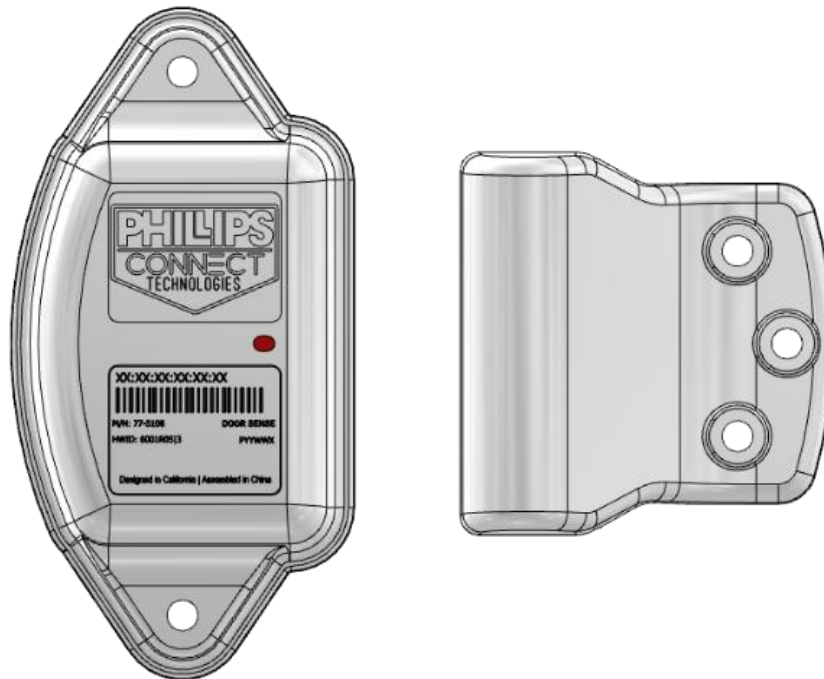




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1. INTRODUCTION

The DoorV™ Sensor from Phillips Connect Technologies, in conjunction with a Phillips Connect Asset Tracking Telematics Gateway, comprise the main components of the DoorV Sensor System. The DoorV Sensor is typically affixed to the trailer door, either using the accompanying magnet on a swing door, or the beacon unit alone on a roll door.

The DoorV Sensor is an IoT peripheral that detects whether a trailer door is in the open or closed position and transmits that status over BLE (Bluetooth Low Energy). The DoorV Sensor operates from a non-rechargeable lithium battery with enough capacity to last for the service life of the sensor.

DoorV Sensor features include:

- 2-minute Installation with VHB Tape
- Bluetooth Low Energy (BLE) Beacon
- IP67 Waterproof Standard

A typical application for the DoorV Sensor is illustrated below:





2. OPERATION SCENARIOS

As stated, the Phillips Connect DoorV Sensor is designed to work with both trailer swing doors and trailer roll doors.

2.1 SWING DOOR OPERATION (77-S108)

For trailer swing doors, the sensor detects the presence or absence of a magnetic field in close range. In this configuration the door sensor operates with a second component, a magnet. The installation consists of either the sensor or magnet secured to a door. The other component is then installed on a door sill or a different door.

2.2 ROLL DOOR OPERATION (77-S138)

For trailer roll doors, the integrated accelerometer sensor is used to determine the sensor orientation with respect to gravity. The installation consists of just the sensor, which is secured as close as possible to the top of the roll door.

3. HARDWARE FEATURES AND SPECIFICATIONS

Supported features and specifications include the following:

ELECTRICAL / BATTERY

Battery Type: Lithium, non-rechargeable

- Nominal Capacity: 2.7 Ah
- Maximum Voltage: 4.2 V_{DC}

GATEWAY DATA INTERFACE

Bluetooth 4.2

SENSOR PROPERTIES

Sensor Magnet Detection Range: Sensor surface to 1" (mounted on steel)

ENVIRONMENTAL

Ingress Protection Rating: IP67

Operating Temperature: -40°F to 149°F (-40°C to 65°C)

Storage Temperature: 32°F to 104°F (0°C to 40°C)

MECHANICAL

Sensor: 4.3" (H) x 2.2" (W) x 1" (D) (109.2 mm x 55.9 mm x 25.4 mm)

Magnet: 2.4" (H) x 2.4" (W) x 1" (D) (61.0 mm x 61.0 mm x 25.4 mm)

Weight (Sensor): 0.16 lbs. (71.7 g)

Weight (Magnet): 0.12 lbs. (56.2 g)

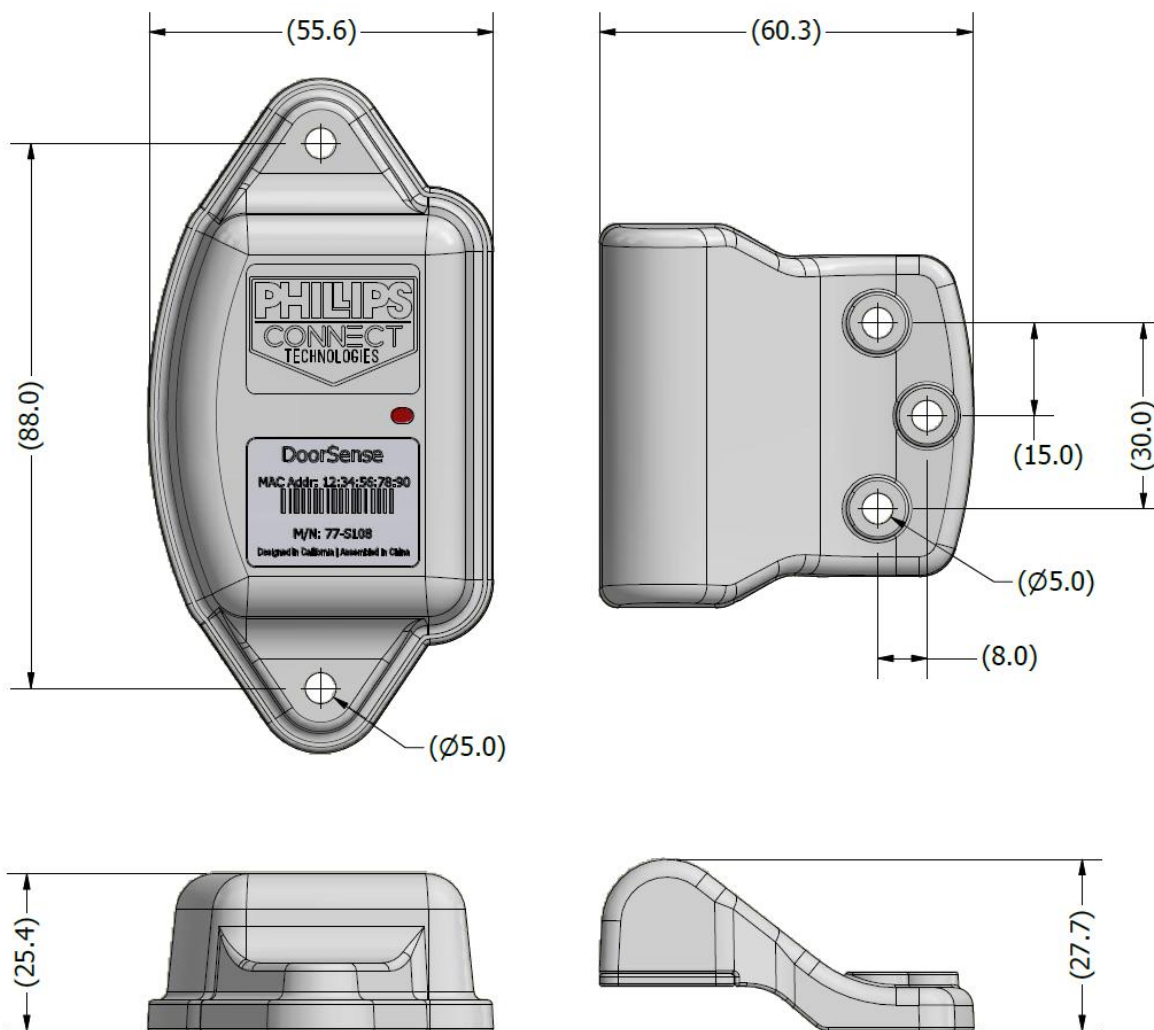
CERTIFICATIONS

FCC / IC



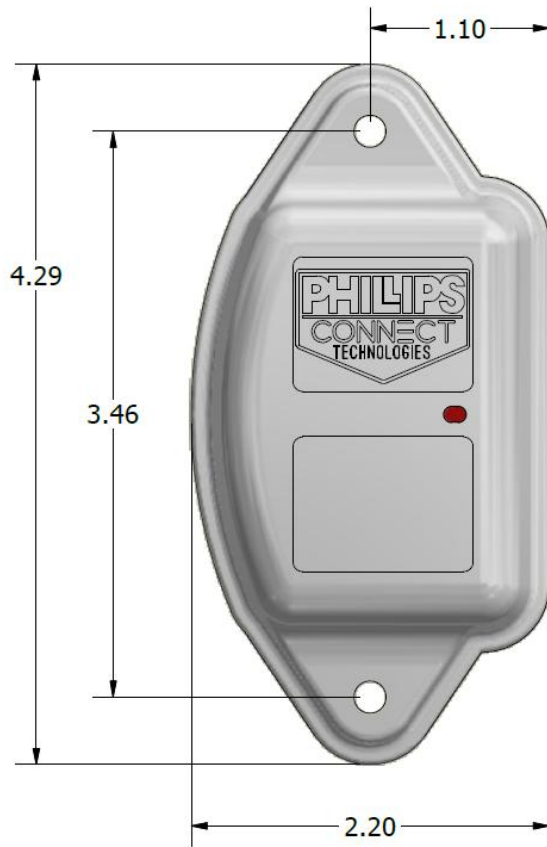
4. MECHANICAL DETAILS

4.1 77-S108 FRONT/SIDE VIEWS WITH DIMENSIONS





4.2 77-S138 FRONT/SIDE VIEWS WITH DIMENSIONS/3D VIEW



FRONT VIEW



SIDE VIEW



3D VIEW



5. COMPANY INFORMATION

**Technology that
moves us forward**



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FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

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 off and on, the user is encouraged to try to correct the interference by one 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

IMPORTANT NOTE: FCC Radiation Exposure Statement

This equipment complies with the FCC radiation exposure limits set forth for an uncontrolled environment.

The transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



INDUSTRY CANADA STATEMENT

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). operation is subject to the following two conditions:

- (1) This device may not cause interference
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicable aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique sub, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radiation Exposure Statement:

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.