



©2016 Lennox Industries Inc.  
Dallas, Texas, USA



## **⚠ WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier.

## **Shipping and Packing List**

### **Package 1 of 1 contains:**

- 1 - Infrared sensor
- 1 - Control module
- 4 - Short phillips-head self-tapping screws
- 4 - Long phillips-head self-tapping screws
- 4 - Long phillips-head machine screws

# INSTALLATION/ OPERATION INSTRUCTIONS

## **V0SNSR78P**

VRF Systems - Infrared Sensor Kit  
507614-01  
5/2016

## **⚠ IMPORTANT**

Read all of the information in this manual before using this accessory. All wiring must conform to local and national building and electrical codes and ordinances.

- 4 - Phillips-head wood screws
- 4 - Plastic Anchors
- 1 - Insulator
- 1 - Connective cable
- 1 - Connective pigtail
- 1 - Installation manual

## Requirements

Be sure that power supply to all equipment has been turned off before beginning installation. This accessory should be used only as described in this manual. This accessory must be installed indoors.

- The accessory uses low voltage. Keep a minimum distance of 12" (305 mm) between low voltage control wire and high voltage power wires.
- Use only the provided cable. Do not extend or splice the cable.
- Do not use a megger to test insulation.

## General

Use the V0SNSR78P infrared sensor kit to automatically turn on/off the indoor unit by sensing motion.

## Specifications

Input voltage	+5 VDC
Ambient temperature	23~110°F (-5~43°C)
Ambient humidity	RH40%~RH90%

## Operations

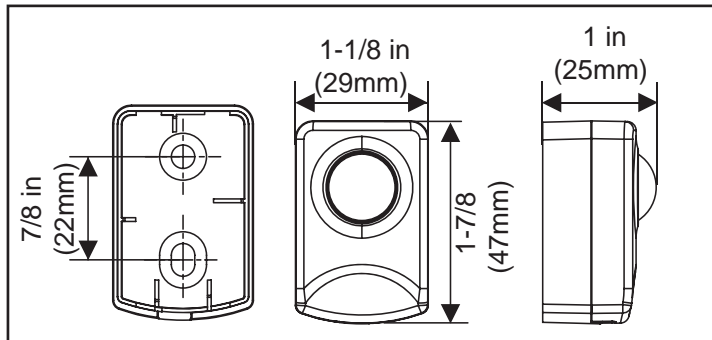
- The infrared sensor kit can sense motion in a certain area and automatically turn off the indoor unit if there is no motion for a specified period of time. See figure 3.
- When the indoor unit is turned on and the infrared sensor does not sense motion, or there are no key-presses on the local controller for 30 minutes or one hour (selectable via S1 dip switch on the control module), the kit will turn off the indoor unit automatically. The next time it senses motion, the kit will turn on the indoor unit.
- The kit will continuously sense motion and determine whether to turn off or on the indoor unit when the indoor unit is turned on by the local controller, regardless of controller schedules or centralized controller commands.
- Operation conflicts could occur if the infrared sensor kit is used with other controls devices such as a

centralized controller.

- Do not place the infrared sensor close to a radio frequency inter-

ference source. The interference device may trigger the infrared sensor.

## Dimensions



**Figure 1. Infrared Sensor Dimensions**

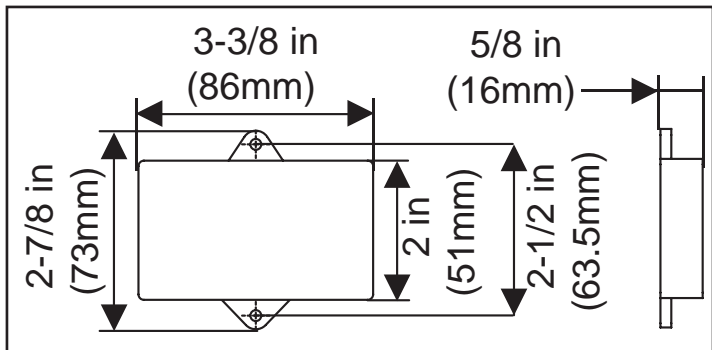
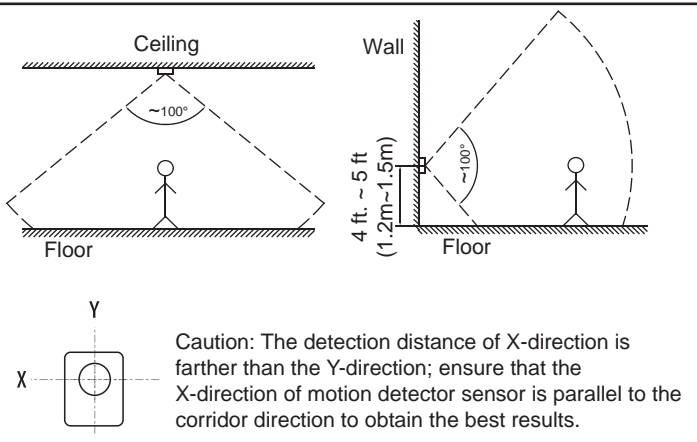


Figure 2. Control Module Dimensions

## Locating the Infrared Sensor



**Figure 3. Mounting the Sensor**

## Wiring Connections

### ⚠ CAUTION

Before attempting to perform any service or maintenance, turn the electrical power to unit OFF at disconnect switch.

Connect the V0SNSR78P infrared sensor kit following the wiring diagram below.

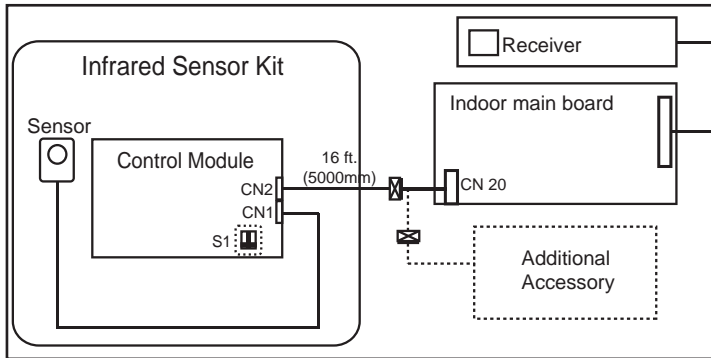


Figure 4. Connection Diagram

## Installation

To indoor  
unit main  
board CN20

Connect one  
additional  
accessory to  
CN20

Pigtail to  
connect to  
indoor unit

Control  
module

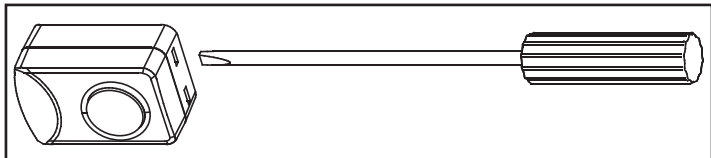
Infrared  
sensor

Connective  
cable



Figure 5. V0SNSR78P-1 Infrared Sensor Kit

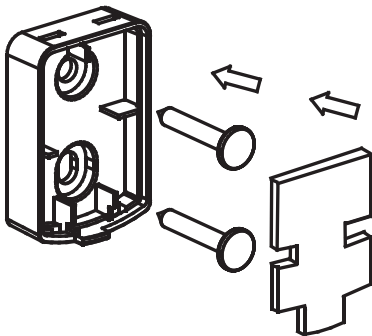
1. Remove the back cover of the infrared sensor with a flat-head screwdriver. See figure 6.



**Figure 6. Remove Back Cover of Infrared Sensor**

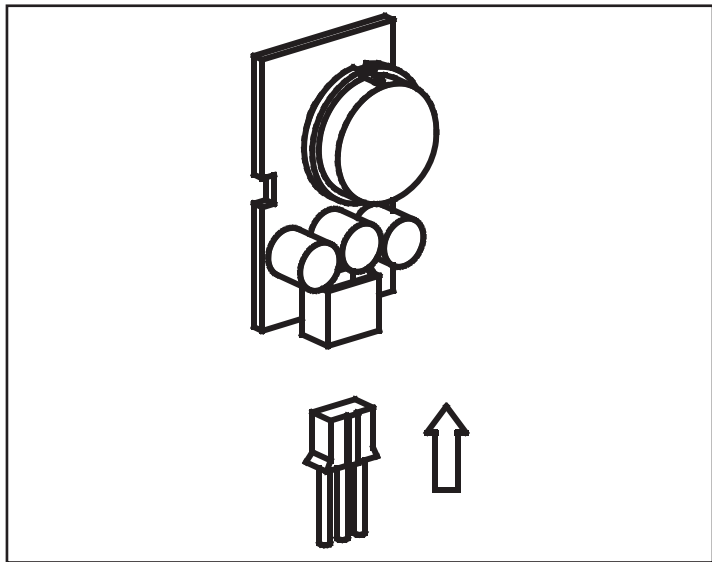


2. Remove rubber insulator and retain for future use.
3. Use the provided screws to fix the back cover of the sensor to the surface where it is to be installed. See figure 7.
4. Place the rubber insulator back into the back cover, covering the screws and insulating the control board from touching the screws. See figure 7.



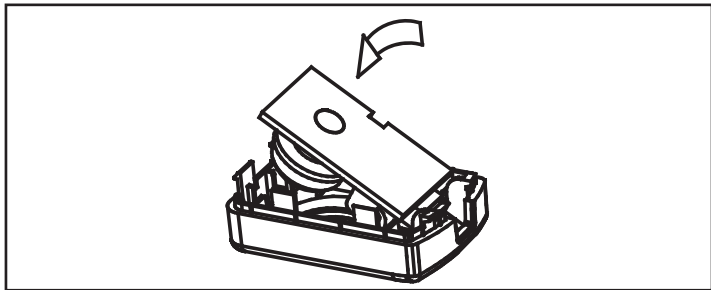
**Figure 7. Remove Back Cover of Infrared Sensor and Rubber Insulator**

5. Insert the plug of the provided connective cable into the corresponding plug of the infrared sensor. See figure 8.



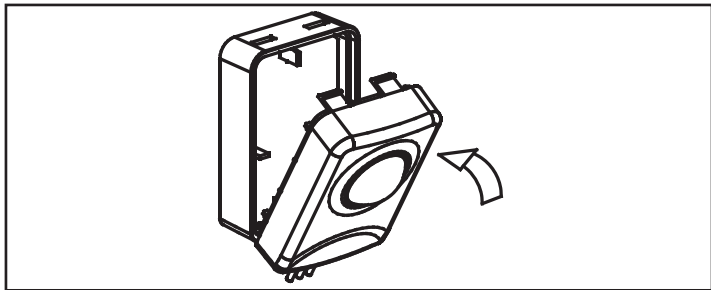
**Figure 8. Connect Infrared Sensor to Control Module**

6. Press the infrared sensor into the back cover. See figure 9.



**Figure 9. Place Infrared Sensor Inside Cover**

7. Snap the front cover of the infrared sensor onto the back cover. See figure 10.



**Figure 10. Connect Infrared Sensor to Control Module**

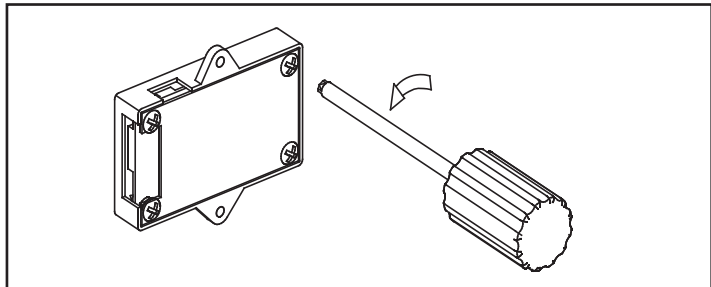
**NOTE** – Do not overtighten screws or the back cover will be deformed.

**NOTE** – Be sure to provide for future maintenance by allowing enough slack in the wiring to allow the sensor to be removed for maintenance.

8. Set the delay OFF time following the instructions on the next page.
9. Locate the infrared sensor and control module as appropriate for your application.
10. Connect the infrared sensor to CN1 of the control module. See figure 5.
11. Connect the indoor unit connective wiring (cable and pigtail) to CN2 of the control module. See figure 5.
12. Connect one additional accessory to CN20 of the indoor unit main board by removing the jumpered plug of the pigtail connection and plugging in the connective cable of that accessory. See figure 5.
13. Connect the blue plug of the pigtail to CN20 of the indoor unit main board.

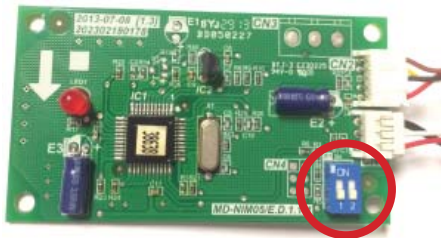
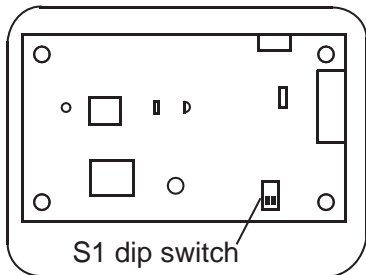
## Set S1 Dip Switch

1. Open the control module with a phillips-head screwdriver. See figure 11.



**Figure 11. Open Control Module**





2. Set the S1 dip switch using Table 1 as a guide. See figure 12 for dip switch location.



**Figure 12. Set S1 Dip Switch**

3. Set the S1-1 dip switch in the control module to select the amount of time after which if the indoor unit will shut off if there is no detected movement.
4. Set the S1-2 dip switch in the control module to select whether or not the control module will remember the indoor unit's operation status when the infrared sensor kit is powered off.

**Table 1. S1 Dip Switch**

<p>ON</p> <p>S1</p>  <p>1 2</p>	<p>Delay OFF time 30 minutes (default)</p>
<p>ON</p> <p>S1</p>  <p>1 2</p>	<p>Delay OFF time one hour</p>
<p>ON</p> <p>S1</p>  <p>1 2</p>	<p>After power loss indoor unit will resume the last setting (default)</p>
<p>ON</p> <p>S1</p>  <p>1 2</p>	<p>Disable infrared sensor</p>