

# Quick Start Guide

## INSTEON® Motion Sensor

Models: 2842-222, 2842-422, 2842-522

### Tools Needed

- Small Phillips screwdriver

### Introduction

The INSTEON Motion Sensor is an indoor/outdoor motion sensor that will turn INSTEON-controlled lights on and off in response to movement around your home. The sensor also contains a photocell, allowing you to configure the unit to only turn your lights on at night. Pair the Motion Sensor with INSTEON software for almost limitless automation possibilities.

In this package you will find the Motion Sensor, a 9V battery, a swivel mount and 2 screws.

### Operation

#### When Motion is Sensed

- 1) When motion is sensed the Motion Sensor will send an ON command to up to 30 linked INSTEON responders and flash its LED (unless it is daytime and unit is in night-only mode)
- 2) Sensor will begin its automatic countdown
- 3) Whenever motion is sensed during countdown, the countdown will be reset to easily allow you to create "occupied" versus "unoccupied" modes for your home
- 4) When countdown expires the Sensor will send an OFF command to all linked responders (unless it is in on-only mode)

#### Applications

- Turn on driveway or front step lights when visitors approach
- Have your fountain always on when you are around (and off when you are away)
- Save money by having HVAC and lighting automatically go into energy-saving mode when no one is around

### Setup

#### Insert Battery

Use a small Phillips screwdriver to remove screw and cover from battery compartment on back of unit. Attach the included 9V battery. Do not replace compartment cover until instructed to do so later in this manual. Wait 5 minutes for the circuit to stabilize. Then, to confirm unit is functioning, tap the set button a couple of times while watching the front of the unit. Each time you tap the set button, a red LED behind the sensor lens will flash. Don't worry if the LED flashes when you are not tapping the set button; it is simply indicating that motion is being detected.



Close-up of battery compartment

#### For US applications - Dual-Band Products and Access Point/Range Extender

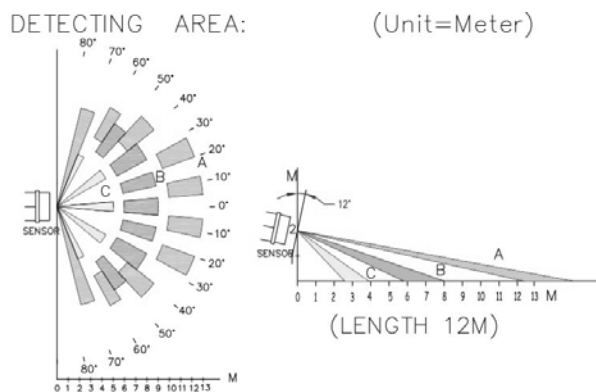
If you want Motion Sensor to control a powerline-only device, you need at least one INSTEON Access Point/Range Extender or other dual-band product installed in your home

### Make Motion Sensor a Controller

- 1) Press and hold Motion Sensor set button for 5 seconds  
*Motion Sensor LED (behind sensor lens) will start blinking red*
- 2) Turn responder on (or any other state such as on 50% or even off)
- 3) Press and hold responder set button until it double-beeps  
*Motion Sensor LED will stop blinking*
- 4) Test by tapping Motion Sensor set button  
*Responder load will respond appropriately*  
*Motion Sensor LED will blink red*
- 5) Repeat steps 1-4 for up to 32 responders you wish Motion Sensor to control



## Detecting Area



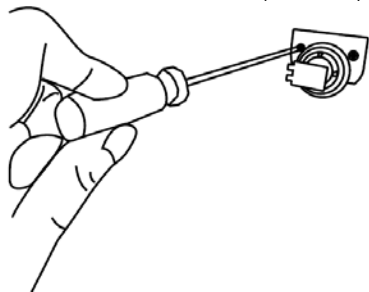
## Placement Tips

Select a location that will provide the coverage required while keeping in mind the following potential problems:

- Reflective surfaces - Do not aim the detector at reflective surfaces such as mirrors or windows as this may distort the coverage pattern or reflect sunlight directly onto the detector
- Air flow - Avoid locations that are subject to direct high air flow such as near an air duct outlet
- Moisture - Do not place the detector near sources of steam or oil
- Sunlight - Do not aim the detector such that it will receive direct or reflected (mirror) sunlight
- Obstruction - Do not limit the coverage with large objects within the detection area such as plants or filing cabinets
- Pet rejection - Do not aim the detector at a stairway which a pet has access to and do not place furniture or objects higher than 3 ft./0.9 m, which a pet can climb onto (e.g. a cat on a couch), closer than 6 ft./1.8 m to the detector
- Fireplace - Do not place the detector near a fireplace due to the light and heat
- Snow or ice – Snow or ice on the Fresnel lens may interfere with Motion Sensor's ability to detect motion
- Dirt – Dirt on the Fresnel lens may interfere with Motion Sensor's ability to detect motion

## Mount Sensor

- 1) Use the two small screws (included) to secure the swivel mounting bracket at your desired location



- 2) Slide Motion Sensor onto the swivel mounting bracket (sliding the unit to the right) until you hear a click



- 3) Aim Motion Sensor towards the area in which you wish to detect motion
- 4) Test by walking through the area. Responder(s) should respond appropriately when motion is sensed and turn off 30 seconds after last motion sensed.

## Adjust Detection Area

- 1) Tap Motion Sensor set button until the linked responder(s) turn off
- 2) Within 10 seconds walk well out of detection area
- 3) Wait 20 seconds
- 4) Walk into and near your detection area. Your linked responders will turn on (LED will flash upon initial motion, then once every 8 seconds during motion).
  - a. If LED does not flash while you are moving within the desired detection area, re-aim sensor (usually means pointing the Sensor “up”)
  - b. If LED flashes while you’re moving outside detection area:
    - i. Aim sensor to decrease range (usually means aiming the sensor “down”).
    - ii. If aiming sensor does not generate desired results place jumper 1 on both pins (see section Setup Modes).

## Setup Modes (Optional)

### Set Jumpers

Jumpers are small plastic “boxes” that act as a switch. When installed on 2 pins, the switch is “on.” When installed on 1 pin (or missing), the switch is “off.”

#### Jumper 1 – Sensitivity

To reduce sensor's detection range by approximately 33%, use needle-nose pliers to carefully remove Jumper 1 (the left-most jumper) from the single pin it is installed on and reinstall it on both pins. Tap the set button once, wait 10 seconds and activate motion to establish the new setting.

#### Jumper 2 – Disable LED

If you wish to disable the LED (it will still operate during setup), install Jumper 2 on both pins. Tap the set button once, wait 10 seconds and activate motion to establish the new setting.

#### Jumper 3 – Night-Only Mode

If you wish to have the Sensor operate only when dark, install Jumper 3 on both pins. Tap the set button once, wait 10 seconds and activate motion to establish the new setting. Note: It takes 3.5 minutes (or 7 set button taps) to detect the difference between day and night. See Day/Night Threshold below for details.

#### Jumper 4 – On-Only Mode

If you wish to disable the automatic-off countdown, install jumper 4 on both pins and the Motion Sensor will only send “On.” Tap the set button once, wait 10 seconds, and activate motion to establish the new setting.

#### Jumper 5 – Remote (Software) Management

If you wish to manage all of sensors settings via INSTEON software (such as HouseLinc), install jumper 5 on both pins. Then, follow your INSTEON software instructions for managing sensor.

## Adjust Modes

### Adjust Dials

#### Left Dial – Adjust Automatic “Off” Countdown

Using a small Phillips screwdriver, adjust to the desired time duration in which you want Motion Sensor to send an OFF command after the last motion sensed. Turning the dial all the way counter-clockwise sets the countdown to 30 seconds; turning the dial all the way clockwise sets it to 2 hours. Anywhere in between results in a proportional difference between 30 seconds and 2 hours.

#### Right Dial – Day/Night Threshold

Using a small Phillips screwdriver, adjust the day/night threshold to desired light level. Turning the dial clockwise increases the light level of the threshold; turning the dial counter-clockwise decreases the light level of the threshold. For example, when you turn the dial all the way clockwise, Motion Sensor will read “night” no matter how bright it is. Likewise, turning the dial all the way counter-clockwise will make Motion Sensor read “day” no matter how dark it is. Turning the dial anywhere in between will choose the specific light level which Motion Sensor uses to determine “night” vs. “day.” To test, set Motion Sensor to night-only mode (see above) and tap the set button 7 times. If it reads the current light level as “night,” it will turn on its linked responders on first sensed motion. If it reads “day,” the LED will flash on first motion, but it will not turn on its linked responders.

## Troubleshooting

Symptom	Resolution
Sensor won't link to responders	Move a dual-band INSTEON device (e.g., Access Point/Range Extender) closer to the Motion Sensor

Sensor won't control linked responders	a) Make sure LED flashes to confirm it has power and is sensing motion b) Sensor is in night-only mode (and it is "day") c) Move a dual-band INSTEON device (e.g., Access Point/Range Extender) closer to the Motion Sensor d) Sensor is in its 1 minute countdown
LED flashing rapidly after motion is detected	Sensor did not receive an acknowledgement from one or more linked devices. If this occurs repeatedly you may need to move a dual-band INSTEON device closer to the Sensor or you may need to unlink a device which is no longer in use in your home. If the INSTEON responders are no longer available, you may either use software or perform a factory reset to remove the unwanted links.
LED not flashing upon motion	a) You may need to wait up to 8 seconds to see the flash b) Battery may need to be replaced
Not sensing motion	a) Light detected and unit is in night-only mode b) Motion Sensor aimed too low c) Temperature too high, or low (sensor needs to be able to distinguish between what is being sensed and its surroundings) d) See <i>Placement Tips</i> section
LED is double flashing upon motion	Low battery warning—replace with fresh battery

### Remove Motion Sensor as a Controller

- 1) Press and hold Motion Sensor set button for 5 seconds  
*Motion Sensor LED (behind sensor lens) will start blinking red*
- 2) Press and hold Motion Sensor set button for 5 seconds  
*Motion Sensor LED will continue blinking red*
- 3) Press and hold responder set button until it beeps  
*Motion Sensor LED will stop blinking*
- 4) Test by tapping Motion Sensor set button  
*Former responder will not respond*

### Factory Reset

#### Return Motion Sensor to Factory Settings

- 1) If possible, remove Motion Sensor as a controller of all responders before proceeding\*
- 2) Remove battery
- 3) Wait 15 seconds
- 4) While pressing the set button, reattach the battery  
*After about 2 seconds the LED will turn on*
- 5) Continue pressing the set button for 5 seconds and then release the set button  
*The LED will turn off after about 2 seconds*

\* If you do not unlink, your responder will continue to respond to Motion Sensor even after factory reset procedure is complete

### Owner's Manual and Tech Support

Visit: <http://www.insteon.com/support> for complete manual, online tech support and latest product documents.

Call: INSTEON Support Line at 866-243-8022

### FCC and IC Warnings

This device complies with FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful 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.

CAUTION - To reduce the risk of overheating and possible damage to other equipment do not install to control a receptacle, a motor-operated appliance, a fluorescent lighting fixture, or a transformer-supplied appliance. Gradateurs commandant une lampe à filament de tungstène – afin de réduire le risque de surchauffe et la possibilité d'endommagement d'autres matériels, ne pas installer pour commander une prise, un appareil à moteur, une lampe fluorescente ou un appareil alimenté par un transformateur.

#### DECLARATION OF CONFORMITY

Hereby, INSTEON declares that this device is in compliance with the essential requirements and other relevant provisions of the following Directives:

- 1) Electromagnetic Compatibility Directive 2004/108/EC
- 2) Hazardous Substance Directive 2005/95/EC

Technical data and copies of the original Declaration of Conformity are available and can be obtained from INSTEON; 16542 Millikan Ave, Irvine, CA, USA.

#### User Information for Consumer Products Covered by EU Directive 2002/96/EC on Waste Electric and Electronic Equipment (WEEE)

This document contains important information for users with regards to the proper disposal and recycling of INSTEON products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:



Environmental Information for Customers in the European Union

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams.

It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

#### DECLARATION OF CONFORMITY TO R&TTE DIRECTIVE 1999/5/EC for the European Community, Switzerland, Norway, Iceland and Liechtenstein

Product category: general consumer (category 3).

English: This equipment is in compliance with the essential requirements and other relevant provisions of the European R&TTE Directive 1999/5/EC

Deutsch [German]: Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.

Nederlands [Dutch]: Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen van de Richtlijn 1999/5/EC.

Svenska [Swedish]: Denna utrustning står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Français [French]: Cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 1999/5/EC

Español [Spanish]: Este equipo cumple con los requisitos esenciales así como con otras disposiciones de la Directiva 1999/5/CE.

Português [Portuguese]: Este equipamento está em conformidade com os requisitos essenciais e outras provisões relevantes da Directiva 1999/5/EC.

Italiano [Italian]: Questo apparato è conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 1999/5/CE.

Norsk [Norwegian]: Dette utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 1999/5/EF.

Suomi [Finnish]: Tämä laite täyttää direktiivin 1999/5/EY olennaiset vaatimukset ja on siinä asetettujen muiden laitetta koskevien määräysten mukainen.

Dansk [Danish]: Dette udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Direktiv 1999/5/EF.

Polski [Polish]: Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE: 1999/5/EC