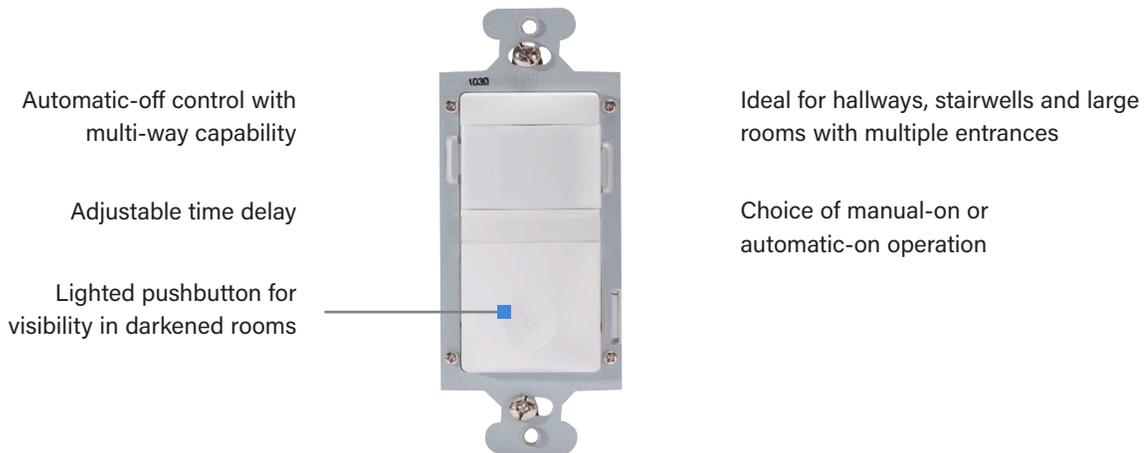# PIR MULTI-WAY WALL SWITCH OCCUPANCY SENSOR

RH-250

Automatic-off control with multi-way capability

Adjustable time delay

Lighted pushbutton for visibility in darkened rooms

Ideal for hallways, stairwells and large rooms with multiple entrances

Choice of manual-on or automatic-on operation

DESCRIPTION

The RH-250 Passive Infrared (PIR) Multi-way Occupancy Sensor provides automatic lighting shutoff for a variety of applications including those with multiple switch locations. It offers optional automatic lighting activation.

OPERATION

The RH-250 operates either as a manual- or automatic-on sensor. When in manual-on mode, users must press the pushbutton to turn on lighting. The RH-250 employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the lighting off manually.

When automatic-on operation has been selected, the adjustable light level sensor may be set to prevent lights from turning on automatically if sufficient daylight is present.

MULTI-WAY OPERATION

An RH-250 connected to other RH-250s and/or RH-253 Decorator Single Pole Momentary Switches provides true multi-way on/off control. An occupant simply presses the on/off pushbutton of any connected device to turn on the lighting. Lights remain on as long as one of the RH-250s continues to detect occupancy. The user may turn off the lighting by pressing the on/off button on any of the connected devices. If the room becomes vacant and lights are on, they will be switched off automatically following the time delay of the last RH-250 to detect occupancy.

APPLICATIONS

RH-250s are ideal for applications where the switch location has an unobstructed line of sight of the room. Multiple RH-250s can be used for lighting control in hallways, stairwells and large rooms with multiple entrances, as each sensor expands the coverage area.

FEATURES

- Complies with 2011 NEC requirements
- Replaces single- or multi-pole switches
- Provides multi-way control when used with other RH-250s or RH-253s
- Adjustable time delay, 15 seconds to 30 minutes
- Lighted switch for visibility in darkened rooms
- If enabled, light level sensing prevents automatic-on when adequate daylight exists

- Low-profile styling
- Choice of five decorator colors; lens is color-matched to device
- Operates most common types of lighting
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- Compliant with Nonresidential CA Title 24 requirements
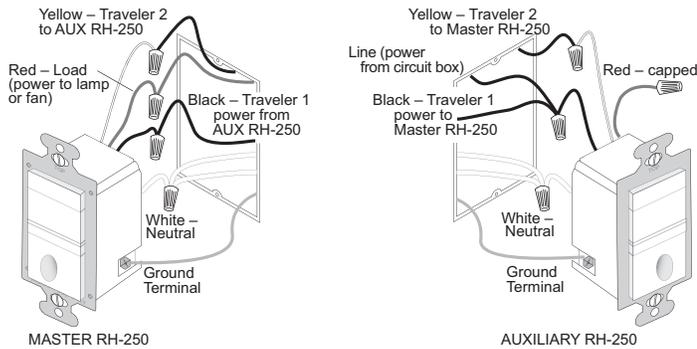
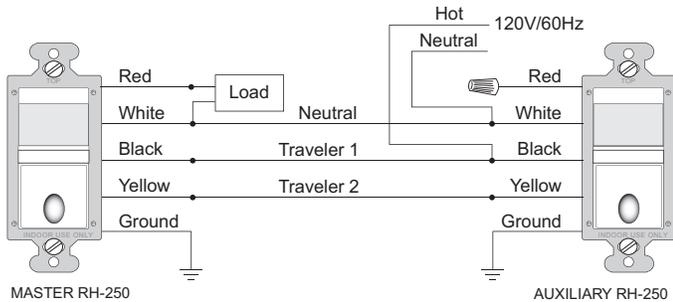| PROJECT		LOCATION/ TYPE	

SPECIFICATIONS

- 120 VAC, 60 Hz; neutral required

- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor

- Time delay settings: 15 seconds, 5, 15, 30 minutes

- Adjustable light level setting from 10-150 fc (100-1500 lux) for daylight sensing

- PIR coverage: 180°, 600 ft2 (56 m2)

- 2.67″ x 1.73″ x 1.77″ (68mm x 44mm x 45mm) L x W x D

- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only

- UL and cUL listed

- Five year warranty

INSTALLATION & WIRING

Wiring Diagrams

Yellow – Traveler 2 to AUX RH-250
Red – Load (power to lamp or fan)
Black – Traveler 1 power from AUX RH-250
White – Neutral
Ground Terminal
MASTER RH-250

Yellow – Traveler 2 to Master RH-250
Line (power from circuit box)
Red – capped
Black – Traveler 1 power to Master RH-250
White – Neutral
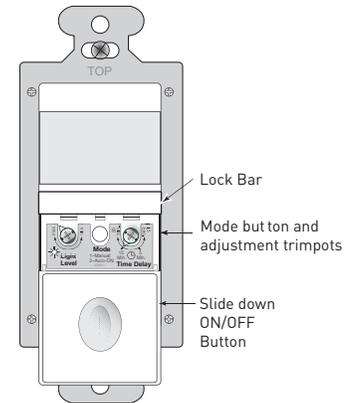Ground Terminal
AUXILIARY RH-250

For single pole applications, cap off the yellow wire. Up to four multi-location sensors may be connected together. For details on connecting RH-253s for multi-location control, see the RH-253 cutsheet.
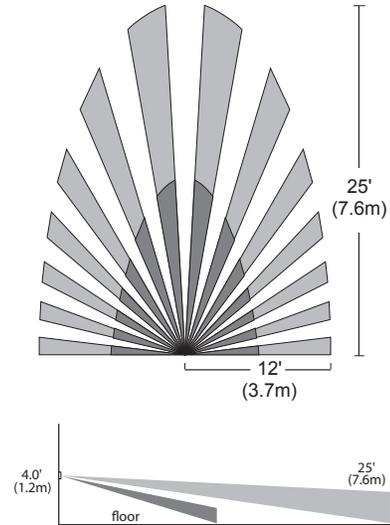

MASTER RH-250

Red
White — Neutral
Black — Traveler 1
Yellow — Traveler 2
Ground
Load
Hot — 120V/60Hz
Neutral
Red
White
Black
Yellow
Ground
AUXILIARY RH-250

CONTROLS

To access adjustment dial, gently pull the lock bar away from the switch face and slide the on/off button down.

TOP
Lock Bar
Mode button and adjustment trimpots
Slide down ON/OFF Button

COVERAGE

25' (7.6m)
12' (3.7m)

4.0' (1.2m)
25' (7.6m)
floor

ORDERING INFORMATION

Catalog #	Color	Description	Voltage	Load Rating	Coverage
☐ RH-250-W	White	Ultrasonic Multi-way Wall Switch Vacancy Sensor	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV lighting or 1/6 hp motor	180°, max. 600 ft² (56m²)
☐ RH-250-I	Ivory				
☐ RH-250-LA	Light Almond				
☐ RH-250-A	Almond				
☐ RH-250-B	Black				

Order wall plate separately.

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