



Total Lighting Control



Low-Voltage Wall Switch Occupancy Sensor



DESCRIPTION

The RSENSWT-LV is an ultrasonic motion sensor designed to control a single room up to 15 by 20 feet. It is a self-contained unit which can be used to replace a standard GE low-voltage remote control wall switch for automatic energy savings.

The unit produces a low intensity, inaudible sound. It detects changes in the sound waves caused by motion, such as walking into the room, reaching for a telephone, turning in a chair, etc. The sensor does not respond to audible sound.

The lights are turned ON when entering the room by pressing the pushpad on the face of the RSENSWT-LV; they do not turn ON automatically when the room is entered. When the lights are turned ON, they will remain

FEATURES

- Manual ON, Auto OFF operation for maximum energy savings.
- Built-in ON/OFF switch.
- Full coverage. No gaps in coverage pattern.
- Separate time delay and sensitivity adjustments.
- Compatible with existing GE RR7, RR8, and RR9 relays. (Requires four low-voltage wires to directly replace existing low-voltage switches.)
- Positive override switch to bypass the unit for maintenance purposes.

Before starting, read the installation instructions inside. If you have questions, call GE TLC Service at:

1-877-584-2685 (LTG-CNTL) in the United States or
1-800-661-6619 in Canada.

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INSTALLATION

continued from previous page —

ON as long as there is someone in the room. If the wall switch sensor fails to detect motion during the user-selected time delay period, it will turn the lights OFF automatically.

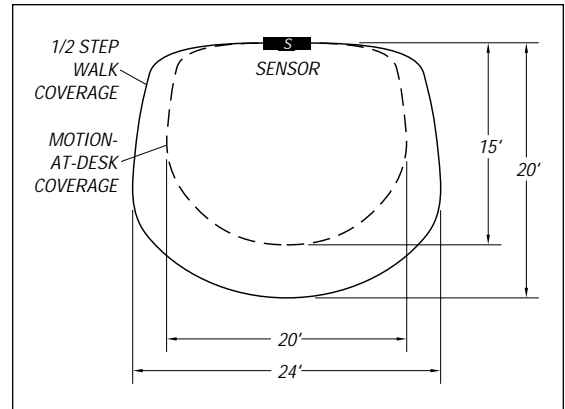
The lights may also be turned OFF and ON while the room is occupied by pressing the pushpad (it alternately toggles the lights ON/OFF).

If the lights go OFF for lack of motion in the room, a ten-second "grace" period begins, which allows lights to be turned ON again by motion. After this ten-second period, the lights can be turned ON by pressing the pushpad.

Locating Sensor

If installing the RSENSWT-LV in a new junction box, choose the location carefully to provide optimum coverage of the occupied area. If replacing an existing wall switch, bear in mind that there must be a clear line of sight between the wall switch sensor and the area being covered. The line of sight must be through air. The sensor cannot "see" through glass or partitions. Consideration should also be given to the path of entry, but avoid pointing the RSENSWT-LV directly into the hallway where it may detect movement from passers-by.

The RSENSWT-LV is designed specifically for small offices up to 300 square feet with dimensions up to 15

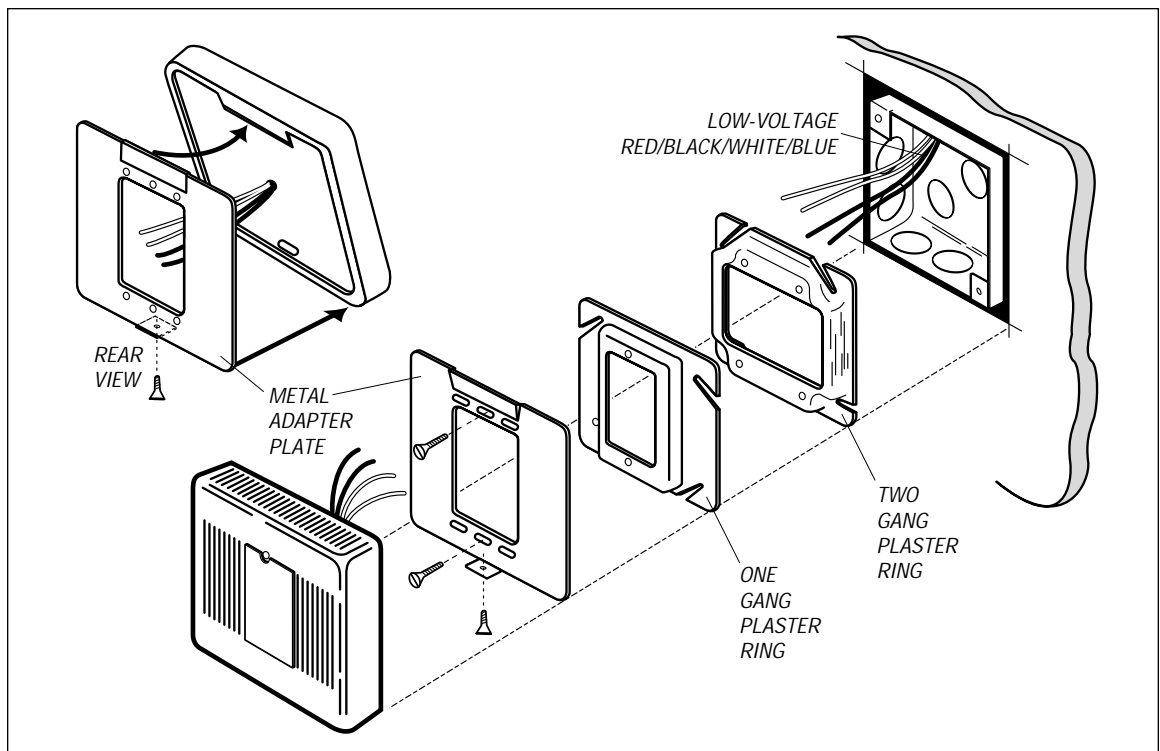


by 20 feet. Refer to the coverage diagram above when selecting the mounting location.

Mounting Sensor

CAUTION: Before installing or doing any service on an RSENSWT-LV, the power **MUST** be turned OFF at the circuit breaker.

The wall switch sensor can replace an existing GE low-voltage switch mounted in a single-gang switch box, provided the switch has four wires. (For a standard 3-wire low voltage switch with red/black/white leads, a fourth blue lead must be added.) The metal adapter plate mounts directly to the switch box or to a plaster ring using the screws supplied with the unit (see the

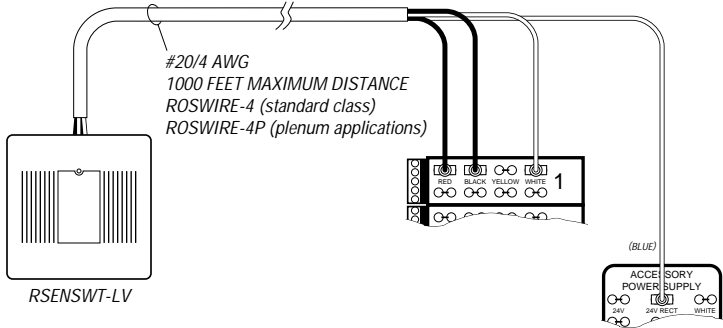


CAUTION: The RSENSWT-LV is for use only on 24 volt Class 2 circuits. **DO NOT USE TO REPLACE LINE-VOLTAGE SWITCHES.**

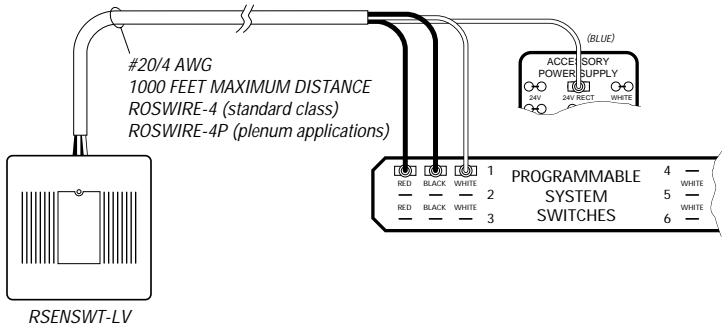
INSTALLATION

TYPICAL WIRING

On/Off Sensor Control



On/Off Actuation of PSS Input (or RMS Master Input)



2. Turn the lights ON/OFF using the pushpad.
3. Check the operation of the manual on/emergency override button on the bottom of the unit. (Pushing the button should always turn the lights ON.)
4. Stand completely still or leave the area. The lights should go out in approximately 90 seconds.
5. Walking towards the sensor within 10 seconds after the lights have turned OFF, will cause the lights to come ON. By watching the red LED on the sensor, you can test the area of coverage. The LED comes on only when the sensor is detecting motion. Adjust the SENSITIVITY adjustment to the lowest position that provides adequate detection of a person entering the room. Do not set it higher than necessary. Remember that in normal operation, the pushpad must be pressed to turn the lights ON.
6. If the red LED blinks or stays on when there is no motion being made in the room, it is possible that the sensor is being activated by air flow from the HVAC system. Reduce the sensitivity setting until the LED goes off and stays off when there is no motion.
7. In very small rooms, the wall switch sensor may continue to be activated by motion outside the doorway. Adjust sensitivity downward to remedy this.
8. Set the MINUTES adjustment to the interval desired for lights to remain ON after leaving the room. The minimum time is approximately 90 seconds, and the maximum about 30 minutes. If the lights go OFF while the room is occupied, increase the time slightly until an optimum interval is obtained. Suggested time for a one-person office or conference room is 6 minutes.

illustration to the left). Wire the RSENSWT-LV as described below.

Mount the wall switch sensor to the adapter plate by hooking the top of the unit over the top of the adapter plate as shown in the illustration, and fix in position with the screw through the bottom.

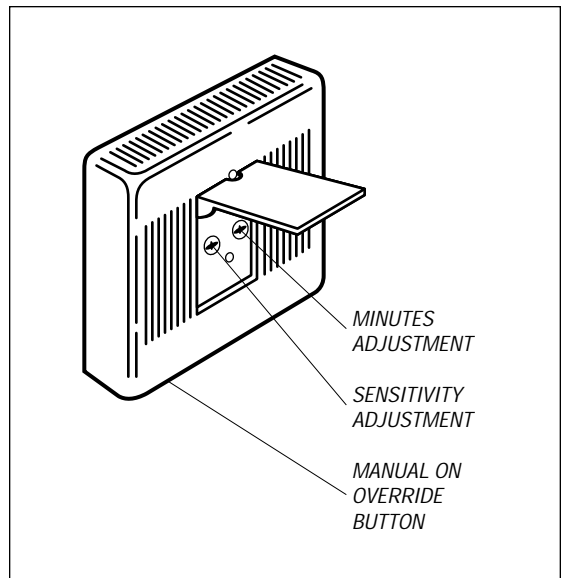
Wiring

Run the color-coded low-voltage cable from the sensor to the Lighting Automation Panel and connect the red/black/white leads to the associated relay, programmable system switch or RMS input. The blue wire connects to any terminal in the panel marked 24V RECT.

Checkout and Adjustment

Once installed, the RSENSWT-LV must be adjusted for suitable sensitivity and time delay. These adjustments can only be made after the unit has been connected and power applied. Use a small screwdriver to turn the adjustment knobs.

1. Set the MINUTES adjustment control to the minimum. Set the SENSITIVITY adjustment control to its midpoint. (The adjustment controls are accessed by lifting the pushpad from the bottom.)



TROUBLESHOOTING

Emergency Manual On

The RSENSWT-LV features an override button which may be used to bypass the sensor circuit for maintenance purposes, or in the event of unit failure. This button, located on the bottom of the unit, can be pressed to bypass the sensor electronics and directly turn the relay ON. If the wall switch sensor fails and cannot be immediately replaced, the override button may be pressed to turn the lights ON.

LED Will Not Come On

- *Press the pushpad.*
- *Verify the voltage between the blue and white wires. If there is no power, check the power supply at the Lighting Automation Panel or relay module.*
- *Increase the SENSITIVITY adjustment setting.*
- *If the LED still will not come ON, the RSENSWT-LV must be replaced.*

Lights Do Not Come ON

- *Press the pushpad on the face of the RSENSWT-LV. If the lights do not come ON, press the override button on the bottom of the unit.*
- *If the lights still do not come ON, check the wiring and lamps on the load side of the relay. Check the relay supply voltage and continuity, and replace the relay, if necessary.*
- *If the lights still will not come ON, the RSENSWT-LV must be replaced.*

Lights Do Not Go OFF After Persons Leave Room

- *If the lights will not go OFF after the time period set on the sensor, and the LED has not gone on during this time, check the relay operation by momentarily shorting the black lead to the white. If the relay opens and the lights are still on, the relay is being bypassed. If the relay operates and turns the lights OFF, check the low voltage wiring connections back to the sensor. Replace the sensor if necessary.*
- *If the LED blinks or remains on when the room is unoccupied, check to be sure no air flow from the ventilating system is blowing on the wall switch sensor.*