

## LDD-700S series

# WALLSENZR

### Line Voltage Dual-Tech Wall Switch Sensor with 0-10V Dimming



## OVERVIEW

The LDD-700S is a line voltage dual technology wall switch sensor with 0-10V dimming output that can turn lights ON/OFF based on occupancy and also allow the user to manually increase or decrease the lighting level as required. This sensor combines digital Passive Infrared (PIR) and High Frequency Doppler (HFD) sensing technologies into an aesthetically pleasing housing to provide occupancy or vacancy sensing based lighting control. HFD is an advanced motion sensing technology capable of providing exceptional minor motion detection, without requiring open grids on the front like ultrasonic sensing technology.

The LDD-700S will automatically turn on the light at the set-level (factory default 100%) when it detects the presence of an occupant. If no motion is detected before the delay time elapses, the sensor will dim the light down to 1/3 of the set-level for 30 seconds before turning OFF. For compliance of specific energy codes, such as CA Title 24, the LDD-700S series can be easily programmed as a vacancy sensor. Thus, the sensor will turn ON the light after pressing any push-button and then control the light in the same way as above described. Two push-buttons allow the user to temporarily dim the light as desired or memorize the preferred lighting level for the next occupancy.

The sensor has a built-in ambient light sensor (ALS) to inhibit turning on the light if ambient light level is higher than the set threshold. Two digitalized Accu-Set potentiometers make delay time (TIME) and ambient light level (LUX) settings fast, easy, and accurate. Exclusive Hybrid Switching technology protects the relay contacts from being fused by the inrush current generated while switching on multiple LED lights.

## FEATURES

- Dual-tech wall switch sensor with 0-10V dimming
- Occupancy/vacancy sensing control convertible
- PIR+HFD or single HFD sensing mode switchable
- Front accessible sensor operation control setting
- Aesthetically pleasing sensor front without open grids
- 180° F. O. V. with coverage more than 1,200 sq. ft.
- 4 levels of programmable HFD detection sensitivity
- Specialized lens provides vandalism protection
- Accu-Set digital potentiometer for control settings
- Hybrid Switching technology for HIC light control
- Screwless wall plate offers appealing appearance

## APPLICATIONS

IR-TEC's Dual-Tech WALLSENZR is designed to fit in a single gang NEMA wall box to provide bi-level occupancy/vacancy sensing control to 0-10V dimmable lights for following applications:

- |                         |                        |
|-------------------------|------------------------|
| <b>Bathrooms</b>        | <b>Laundry rooms</b>   |
| <b>Classrooms</b>       | <b>Meeting rooms</b>   |
| <b>Conference rooms</b> | <b>Private offices</b> |
| <b>Entrances</b>        | <b>Playrooms</b>       |
| <b>Exit halls</b>       | <b>Restrooms</b>       |
| <b>Garages</b>          | <b>Showrooms</b>       |
| <b>Break rooms</b>      | <b>Storage rooms</b>   |
| <b>Gymnasiums</b>       | <b>Utility rooms</b>   |
| <b>Hallways</b>         | <b>Workshops</b>       |



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## OPERATION

The LDD-700S series dual-tech wall switch sensor employs Passive Infrared (PIR) and High Frequency Doppler (HFD) sensing technologies to monitor the occupancy status within its detection coverage. The sensor can be easily programmed as an Occupancy Sensor (Auto-ON, Auto-OFF) or Vacancy Sensor (Manual-ON, Auto-OFF) with different control modes via DIP switch settings and push-button operation.

### 1. Occupancy Sensing with ALS Control (OSAC)

When the ambient light level is lower than the set threshold, the sensor will turn ON the light at the set-level when it detects the presence of occupant. If no occupant motion has been detected during the time delay, the sensor will dim the light down to 1/3 of the set-level for 30 seconds before turning OFF.

### 2. Occupancy Sensing with ALS & PM (OSAP)

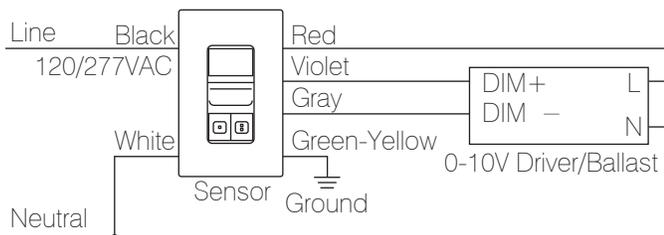
The sensor will control the light same as OSAC, but with Presentation Mode (PM) enabled.

**Presentation Mode** allows the occupant to switch off the light as desired by pressing any push-button. The light will remain off if motion is detected before the time delay elapses. Pressing the push-button again will turn the light back ON and the sensor will operate as set. If no motion has been detected and the time delay elapses, the sensor will return to normal operation and turn on the light with the next sensed motion.

### 3. Vacancy Sensing Only Control (VSOC)

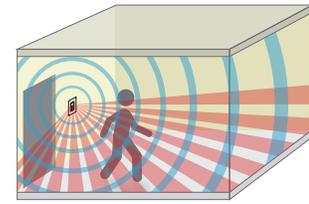
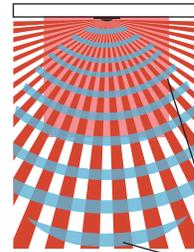
This control mode requires occupant to press any push-button to turn ON the light at the set-level, and the sensor will dim the light down to 1/3 of the set-level for 30 seconds before turning off if no occupant motion has been detected before the time delay elapses. The sensor will automatically turn the light back on if it detects occupant activity within 30 seconds after turning off.

## WIRING DIAGRAM



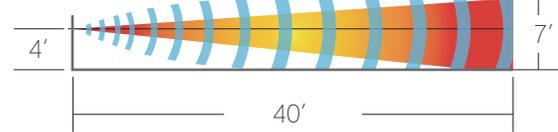
## DETECTION COVERAGE

Top view



Minor motion - 20 ft x 20 ft (W x L) @4 ft high  
Major motion - 30 ft x 40 ft (W x L) @4 ft high

Side view



## SPECIFICATIONS

Power supply	120/277VAC, 60Hz
Sensing technology	Digital PIR & High Frequency Doppler
Maximum load	Electronic Ballast- 500/800VA@120/277V
Inrush current	Max. 80A, 16.7 ms @60Hz
Load switching	True Zero-cross Hybrid Switching
Dim control output	0-10V, ±5%, isolated, max. 25 mA
Detectable speed	1~10 ft./sec. (0.3~3 m/sec)
Mounting height	3~5 ft. (90~150 cm) above the floor
Ambient light level	7 levels, from dark to 24 Hour
Delay time setting	T/1'/3'/5'/10'/20'/30', T=10 sec. for testing
Op. humidity	Max. 95% RH, non-condensate
Op. temperature	14°F ~ 131°F (-10°C ~ 55°C)
Dimensions	4.13"H x 1.77"W x 1.65"D (w/mounting plate)

## ORDERING INFORMATION

**LDD-700SW** – Line Voltage Dual-Tech Wall Switch Sensor, 120/277 VAC, 0-10V, White,

**LDD-700SI** – Line Voltage Dual-Tech Wall Switch Sensor, 120/277 VAC, 0-10V, Ivory

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1-855-GO-IRTEC

DS-LDD700-EN-LS\_V2 (2019-7)

