LDT-700 series

Line Voltage Dual-Tech Wall Switch Sensor

WALLSENZR

OVERVIEW

The LDT-700S is a dual technology 2-pole line voltage wall switch sensor IR-TEC's WALLSENZR family designed to fit in a standard NEMA wall box. This state-of-the-art dual-tech wall switch sensor combines digital Passive Infrared (PIR) and High Frequency Doppler (HFD) sensing technologies into an aesthetically pleasing housing to provide second-to-none occupancy/vacancy sensing based lighting control for all applications. HFD is an advanced sensing technology which utilizes super high frequency radio waves (4~12GHz) to detect the occupancy, similar to ultrasonic sensor, but without requiring the grid openings on the front.

The LDT-700S employs two relays with two push-buttons, for controlling two lighting loads or circuits independently. To comply with specific energy code, such as CA Title 24, the sensor is factory set to control the primary load (pole-1) in occupancy sensing mode, and the secondary load (pole -2) in vacancy sensing mode. A variety of control modes can be programmed via DIP switch settings to meet specific energy code or customer requirements.

The sensor comes with an ambient light sensor (ALS) to inhibit the lighting if ambient light levels are higher than required. The Accu-Set digital potentiometers make delay time (TIME) and ambient light level (LUX) settings fast, easy and accurate. Patent pending Hybrid-Switching technology allows the sensor to switch On two separate loads even with very high inrush current, such as multiple LED or CFL lights connected in parallel.

FEATURES

- **World's 1st** PIR+HFD dual-tech wall switch sensor
- Occupancy/vacancy sensor convertible operation
- Dual-tech or single HFD sensing mode switchable
- Front accessible sensor operation configurations
- No grid opening aesthetics pleasing sensor front
- 180° F. O. V. with coverage exceeds 1,200 sq. ft.
- 4 levels of HFD sensitivity setting programmable
- Specialized lens provides vandalism protection
- Dual Hybrid-Switching for controlling HIC loads
- Accu-Set digital potentiometer sensor settings
- Screwless wall plate offers high end appearance

APPLICATIONS

IR-TEC's Dual-Tech WALLSENZR can be used for occupancy sensing based lighting, or load controls, in a variety of spaces:

Bathrooms	Laundry rooms
Classrooms	Offices
Closets	Playrooms
Conference rooms	Restrooms
Entrances	Self-storage facilities
Exit halls	Showrooms
Garages	Storage rooms
Gymnasiums	Utility rooms
Hallways	Workshops

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OPERATION

The LDT-700S series dual-tech wall switch sensor employs Passive Infrared (PIR) and High Frequency Doppler (HFD) sensing technologies to monitor the occupancy status through an exclusive lens with 180° field of view. The sensor provides typical occupancy sensing control (Auto-ON, Auto-OFF) on pole-1 and vacancy sensing control (Manual-ON, Auto-OFF) on pole-2. Different control modes can be programmed through DIP switch settings. Followings are brief descriptions of the control modes available on two control poles of LDT-700S series.

1. Occupancy Sensing with ALS Control (OSAC)

The sensor operates as occupancy sensing control (Auto-ON, Auto-OFF), but with the ALS to inhibit switching on the load of pole-1 connected when ambient light level is higher than the set threshold.

2. Occupancy Sensing with ALS & PM (OSAP)

The sensor operates as above OSAC on the pole-1, but with Presentation Mode (PM) active.

3. Vacancy Sensing Only Control (VSOC)

This requires occupant to press the push-button to turn ON the load of pole-2 connected, and the sensor will switch OFF the load automatically if no occupant motion has been detected before the time delay elapses. The sensor will automatically turn ON the light if it detects occupant activity within 30 seconds after time delay elapsed.

4. Pole One with Extended Delay (POED)

The sensor will control the load of pole-2 connected as per pole-1 with Extended Delay (ED) for 5 minutes.

5. Ambient Light Sensing Only (ALSO)

The sensor will automatically turn ON the load of pole-2 connected when ambient light is lower than the LUX level set, and turn OFF if ambient light is higher than the set level.

Presentation Mode allows the occupant to switch OFF the load as desired by pressing the specific push-button. The load will remain OFF if motion is detected before the time delay elapses. Pressing the push-button again will turn the load back ON and the sensor will operate as per sensor setting. If no motion has been detected and the time delay expires, sensor will return to normal operation and turn ON the load with the next sensed motion.

DETECTION COVERAGE

Top view

30'
20'
20'
40'
Minor motion
Major motion

180°, 30 ft x 40 ft (W x L)

Side view

4'
7'
40'
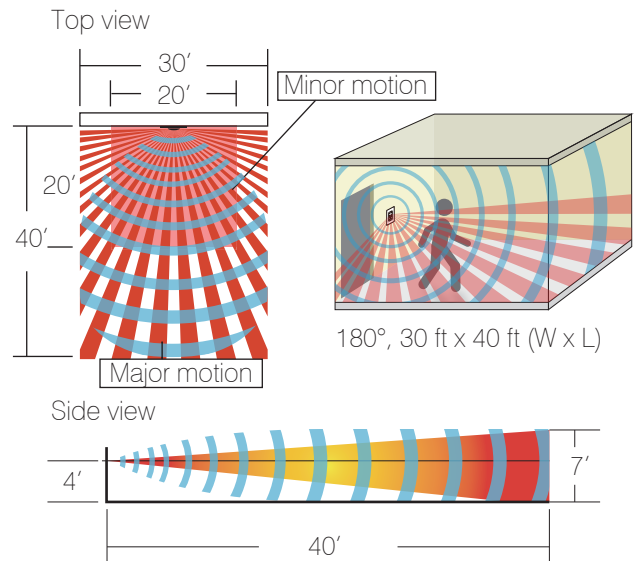
SPECIFICATIONS

Power supply	120/277VAC, 60Hz
Sensing technology	Digital PIR & High Frequency Doppler
Maximum load, per pole	Incandescent/Halogen – 800W(VA)
	Fluorescent Ballast/CFL – 800W(VA)
	Ballast Electronic (LED) – 500/800VA@120/277V
	Motor – 1/6 HP
Inrush current	Max. 80A, 16.7 mS, per pole
Load switching	Zero-cross Hybrid-Switching
Detectable speed	1~10 ft./sec. (0.3~3 m/sec)
Mounting height	3 ~ 5 ft. (90~150 cm) above the floor
Detection coverage	Major motion - 30 ft x 40 ft (W x L) @4 ft high
	Minor motion - 20 ft x 20 ft (W x L) @4 ft high
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	-40°F ~ 131°F (-40°C ~ 55°C)
Dimensions	4.13"H x 1.77"W x 1.65"D (w/mounting plate)

ORDERING INFORMATION

LDT-700SW – Line Voltage Dual-Tech Wall Switch Sensor, 120/277 VAC, 2-pole, White

LDT-700SI – Line Voltage Dual-Tech Wall Switch Sensor, 120/277 VAC, 2-pole, Ivory