BDT-700 series

Low Voltage Dual-Tech Wall Switch Sensor

WALLSENZR

OVERVIEW

The BDT-700 is a 2-pole low voltage dual-tech wall switch sensor in the IR-TEC's WALLSENZR family designed to fit in a NEMA standard wall box. This state-of-the-art wall switch sensor combines digital Passive Infrared (PIR) and High Frequency Doppler (HFD) sensing technologies into an aesthetically pleasing housing to provide superior occupancy/vacancy sensing control for various applications. HFD is an advanced sensing technology which utilizes super high frequency radio waves to detect the object movement, similar to ultrasonic but without grid openings on the front.

The BDT-700 contains two relays, and two push buttons, for controlling two lighting loads or circuits independently via the connected Power Packs or BMS. To comply with specific energy code, such as CA Title 24, the sensor is factory set to control the primary output (pole 1) in occupancy sensing mode, and the secondary output (pole 2) in vacancy sensing mode. A variety of control options 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 level is higher than required. The Accu-Set digital potentiometers make delay time (TIME) and ambient light level (LUX) settings fast, easy and accurate. Isolated dry contact outputs allow the BBT-700 series to operate with two IR-TEC Power Packs for controlling two separate loads in occupancy and vacancy sensing bases.

FEATURES

- Cutting edge PIR + HFD dual technology sensor
- Occupancy/vacancy sensor convertible operation
- Dual-tech or single HFD sensor mode selectable
- 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
- Accu-Set digital potentiometer sensor settings
- Isolated dry contact output for versatile control
- Screwless wall plate offers high end appearance

APPLICATIONS

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

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

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iR-TEC
Specializing in Building Sensors

BDT-700 series

Low Voltage Dual-Tech Wall Switch Sensor

OPERATION

The BDT-700 series dual-tech wall switch sensor employs Passive Infrared (PIR) and High Frequency Doppler (HFD) sensing technologies to monitor the occupancy status 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, in respective mode as below.

1. Occupancy Sensing with ALS Control (OSAC)

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

2. Occupancy Sensing with ALS & PM (OSAP)

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

3. Vacancy Sensing Only Control (VSOC)

This requires occupant to press the push-button of pole-2 to turn ON the load controlled, 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)

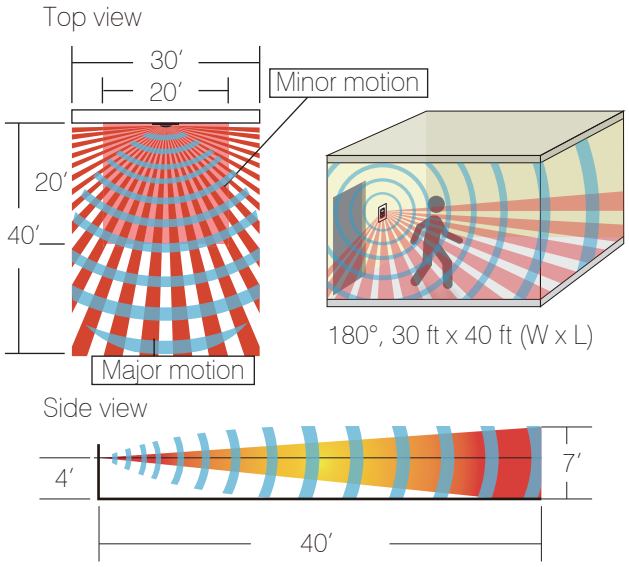
The sensor will control the pole-2 output as per pole-1, but with Extended Delay (ED) for 5 minutes.

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 when ambient light is higher than the set level.

***Presentation Mode** allows the occupant to switch off the load as desired by pressing the relevant 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



SPECIFICATIONS

Power input	12~24VDC ± 5%
Current drain	10/40 mA, 24VDC @vacant/occupied
Sensing technology	Digital PIR & High Frequency Doppler
Control output	2 x form A relay, isolated dry contact
Contact rating	Max. 2A @30VDC, isolated
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 Hr. (ALS disabled)
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

BDT-700SW– Low Voltage Dual-Tech Wall Switch Sensor, 12-24 VDC, 2-pole, White

BDT-700SI – Low Voltage Dual-Tech Wall Switch Sensor, 12-24 VDC, 2-pole, Ivory