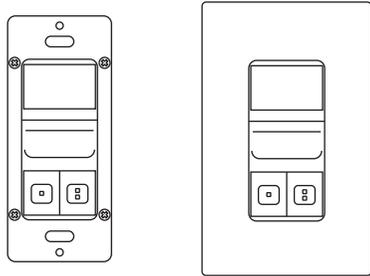


WALLSENZR

BDT-702 Series

Low Voltage Dual-Tech Wall Switch Sensor

INSTALLATION INSTRUCTIONS



Indoor dry location use only
Utilisation a L'interieur Uniquement

⚠ WARNING & CAUTION

- Turn power OFF at circuit breaker before installing Power Pack or Sensors.
- Do NOT touch the square window of infrared sensor under the lens assembly.
- Do Not Install To and/or Cover a Junction Box Having Class 1, 3 or Power and Lighting Circuits.
- Class 2 Device Wiring Only – Do Not Reclassify and Install as Class 1, 3 or Power and Lighting Wiring.
- Install the sensor at least 1ft. away from any occupant.

⚠ AVERTISSEMENT & PRUDENCE

- Coupez l'alimentation au disjoncteur avant d'installer Power Pack ou capteurs.
- Ne PAS toucher la fenêtre carrée de capteur infrarouge sous l'ensemble de l'objectif.
- Ne pas installer ou couvrir une boîte de jonction ayant les classes 1 et 3 ou circuits de puissance et d'éclairage.
- Classe 2 Câblage de périphériques Seulement - Ne PAS reclasser et installer Classe 1, 3 ou alimentation et circuits d'éclairage.

Federal Communication Commission Interference Statement FCC ID: ROO-MDU2000

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

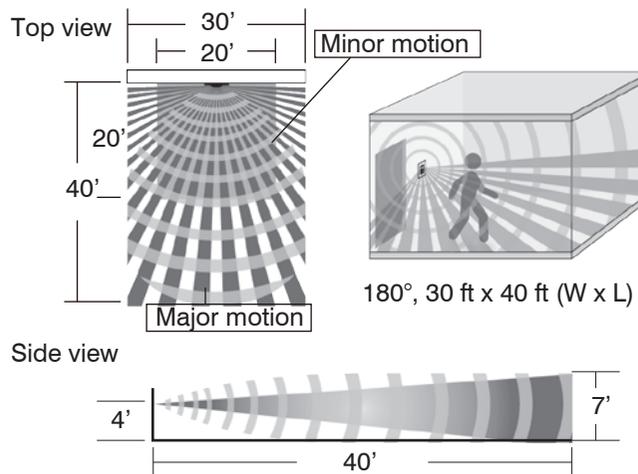
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

OVERVIEW & OPERATION

The BDT-702 series is a 2-pole dual technology low voltage wall switch sensor designed to fit in a standard NEMA wall box for automatic lighting control. This wall switch sensor combines digital Passive Infrared (PIR) and advanced High Frequency Doppler (HFD) sensing technologies into an aesthetically pleasing housing to provide excellent occupancy or vacancy sensing control within its 180° field of view detection range. The sensor can be programmed to operate as a dual or single technology sensor via DIP switch setting.

The BDT-702 contains two isolated dry contacts for controlling two lighting loads or circuits independently via the connected Power Packs. The output of pole 1 can be applied for occupancy or vacancy sensing control through specific wiring with the PPU-300 power pack, and the pole 2 can be programmed via DIP switching setting to control the load, as pole 1 set but with an extended delay, or based on the ambient light level threshold automatically. Two independent momentary contact signals are available for Multi-way Manual Control (MMC). The MMC is ideal for large space application that may require multiple wall switch sensors and wall/ceiling mount sensors to cover the whole area, and with manual control capability from different locations.

DETECTION COVERAGE



- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

INSTALLATION NOTES

1. The PIR sensor is more sensitive to the movements "crossing" the detection zones than "toward" or "away" it. To obtain better sensitivity, ensure the sensor to have clear field of view for the occupant's motion within the desired detection coverage.
2. In general, the HFD sensor has better sensitivity to the minor motions than the PIR sensor. The HFD sensor could possibly detect the movements out of sight through non-metallic partition or enclosure. If so, reduce the HFD sensitivity to prevent unwanted triggering.
3. The sensor should be mounted within the specified mounting height to achieve optimal performance.
4. Do NOT mount the sensor directly above or nearby a heat source, or where unintended motion (e.g. hallway traffic) will be "seen" by the sensor.

SPECIFICATIONS

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

Industry Canada statement:

IC: 10829A-MDU2000

This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.



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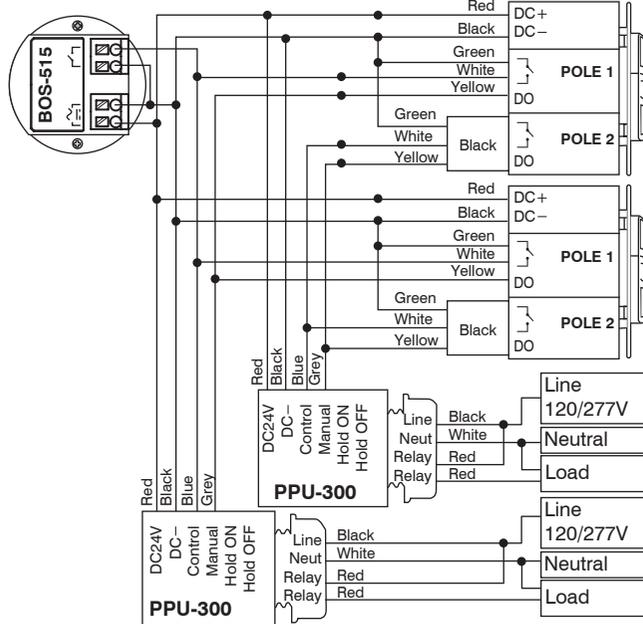
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This product may be covered by one or more U.S. patents or patent applications.
Please visit www.irtec.com for more information.

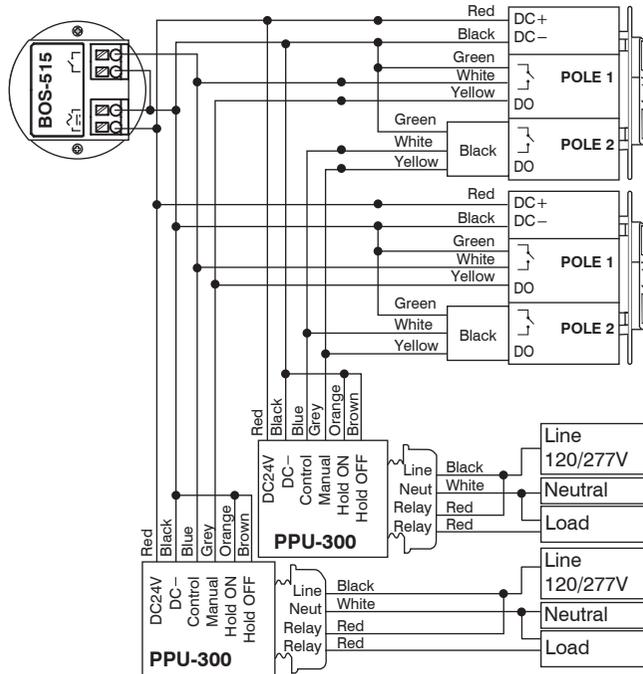


WIRING DIAGRAM

• Occupancy Sensing Control with PPU-300

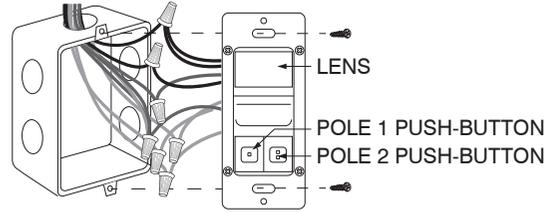


• Vacancy Sensing Control with PPU-300



NOTE: Other IR-TEC low voltage occupancy sensor may be applicable, please contact sales team for more information.

INSTALLATION

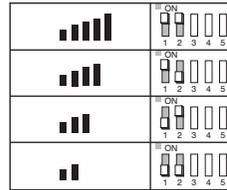


1. Lead the low voltage wires from the wall box to the junction box that the power pack will be installed. Properly label the wires for identification.
2. Connect the sensor wires with the associated power pack according to the wiring diagram of desired control. Mount the sensor into the wall box with screws provided.
3. Connect the line voltage wires of the power pack to the load and line voltage power as diagram shown.
4. Turn on the line voltage power to the power pack, and conduct the sensor operation and control test.

DIP Switch Settings

HFD Sensitivity - SW1 & 2

The combinations of DIP switch 1 and 2 determine the sensitivity of HFD sensor.



Sensing Technology - SW3 & 4

The combinations of DIP switch 3 and 4 set the operating sensing technology of the sensor.

Technology	DIP switch
PIR+HFD	ON OFF ON OFF ON OFF ON OFF
HFD	ON OFF ON OFF ON OFF ON OFF
PIR	ON OFF ON OFF ON OFF ON OFF
PIR+HFD	ON OFF ON OFF ON OFF ON OFF

Pole 2 Control - SW5

POED - Pole One with Extended Delay

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

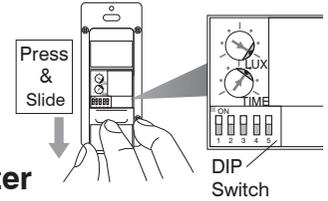
Pole 2	DIP switch
POED	ON OFF ON OFF ON OFF ON OFF
ALSO	ON OFF ON OFF ON OFF ON OFF

ALSO - Ambient Light Sensing Only

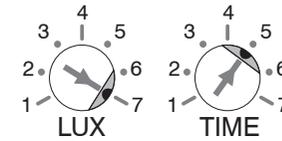
The sensor will automatically turn ON the connected load of pole 2 when ambient light is lower than the LUX level set, and turn OFF the load when ambient light level is higher than the threshold.

SENSOR SETTINGS

To change the sensor settings, press the push-button cover and slide it down gently.



SETTING - Potentiometer



POS.	1	2	3	4	5	6	7
TIME	T	1'	3'	5'	10'	20'	30'
LUX	5	10	30	50	100	150	24H

Factory Set

TIME - Delay time

TIME setting determines the delay time that the sensor will hold the load on after the last motion detected. Factory setting is 10 minutes, and it can be changed by pointing the arrowhead of potentiometer to different position.

NOTE: For test convenience, TIME potentiometer can be adjusted to position 1 for the shorten delay (10 seconds). **The sensor will automatically return to the factory default delay (10 minutes) if the potentiometer has not been set to other position within 10 minutes.**

LUX - Ambient light level

LUX setting determines the threshold of ambient light level that the sensor will inhibit switching on the load. The factory setting is ALS disabled (24 Hr) for testing convenience, and it can be changed by pointing the arrowhead of potentiometer to the specific position.

NOTE: If multiple sensors are connected, the LUX settings of all sensors in the same area should be adjusted to the same ambient light level position to achieve coordinated control.

TESTING

After the sensor installed and wiring completed, sensor operation test can be conducted as instructed below;

1. Apply the line voltage power and wait for the sensor to warm-up.
2. Move within the desired range and observe the sensor detection. BLUE blink indicates the PIR sensor detected, and GREEN blink indicates the HFD sensor detected. Move outside of the desired range and observe if the HFD sensor can detect. If GREEN LED blinks, reduce the HFD sensitivity via changing the DIP switch setting as instructed below.
3. Replace the wall plate cover after sensor testing and setting completed.