sensorswitch®

WSX 2P FAMILY
INSTRUCTIONS

WSX 2P
WSX PDT 2P

WSX 2P NL
WSX PDT 2P NL

SPECIFICATIONS

PHYSICAL SPECS
SIZE: 2.74"H x 1.68"W x 1.63"D (6.96 cm x 4.27 cm x 4.14 cm)
   (not including ground strap)
WEIGHT: 5 oz
MOUNTING: Single Gang Switch Box
MOUNTING HEIGHT: 30-48 in (76.2-121.9 cm)
SILICONE FREE
ROHS COMPLIANT
ELECTRICAL SPECS
MAXIMUM LOAD / POLE (RELAY)
   800 W @ 120 VAC
   1200 W @ 277 VAC
   1500 W @ 347 VAC

MINIMUM LOAD: None
MOTOR LOAD: 1/4 HP
FREQUENCY: 50/60 Hz (timers are 1.2x for 50 Hz)
ENVIRONMENTAL SPECS
OPERATING TEMP
   Standard: 14º to 122º F (-10º to 50º C)
   LT Option (PIR): -40º to 122º F (-40º to 50º C)
   LT Option (PDT): -4º to 122º F (-20º to 50º C)
RELATIVE HUMIDITY:
   Standard: 20 to 75% non-condensing
   LT Option: 20 to 90% non-condensing
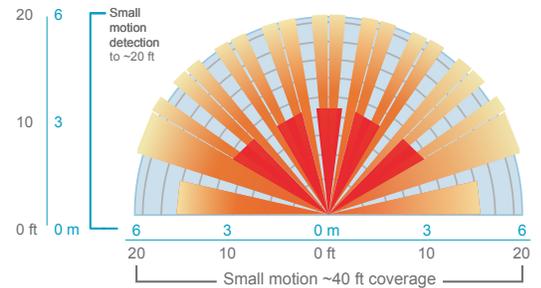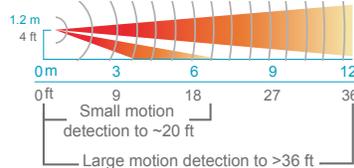   (electronics coated for corrosion resistance)

COVERAGE PATTERN

- Small motion (e.g. hand movements) detection up to 20 ft (6.10 m), ~625 ft^2
- Large motion (e.g. walking) detection greater than 36 ft (10.97 m), ~2025 ft^2
- Wall-to-wall PIR coverage
- Units with -PDT (Passive Dual Technology) option (also called Microphonics) provide overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is utilized to prevent non-occupant noises from keeping the lights on.

TOP VIEW

SIDE VIEW

Small motion detection to ~20 ft

Small motion detection to ~20 ft
Large motion detection to >36 ft
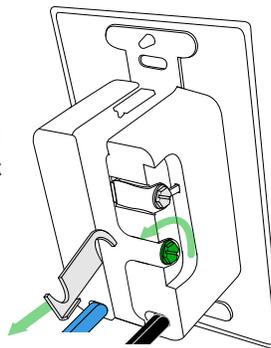
Small motion ~40 ft coverage

CONVERSION FROM GROUND ONLY (NO NEUTRAL) TO NEUTRAL WIRING

This product is pre-configured for wiring without a neutral; however, if connection to neutral is required by code, contractors can quickly and easily convert the unit in seconds.
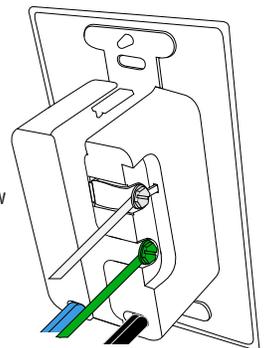
Step 1:
Remove Yellow Label
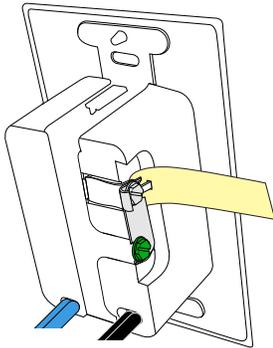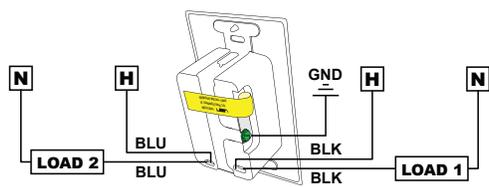
Step 2:
Loosen Screws and Remove Metal Link

Step 3:
Connect Neutral to Silver Screw and Ground to Green Screw

WIRING TO GROUND (NO NEUTRAL)

DUAL RELAY

LOAD 2
LOAD 1
BLU
BLU
BLK
BLK
GND

Notes:
- Unit will draw power from either line connection.
- When switching 277 VAC or 347 VAC on both relays, the line inputs must be of the same phase.

WIRE COLOR KEY

120/277 VAC WIRING
BLACK* - Line 1 Input   *BLACK wires
BLACK* - Load 1 Output   can be reversed
BLUE* - Line 2 Input   *BLUE wires
BLUE* - Load 2 Output   can be reversed

347 VAC WIRING (-347 Option)
Red wires replace Black wires.

WIRING TO NEUTRAL

DUAL RELAY

LOAD 2
LOAD 1
BLU
BLU
BLK
BLK
GND

Notes:
- Unit will draw power from either line connection.
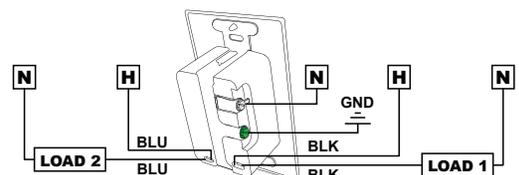- When switching 277 VAC or 347 VAC on both relays, the line inputs must be of the same phase.

OPERATIONAL SETTINGS

NOTE: (*) Indicates factory default (unless otherwise marked)

2 = Occupancy Time Delay

Time sensor keeps lights on after last occupancy detection.

1	30 sec	**4** 7.5 min	**7**	15.0 min	**13** 30.0 min
2	2.5 min	**5** 10.0 min*	**8**	17.5 min	
3	5.0 min	**6** 12.5 min	**9**	20.0 min	

For additional time settings, contact technical support at 1.800.PASSIVE

3 = On Mode

Automatic On turns lights on when occupancy is detected. Manual On requires a button press to turn the lights on. Reduced Turn-On directs the sensor to only detect large motions, such as a person entering a room. Weaker signals, such as reflections from glass, are ignored. Once lights are on, the sensor returns to maximum sensitivity.

1 Automatic On   **2** Manual On   **3** Reduced Turn-On

WSX 2P models default: Pole 1 Auto On, Pole 2 Manual On
2SA and NL options default: Both poles Manual On

4 = Switch Modes

These modes dictate switch functionality. Pressing the button in Override Off mode (setting 1) turns off and keeps lights off until pressed again. Disabling the Switch (setting 2) prevents the button from turning the lights on.

Predictive Mode (setting 3) automatically determines if a user has left the room after the lights are switched off. It does this by monitoring the space for a period after the button is pressed (Predictive Grace Time), following a certain delay (Predictive Exit Time). If occupancy is detected the device will disable auto-on and hold the lights off until manually switched. If no occupancy is detected the sensor instantly reverts to auto-on mode. (continued next column)

If Predictive Mode with Expiration (setting 4) is enabled, once the sensor has disabled auto-on it will continue to monitor the space. When no occupancy is detected for a duration equal to the occupancy time delay, the sensor will revert to auto-on mode.

1 Override Off (default Pole 2)
2 Switch Disable
3 Predictive Mode
4 Predictive Mode with Expiration (default Pole 1)

2SA and NL options default: Both poles Override Off

5 = Photocell Set-Point

The ambient light level at which the sensor prevents the lights from initially turning on. Once on, the lights will remain on until the occupancy time delay expires and turns them off.

1	Disabled*	**6**	4 fc
2	Auto Setpoint	**7**	8 fc
3	0.5 fc	**8**	16 fc
4	1 fc	**9**	32 fc
5	2 fc	**10**	64 fc

Note: Sensor will be changed to Automatic On mode if photocell is enabled. Photocell not present in -NL versions. LED flashes while Auto-Setpoint mode is running.

7 = LED Operation

Indicates behavior of device's LED.

1 Occupancy Indication*   **3** Disabled
2 Relay Indication   **4** Override On***

*Standard Factory Default   *** Factory Default for -NL version

9 = Restore Factory Defaults

Returns all functions to original settings.

1 Maintain Current*   **2** Restore Defaults (both poles)

10 = Minimum On Time

Required initial time for lamps to be on after each switch on, regardless of occupancy status. Once met, lights resume following occupancy time delay.

1 0 min (disabled)*   **3** 30 min   **5** 60 min
2 15 min   **4** 45 min

11 = Manual On Grace Period

Time period after lights automatically turn off that they can be reactivated by motion. (Manual On (Semi-Auto) mode only)

1 0 sec   **2** Unused   **3** 15 sec*

12 = Dual Technology (Microphonics™)

Relative responsiveness of Microphonics detection. Included in -PDT versions only.

1 Normal*   **3** Medium   **5** Phase Off
2 Off   **4** Low   (15-10-5 min)

13 = Microphone Grace Period

Time period after lights are automatically turned off that they can be voice reactivated. Included in -PDT versions only.

1 0 sec   **3** 20 sec   **5** 40 sec   **7** 60 sec
2 10 sec*   **4** 30 sec   **6** 50 sec

15 = Predictive Mode Exit Time

Time period after manually switching lights off for occupant to leave the space.

1 5 sec   **3** 7 sec   **5** 9 sec   **7** 15 sec   **9** 30 sec
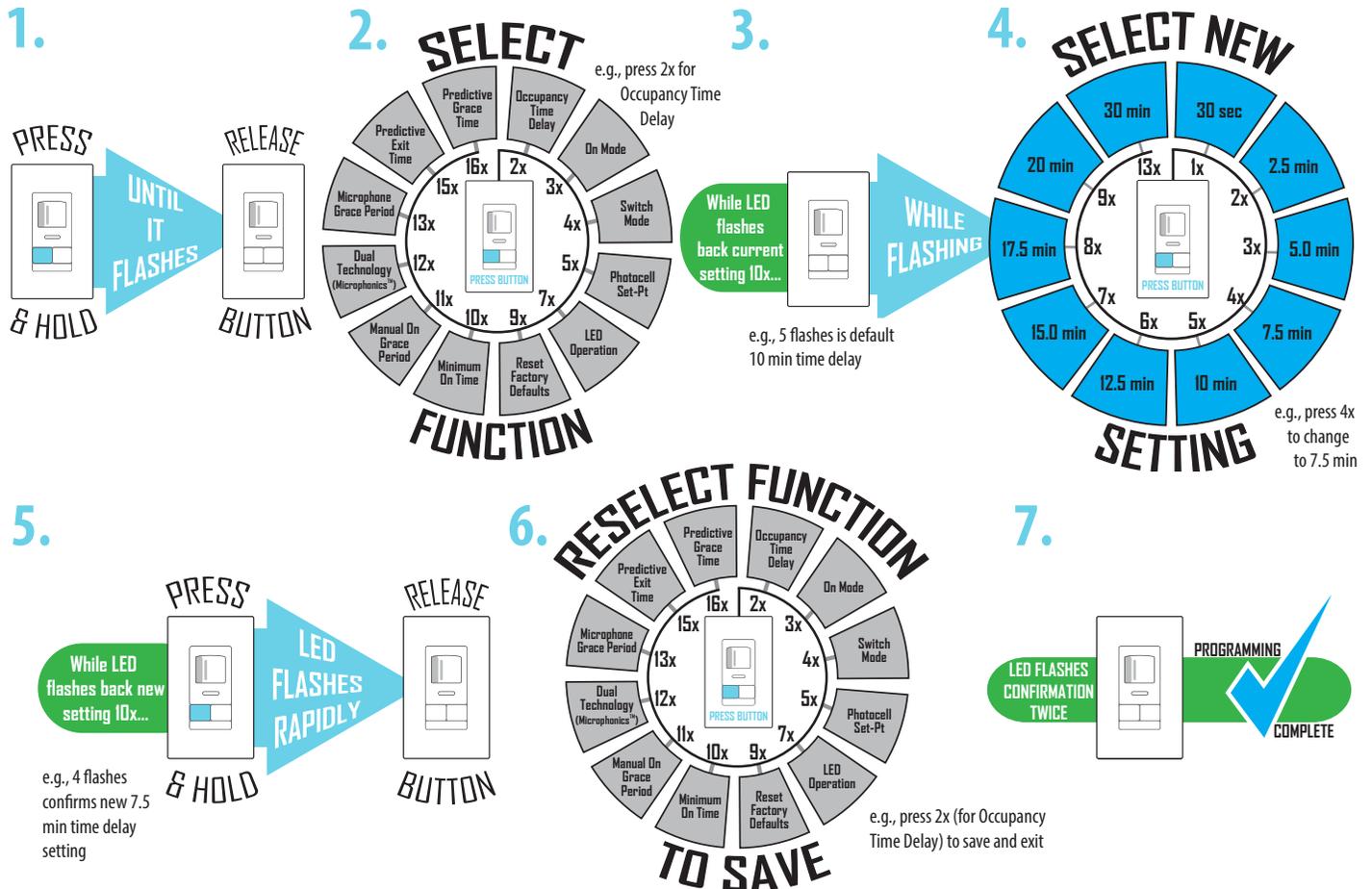**2** 6 sec   **4** 8 sec   **6** 10 sec*   **8** 20 sec

16 = Predictive Mode Grace Time

Time period after Predictive Mode Exit Time that sensor rescans the room for remaining occupants.

1 0 sec   **3** 10 sec   **5** 30 sec*   **7** 50 sec
2 5 sec   **4** 20 sec   **6** 40 sec   **8** 60 sec

PROGRAMMING INSTRUCTIONS

Operational settings can be changed for either pole via the corresponding push-button using the sequence outlined below (note the example used is for changing occupancy time delay).

1. PRESS & HOLD UNTIL IT FLASHES RELEASE BUTTON

2. SELECT FUNCTION
e.g., press 2x for Occupancy Time Delay

3. While LED flashes back current setting 10x...
e.g., 5 flashes is default 10 min time delay

4. SELECT NEW SETTING
e.g., press 4x to change to 7.5 min

5. While LED flashes back new setting 10x...
e.g., 4 flashes confirms new 7.5 min time delay setting
PRESS & HOLD LED FLASHES RAPIDLY RELEASE BUTTON

6. RESELECT FUNCTION TO SAVE
e.g., press 2x (for Occupancy Time Delay) to save and exit

7. LED FLASHES CONFIRMATION TWICE PROGRAMMING COMPLETE

Sheet#: IS-WSX-2P-002

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TITLE 24
ASSEMBLED in U.S.A.
5 YEAR WARRANTY

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