SAVANT

## Occupancy Sensor 24V Contact Quick Reference Guide

Box Contents

(1)   Occupancy Sensor 24V Contact (SEN-OCC24V-xx)
(1)   Wall Anchor Kit
(2)   Retaining Springs
(1)   Quick Reference Guide (this document)

Specifications

| Environmental			
Indoor Use Only			
Temperature	32° to 104° F (0° to 40°C)		
Humidity	10% to 90% (non-condensing)		
Dimensions and Weights			
Height	1.5 in (38.1 in)		
Diameter	3.75 in (95.25 mm)		
Weight	0.20 lbs (0.09 kg)		
Power			
Input	24V DC		
Power Consumption	5 - 20 mA		
Regulatory			
Safety and Emissions	FCC Part 15	CE	C-Tick
RoHS	Compliant		

Drop Ceiling Installation
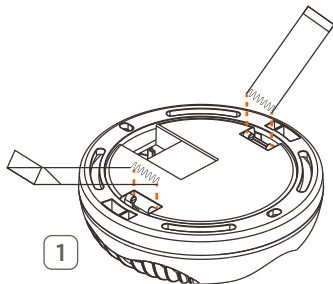
1.   Install the two retaining springs.
2.   Use a hole saw to cut a circular hole (85mm) in the drop ceiling panel.
3.   Holding the retaining springs together, push assembled sensor through ceiling panel hole until sensor seam is seated flush.
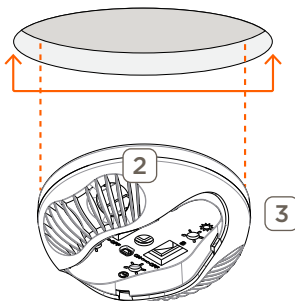

Top Panel
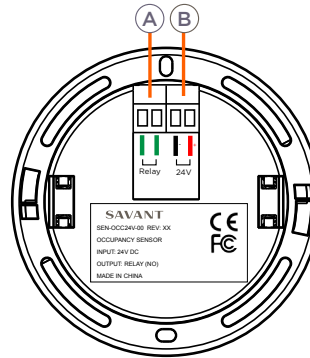
Bottom Panel
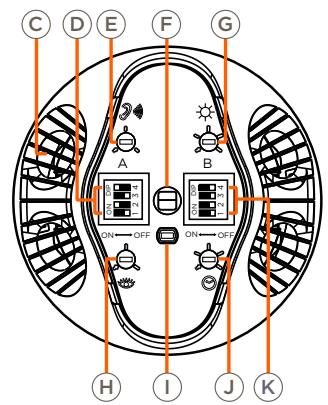
A	Relay	Normally Open (NO) solid state relay **Maximum**: 50 mA / 30V
B	Power Input	24 V DC.
C	Ultrasound Sensor	Used to detect motion.
D	Dip Switch A	Refer to Sensor Modes.
E	Ultrasound Sensitivity Adjustment	Adjust Ultrasound sensitivity level. Refer to Occupancy Sensor Adjustment.
F	PIR Sensor	Uses Infrared to detect motion.
G	Ambient Sensitivity Adjustment	Adjust sensitivity of motion detection with only ambient lighting. Refer to Occupancy Sensor Adjustment.
H	PIR Sensitivity Adjustment	Set the tolerance for microphones to detect sound and activate relays. Refer to Occupancy Sensor Adjustment.
I	Ambient Light Sensor	Set the range at which infrared sensor will .detect movement and activate lights
J	Timer Adjustment	Set the length of time relays remain active after occupancy detection. Refer to Occupancy Sensor Adjustment.
K	Dip Switch B	Refer to Sensor Modes.

Solid Ceiling Installation

1.   Attach base ring to the ceiling with included screws.
2.   Press sensor onto base ring.
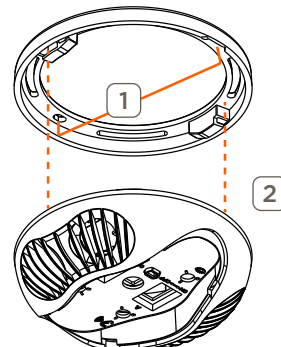
Occupancy Sensor Adjustment

Remove the control cover to adjust occupancy sensor settings. Refer to the diagram and table below for details:

Timer Adjustment	30 Seconds	5 minutes	10 minutes	20 Minutes	30 Minutes
Ambient Light Sensitivity	20 Lux	40 Lux	80 Lux	160 Lux	320 Lux
Ultrasound Range / **Infrared Range**	Off	Low	Medium	High	Maximum

Sensor Modes

The Occupancy / Motion Sensor can be configured to meet the requirements of the deployment. To do this, remove the sensor cover and configure the DIP Switch banks as described below.

Switch	Off	On
A1	Multi-Tech Mode	Single Tech Mode
A2	PIR Mode	Ultrasonic Mode
A3	Auto-Adapting Enabled	Auto-Adapting Disabled
A4	Walk-Through Enabled	Walk-Through Disabled
B1	Light Mode Enabled	Light Mode Disabled
B2	LEDs Enabled	LEDs Disabled
B3	OFF > ON > OFF: Enter/Exit Test Mode	
B4	N/A	
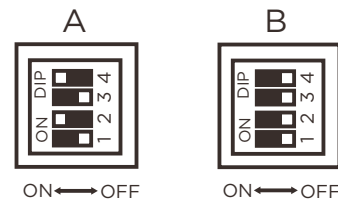
Multi-Tech Mode 1: (A1 OFF, A2 ON) If motion is detected in PIR or Ultrasonic, the relay is closed.

Multi-Tech Mode 2: (A1 OFF, A2 OFF) If motion is detected by the PIR, both PIR and Ultrasonic sensors will be activated. If motion is detected by either in this state, the relay is closed.

Single-PIR Mode: (A1 ON, A2 OFF) If motion is detected by PIR Sensor, the relay is closed.

Single-Ultrasonic Mode: (A1 ON, A2 ON) If motion is detected by Ultrasonic sensor, the relay is closed.

Auto-Adapting Mode: When room lights are turned on, sensor enters the Walk-Through mode. If occupancy is detected for longer than 2.5 minutes, the occupancy sensor will exit Walk-Through mode and treat the room as occupied. The length of time.

Walk-Through Mode: Lights will be turned off shortly after no occupancy is detected.

Light Mode: Ambient Light sensing is enabled.

Timer Mode: The output signal to attached relays will last 2.5 minutes when this mode is enabled. If occupancy is sensed during this time, the relay will be closed.

Test Mode: Sets the Delayed-Off Time Adjustment to 5 seconds. This mode will persist for 15 minutes or until the **OFF-ON-OFF** command sequence is entered again.

Example Wiring Diagram

NOTE: The Low Voltage Keypad diagram below shows the Occupancy/Motion sensor wired to a Low Voltage Keypad. However it can be wired to any GPIO Port.
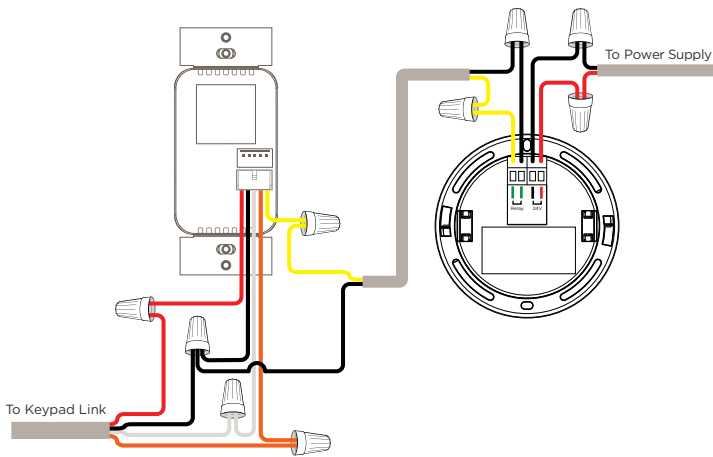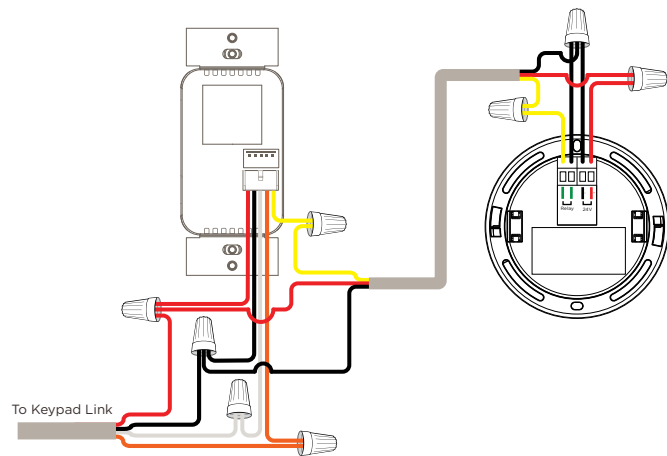
Basic Deployment

To Power Supply

Savant Controller

PD NC C NO
-GPIO/Relay
5 VDC
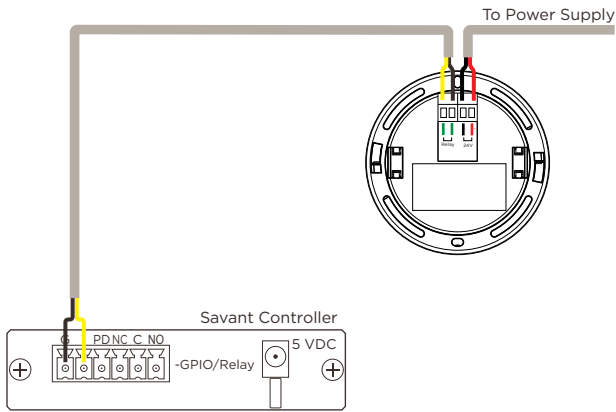
NOTES:
- – This works with any Savant Controller using a sense GPIO.
- – An external power supply is required.

Savant Keypad Link w/External Power

To Power Supply

To Keypad Link

NOTE: An external power supply is required.

Savant Keypad Link

To Keypad Link

NOTES:
- – All Savant Keypad Links have a maximum number of keypads per run, the occupancy sensor counts as a keypad in this maximum when being powered by an SKL.

NOTES: