Small Box™ energy Optional Occupancy Sensor

Install, OCC Sensor Ceiling Location

1. Remove the sensor from packaging
2. Locate a spot near the back door in ceiling area
3. Cut 7/8" hole in the ceiling tile at the mounting location
4. In ceiling above grid, set the j-Box over the hole
5. Attach the mounting base through the 7/8" hole to the j-box above
6. Put the gasket and locknut along with the connector, and twist the locknut until the mounting base is tight to the ceiling
7. Pull the wire harness through base hole
8. Secure sensor face plate to base plate (*Figure 1*)
9. From j-box run a three wire harness in ½" flex to the LCP panel (Black Red Blue)
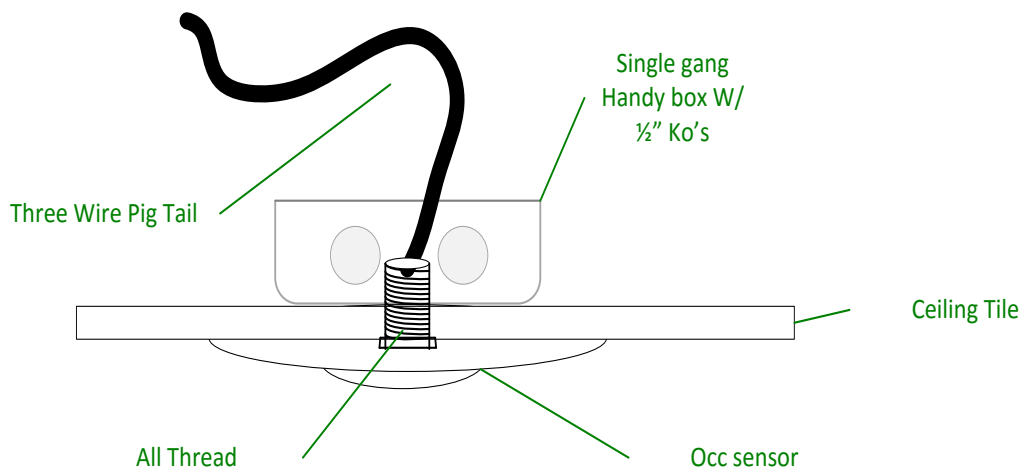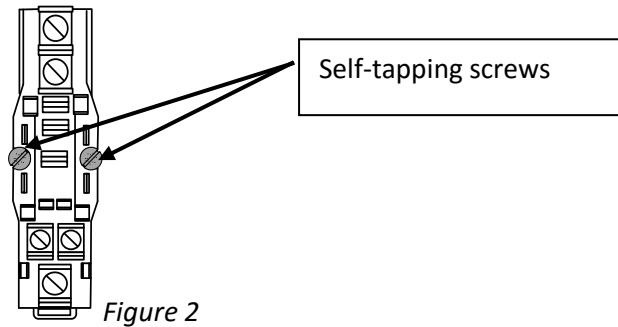10. Connect (wire nut) matching colors in j-box and install cover plate

Single gang
Handy box W/
½" Ko's

Three Wire Pig Tail

Ceiling Tile

All Thread

Occ sensor

Figure 1

Mounting Relay Base in LCP

1. Place the relay base next to the contactor zone to be controlled by the OCC sensor.
2. Use self-tapping screws and secure base to back plate of the LCP

Self-tapping screws

Figure 2

Conversion of the control wire from the I/O device to the relay base

1. Remove and reroute the control wire from the A1 terminal on the contactor and secure to the bottom screw terminal at the bottom of the relay base
2. Connect a wire from the top screw terminal at the top of the relay base to the A1 terminal on.

I/0 Controller
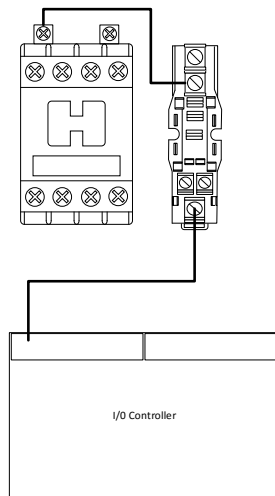
Figure 3

Digital Input Connections

1. Connect a wire from D+ of the I/O controller to the bottom screw terminal at the top of the relay base.
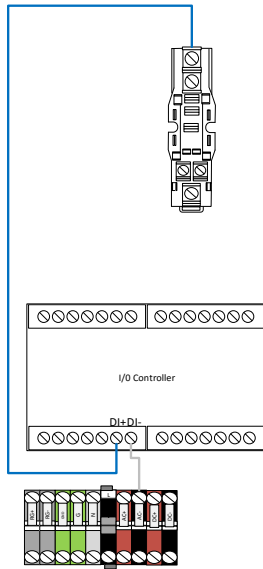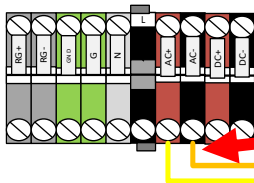2. Connect a wire from the D- to the AC- terminal below the I/O controller.

Figure 4

Note: Test 24VAC first to ensure that AC+ is Positive power and AC- is Negative power. If not, switch the incoming power at the bottom of the terminal blocks.

OCC Connections in LCP

1. Drill ½" hole at entrance area in LCP
2. Insert KO bushing to protect from wire damage or qualified means of entrance termination such as a two-screw connector
3. Connect **black** wire from the sensor to the power(Black) terminal at bottom left of panel (*make sure panel is powered off*) (*Figure 3*)
4. Connect the **white** wire from the sensor to the upper left terminal on the relay block
5. Connect a **white** wire from base unit to neutral (N) Terminal (*Figure 3*)
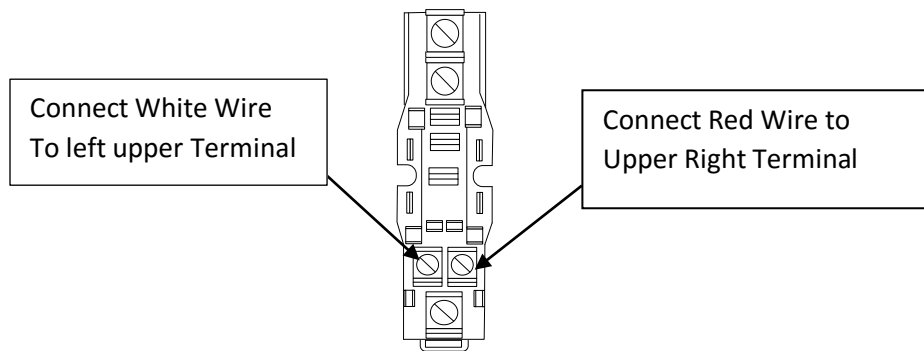6. Connect **red** wire to right terminal of relay base (*Figure 2*)

Optional Occupancy Sensor

Connect White Wire To left upper Terminal

Connect Red Wire to Upper Right Terminal

Figure 5

Figure 6

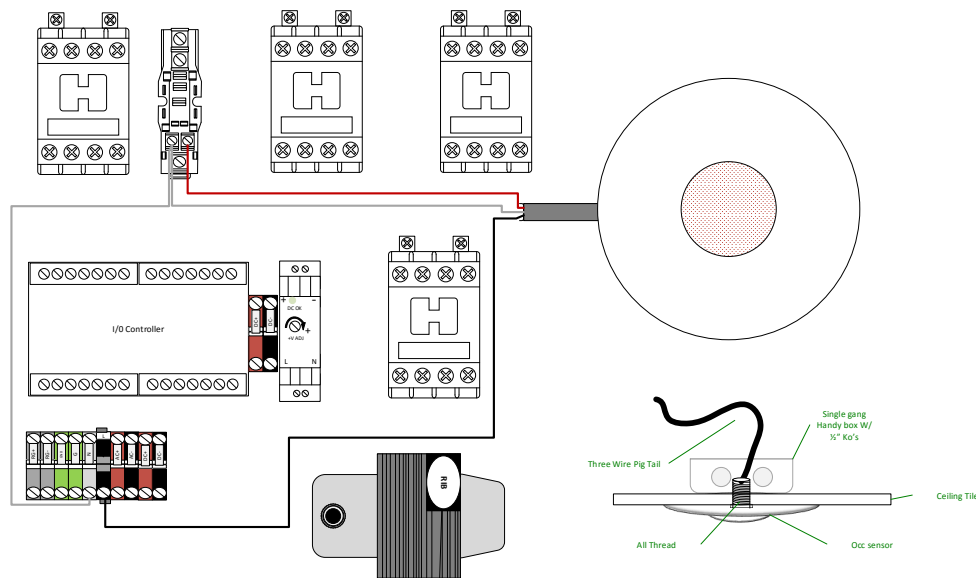## Install IDEC Relay

1. Once wiring is completed, insert the IDEC relay into the base unit
2. Re-power lighting panel

Sensor Adjustment

Note: There is a 40 second warm up period when unit is first powered on, LED Flashes

1. After test period is complete you can adjust the potentiometer according to the ambient specifications

Dip Switch settings

The Sensor has 4 DIP switches for setting the sensitivity and time delay features.

Sensitivity	1

Optional Occupancy Sensor

100%	↑
50%	↓	◄

1. 50%, the sensor coverage is smaller, just about half of the widest range
2. 100%, the maximum range of the sensor

Time Delay Settings Dip Switch 2,3,4

Time Delay	2	3	4
Test / 15 Seconds	↓	↓	↓	◄
5 Minutes	↓	↓	↑
10 Minutes	↓	↑	↓
15 Minutes	↓	↑	↑
20 Minutes	↑	↓	↓
25 Minutes	↑	↓	↑
30 Minutes	↑	↑	↓

↓ =OFF   ↑ =ON

◄ = Factory Settings

Light Level Adjustment

The factory default is at "+" which is the maximum regardless of ambient light level. The load is to be automatic turned ON and OFF only according to the occupancy and vacancy. By turning the light level knob (as shown in figure 5) toward THE "- ", if there is adequate ambient light, the load cannot be turned on even if there is occupancy detected.

Therefore:

1. Avoid mounting sensor close to windows
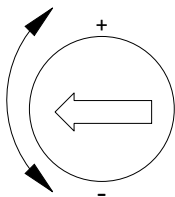2. Adjust during the daylight hours when the ambient light is at desired levels

Figure 5