Integrated Sensor

Overview

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit fixtures with the Integrated Sensor deliver Automatic On to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor.

Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant (ASHRAE, IECC, T24) manual raise, lower, ON, OFF control.

How it works:

- As the user enters the space controlled by the integrated sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at the daylight or occupied level until the space is unoccupied. This will start the occupancy time-out period (default 20 minutes).
- If the space remains unoccupied for half of the time-out period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically equal to the occupied daylight level.
- At the end of the time-out period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.
- Use the ISHH-01 Programming remote to customize the Occupied, Energy Save and Unoccupied light levels.
Adjusting Lighting with Handheld (ISHH-01) or (ISHH-02)

Manual On/Off
● With lighting in the On position.
● Point handheld remote at Integrated Sensor.
● Press the Relay On/Off button to toggle the lighting (LED blinks 2 times rapidly).

Manual Raise/ Lower
● With lighting in the On position.
● Point handheld remote at Integrated Sensor.
● Adjust light level using the Raise/Lower buttons to the desired Light Level. (LED blinks 2 times rapidly)
● The lighting will remain at this light level until the occupancy sensor times out.

Select Scene
● With lighting in the ON position.
● Point handheld remote at Integrated Sensor.
● Press the MIN, 50, 75, MAX, ES, Occ, or UnOcc buttons (LED blinks 2 times rapidly)
● The lighting will ramp to the selected scene light level.
● The lighting will remain at this light level until the occupancy sensor times out.

Programming with Handheld (ISHH-01)

When to adjust programming in your fixtures
● Daylight levels in any space are dependent on local conditions and may be effected by shades, window size and amount of natural light.
● The best time to adjust daylight levels is when there is little natural light entering the space. This could be done at night or by closing the shades.

Programming Order for a Single Fixture
It is recommended that the user saves their settings in the following order to streamline the process.
● Sensitivity Level
● Time-out Value
● Occupied Light Level (daylight level)
● Energy Saver Scene
● Unoccupied Light Level

Programming Order for a Multiple Fixtures in a Room
It is recommended that the user saves their settings in the following order to streamline the process.
● Sensitivity Level
● Time-Out Value
● When adjusting multiple fixtures, adjust all fixtures to the desired light level first then set the following:
  ● Occupied Light Level (daylight level)
  ● Unoccupied Light Level
  ● Energy Saver Scene

Set Sensitivity Level
● With lighting in the On position.
● Press the “LO” button to put the Occupancy Sensor into the Low (50%) sensitivity mode
● Press the “HI” button to put the Occupancy Sensor into the High (full) coverage sensitivity mode

Set Sensor Time-out Value
● With lighting in the On position.
● Press the “5” , “10” , “15” , “20” button to select the proper time-out value for the Occupancy Sensor
● After half the time-out setting of no occupancy, the Occupancy Sensor will trigger the Energy Saver Scene. The lighting will remain at the scene light level for the remainder of the time-out value and then transition to the Unoccupied Scene.
● If the time-out value is 10 minutes or less, the occupancy sensor will turn off the lighting after 10 minutes of no occupancy.

Set Occupied Light Level (Daylight level)
● With lighting in the On position.
● Point handheld remote at Integrated Sensor. Adjust light level using On/Off, Raise/Lower buttons to the desired Daytime Occupied Light Level.
● When light level has reached desired level
● Press the “SET” button (LED blinks 3 times rapidly)
● Then press the “Occ” button (LED blinks 5 seconds continuously)
● The desired light level is now stored as the Daytime Occupied Light Level.
Set Unoccupied Light Level

- With lighting in the On position.
- Point handheld remote at Integrated Sensor. Adjust light level using On/Off, Raise/Lower buttons to the desired Daytime Unoccupied Light Level.
- When light level has reached desired level
- Press the “SET” button (LED blinks 3 times rapidly)
- Then press the “Un Occ” button (LED links blinks continuously for 5 seconds)
- The desired light level is now stored as the Daytime Unoccupied Light Level

Set Energy Saver Scene

- The Energy Saver Scene is used as a single scene control that can be triggered from the handheld remote or future mobile application. The Energy Saver Scene is also used to save additional energy when the space is vacant, by reducing the light level to the Energy Saver Scene after half the time-out setting with NO OCCUPANCY.
- With lighting in the On position.
- Point handheld remote at Integrated Sensor. Adjust light level using On/Off, Raise/Lower buttons to the desired Energy Saver Scene.
- When light level has reached desired level
- Press the “SET” button (LED blinks 3 times rapidly)
- Then press the “ES” button (LED links blinks continuously for 5 seconds)
- The desired light level is now stored as the Energy Saver Scene

Troubleshooting Guide

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<th>Possible Causes</th>
<th>Suggestions</th>
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<td>Lights will not turn ON automatically</td>
<td>Line voltage switch has power turned off</td>
<td>Ensure any line voltage switches are in the ON position.</td>
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<tr>
<td></td>
<td>Occupied Mode set to Relay Off</td>
<td>Using Integrated Sensor Programming Remote (ISHH-01) ensure Relay can be turn On/OFF. Turn relay ON, press “SET” and “Occ”, this will set the Daytime Occupied mode to turn the relay ON.</td>
</tr>
<tr>
<td>Lights will not turn ON from wallstation</td>
<td>Occupied Mode set to Relay Off</td>
<td>On Powerup, if you see the RED LED in the Integrated Sensor blinking for 1 minute after initial power up, but the lighting is not ON. The Occupied Mode has been set to relay OFF. Using Integrated Sensor Programming Remote (ISHH-01) ensure Relay can be turned OFF. Turn relay ON, press “SET” and “Occ”, this will set the Daytime Occupied mode to turn the relay ON.</td>
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<tr>
<td>Lights will not remain ON</td>
<td>The Occupancy sensitivity may be set to LOW</td>
<td>Verify the RED LED flash as you move in the space. Using the Programming Remote (ISHH-01) push the “HI” button. Using the Programming Remote (ISHH-01) push the relay ON button to ensure the fixture has power.</td>
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<tr>
<td>Lights will not turn OFF automatically</td>
<td>Occupancy Sensor</td>
<td>Verify the occupancy sensor is properly sensing lack of motion, is not located within 4-6 feet of air vents, make sensitivity adjustments if necessary. Turn relay OFF using the Programming Remote (ISHH-01).</td>
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<td>Daylighting</td>
<td>Verify the Occupied and Unoccupied scenes are SET with the relay off. Turn relay OFF using the Programming Remote (ISHH-01) press “SET” and “Occ” this will set the daytime Occupied mode to turn the relay OFF. Turn the relay OFF using the Programming Remote (ISHH-01), press “SET” and “UnOcc” this will set the daytime Unoccupied mode to turn the relay OFF.</td>
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<td><strong>Lights turn ON but remain at a dimmed level</strong></td>
<td>Disconnect 0-10V wires from the Control Module. If the lighting does not go to full bright check wiring for shorts. Verify with a meter that at least 10VDC is present between the purple and gray disconnected driver leads. If the lighting does go to full bright when disconnected from the Control Module, check for polarity reversal on the 0-10V leads.</td>
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<td><strong>Lights turn ON but remain at full bright level</strong></td>
<td>Disconnect 0-10V wires from the Control Module. If the lighting does not go to full bright check wiring for shorts. Temporarily connect the purple and gray wires together. Verify the lighting goes to full dim. Verify with a meter that 10VDC is present between the purple and gray disconnected driver leads. If the lighting does go to full dim when disconnected from the Control Module, check for polarity reversal on the 0-10V leads.</td>
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<td><strong>Daylighting</strong></td>
<td>Daylight levels may not be correct for your space. Using the Programming Remote (ISHH-01), press the lower button to ensure the light level can go lower. Use the Programming Remote (ISHH-01) to adjust the Daytime Occupied light level.</td>
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<td><strong>How do I know if the sensor is working on Powerup</strong></td>
<td>Turn the fixture circuit OFF and then ON. The light should start at 50% light level and then raise or lower to the daylight level. The sensor RED LED should slow blink (ON for 2 seconds, OFF for 2 seconds) for a 1 minute duration then blink only on occupancy. Using the Programming Remote (ISHH-01) press the relay ON/OFF button to ensure the light fixture turns ON/OFF.</td>
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