# **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 use 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 timeout 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. Refer to the Integrated Sensor programming guide for more information.





## Troubleshooting Guide

Issue	Possible Causes	Suggestions
Lights will not turn ON automatically	Line voltage switch has power turned off	Ensure any line voltage switches are in the ON position.
	Occupied Mode set to Relay Off	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.
Lights will not turn ON from wallstation	Occupied Mode set to Relay Off	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.
Lights will not remain ON	The Occupancy sensitivity may be set to LOW	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.
Lights will not turn OFF automatically	Occupancy Sensor	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).
	Daylighting	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.
Lights turn ON but remain at a dimmed level	0-10V Output	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.
	Daylighting	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 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.

### **Troubleshooting Guide (Cont.)**

Issue	<b>Possible Causes</b>	Suggestions
Lights turn ON but remain at full bright level	0-10V Output	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.
	Daylighting	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.
How do I know if the sensor is working on Powerup		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.
	Occupancy Sensor	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.

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