

ETC Application Note

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Application
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ETC Application Notes are designed to provide specific helpful information regarding ETC's technology or about solving a problem using ETC equipment.

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Configuring Hubbell Occupancy and Daylight Sensors for Unison Paradigm Systems

Occupancy Sensor Configuration

Before you can configure the occupancy sensor functions in LightDesigner you must first add an occupancy sensor to the configuration. To do this select Hubbell as a manufacturer in the Station Library; then select the OMNIDT2000 sensor and drag and drop it into the desired space. With the station added and selected from the Control Simulate view, the station properties will display in the Property Editor. (Pictured Below)

Property Editor	
Object Type	Station
Type	LXOMDT2000 Occupancy Sensor
Name	Occ. Sensor 1
Number	2
X	740cm
Y	420cm
Processor	Bryans Desk Config
Neuron ID	xxxx-xxxx-xxxx
Auto Update Page	Page 1
<input type="checkbox"/> Configuration	
Sensor Config	84
Inactivity Timeout	1
Ultra Sonic Sensitivity	44
IR Sensitivity	140

Within the configuration area, there are few items that may require changes based on the desired functionality of the sensor.

Sensor Configuration:

This setting will determine how the sensor responds to occupancy detection. There are 6 common modes to use. Based on the desired functionality you will need to set this field using the table below.

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Sensor Config Value	Desired Functionality
64	Sensor will trigger when occupancy is detected using Passive Infrared or Ultrasonic detection. Adaptive Learning Disabled
80	Sensor will trigger when occupancy is detected using Passive Infrared or Ultrasonic detection. Adaptive Learning Enabled
68	Sensor will trigger when occupancy is detected using Passive Infrared and Ultrasonic detection. Adaptive Learning Disabled
84	Sensor will trigger when occupancy is detected using Passive Infrared and ultrasonic detection. Adaptive Learning Enabled (DEFAULT)
70	Sensor will trigger when occupancy is detected using Passive Infrared only . Ultrasonic detection Disabled . Adaptive Learning Disabled
86	Sensor will trigger when occupancy is detected using Passive Infrared only . Ultrasonic detection Disabled . Adaptive Learning Enabled

Note: Adaptive Learning allows the sensor to determine false occupancy triggers over time to provide more efficient performance and energy conservation; when enabled, the occupancy sensor will mitigate false triggers after 72 hours of operation.

Inactivity Timeout:

Amount of time (in minutes) before 'No Occupancy' action is executed

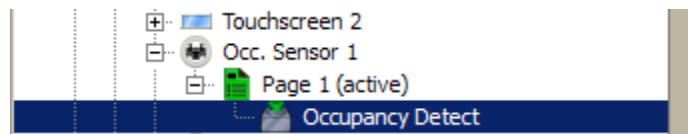
Ultra Sonic Sensitivity:

Should not be adjusted unless instructed by ETC Technical Services

IR Sensitivity:

Should not be adjusted unless instructed by ETC Technical Services

With these properties set as required, expand the occupancy sensor in the Browser (Pictured here)



This will display control action information in the property editor. (Pictured here)

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Property Editor	
Object Type	Control
Name	Occupancy Detect
Label	
[-] Function	Occupancy Sensor
[-] Occ Event	Preset Activate (HTP)
Preset	Logo Backlight
[-] No Occ Event	Preset Deactivate (LTP)
Preset	Logo Backlight
Runtime Properties	
State	Up

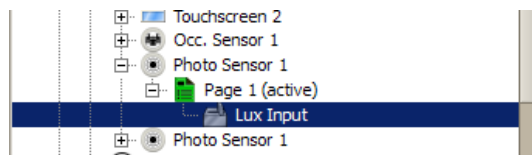
From here you can assign the occupancy and no occupancy actions using any action that can be assigned to a button on a station. When using simulation control, or using LiveControl, the State property indicates what the current position of the sensor is. Occupancy =Down, No Occupancy = Up

Daylight Sensor Configuration

Before you can configure the daylight sensor functions in LightDesigner you must first add a daylight sensor controller to the configuration. To do this select Hubbell as a manufacturer in the Station Library; then select the LXPSCMLP (LinkPower) or LXPSCMFT (Aux Power) sensor controller and drag and drop it into the desired space. Either sensor controller will support any of three sensors for Indoor, Outdoor or Skylight use

Note: Either sensor controller can be used with an indoor, outdoor, or skylight sensor unit; it is not important during configuration which physical sensor is used.

With the sensor controller added and selected, expand the station in the browser (shown below). The configuration settings will be displayed in the Property Editor.



Select the Lux Input portion of the Photo Sensor to display the sensor properties in the Property Editor. (Pictured here)

Property Editor	
Object Type	Control
Name	Lux Input
Label	
[-] Function	Photo Sensor Dimming
[-] Action	Space Daylight Harvesting
Space	Ballrooms
Percent C...	1%
Delay Time	120s
Target level	3000 lux
Sensitivity...	1000 lux
Fade Time	1 s
Runtime Properties	
Value	-1

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The sensor will default to providing Daylight Harvesting Functionality in a closed loop format for the entire space that the sensor was added to. To change the default control function, use the same process you would to configure a button or fader station control to select space, group, or channel daylight harvesting.

There are a few other properties displayed in the property editor that will need to be configured based on the projects requirements.

Percent Change:

Determines what percentage change is made with each step. For example a setting of 5% means the electric light level will change in 5% increments until the target Level is achieved. The interval of change is dependent on the *Fade Time* property.

Delay time:

Sets how long the system must wait after detecting a change before any level changes will take effect. This prevents the system from changing output to the electric light level when a shadow passes the sensor or a cloud passes by.

Target Level:

Sets the desired overall reading the sensor should maintain in lux

Sensitivity Level:

Sets the amount of the measured light (in lux) must deviate from the specified target before the system should take action.

Fade Time:

Sets the Fade Time used between Change Steps in seconds.

Value:

When in Live Control, and connected to the control system, the value field will display the actual level the photocell is detecting in lux. This field is useful in configuring the above values during commissioning.