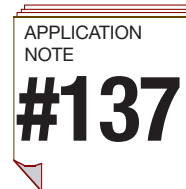




# For Your Information ...



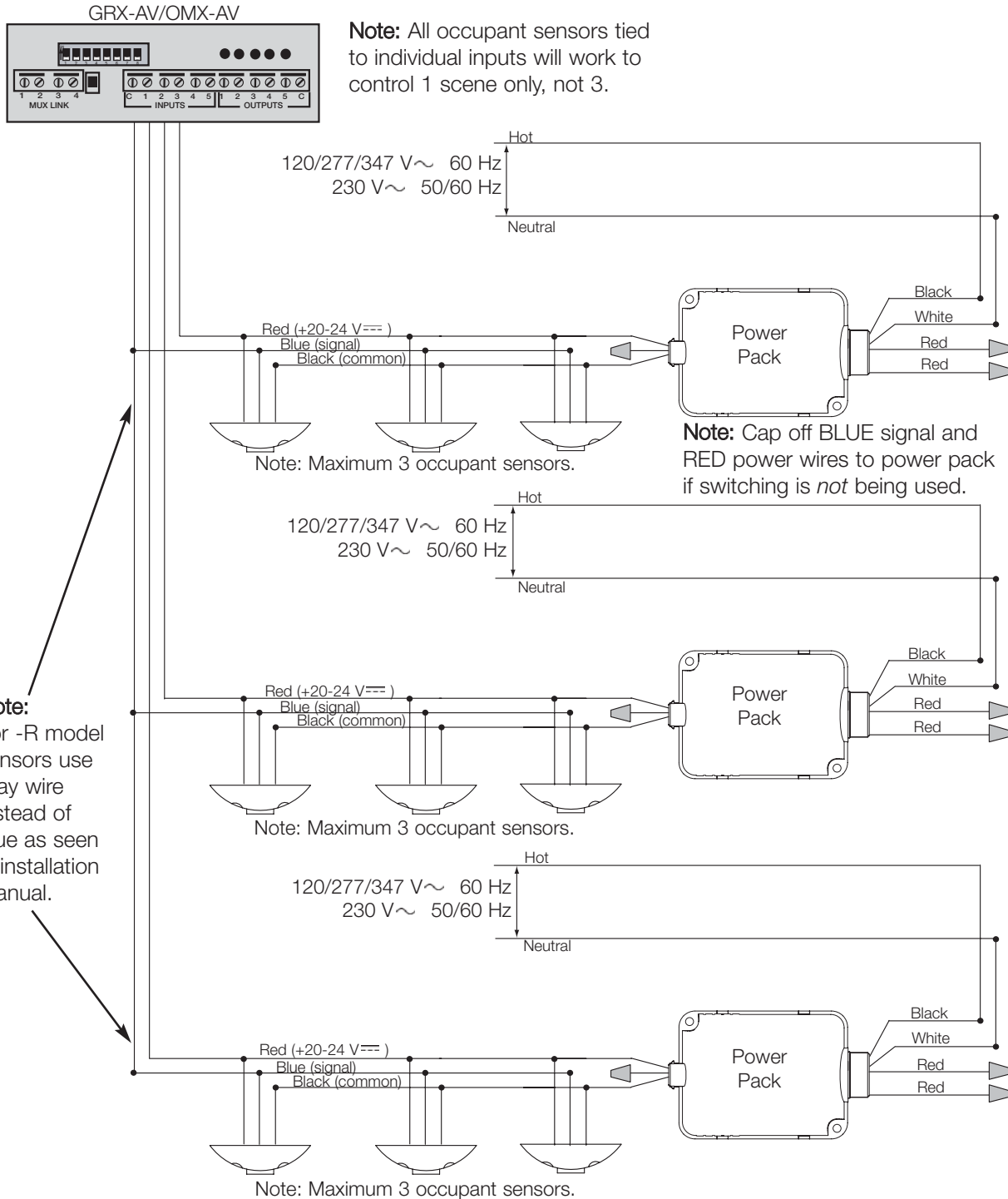
## Wiring Lutron Occupant Sensors to Lutron Control Systems and Hardware

### Quick Reference Guide

Lutron Control System	Power Pack Required?	Number of sensors powered by system	System expandable with power pack?	Notes:
EcoSystem™	N	1	Y	Use <i>Ecosystem</i> Ballast/C5-BMF
Digital microWATT™	N	1-3	Y	Use lighting zone controller; at least one must be connected before expansion
MicroWATT®	N	1-3	Y	Use lighting zone controller; at least one must be connected before expansion
RadioTouch™	N	1	Y	Use with RTA-RX controller/RTA-SCI
Softswitch™	N*	1	Y	Use with seeTouch™ wallstation/OMX-AV/Panel CCI
LCP128™	N*	1	Y	Use with seeTouch wallstation/OMX-AV/Panel CCI
GRAFIK 5000/6000/7000™	N*	1	Y	Use with seeTouch wallstation/OMX-AV
GRAFIK Eye® 3000/4000	Y	0	Y	Use with GRX-AV
HomeWorks®	Y	0	Y	Use with CCI
RadioRA®	Y	0	Y	Use with RA-SCI
*Power Pack required for OMX-AV and Panel CCI controls				
<b>Supporting Hardware</b>				
OMX-AV	Y	0	Y	Power pack must power occupant sensor**
GRX-AV	Y	0	Y	Power pack must power occupant sensor**
Panel Contact Closure Interface	Y	0	Y	Power pack must power occupant sensor**
seeTouch™ wallstation	N	1	Y	Power pack used to expand system**
Contact Closure Interface	Y	0	Y	Power pack must power occupant sensor**
**Power Packs are able to support a MAX of three occupant sensors each				
<b>Wire Size Note:</b> Use a minimum wire size of #18 AWG (1.0 mm <sup>2</sup> ) for long wire runs (>2000 ft/610 m), #24 AWG (0.5 mm <sup>2</sup> ) for medium wire runs (500 ft/152 m to 2000 ft/610 m), and #28 AWG (0.5 mm <sup>2</sup> ) for short wire runs only (<500 ft/152 m).				

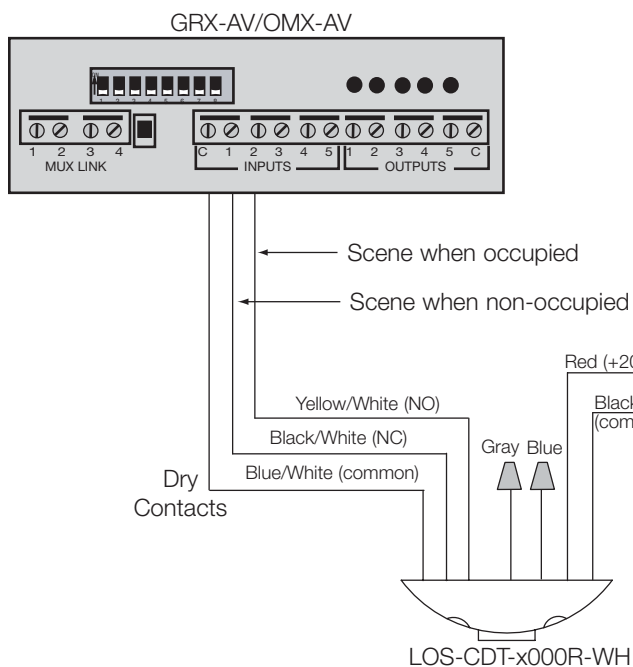
- See individual product specifications for a complete wiring guide of Lutron occupant sensors to other Lutron Lighting Control Systems

# GRX-AV and OMX-AV Wiring Diagram: 3-Zone Example



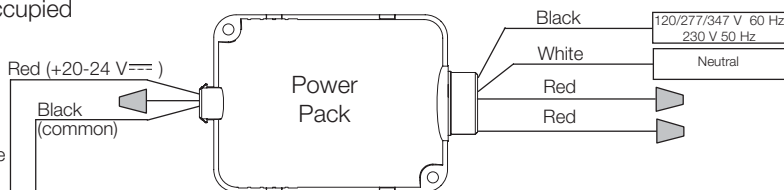
**Note:** All of the signal (blue) wires are connected to "C", with the +24 VDC wire of each zone connected to a contact closure input of the AV unit. All three occupant sensors per power pack are seen as one signal by the AV input in this drawing.

## Creating Toggle Function with GRX-AV/OMX-AV (for use with -R model sensors only)

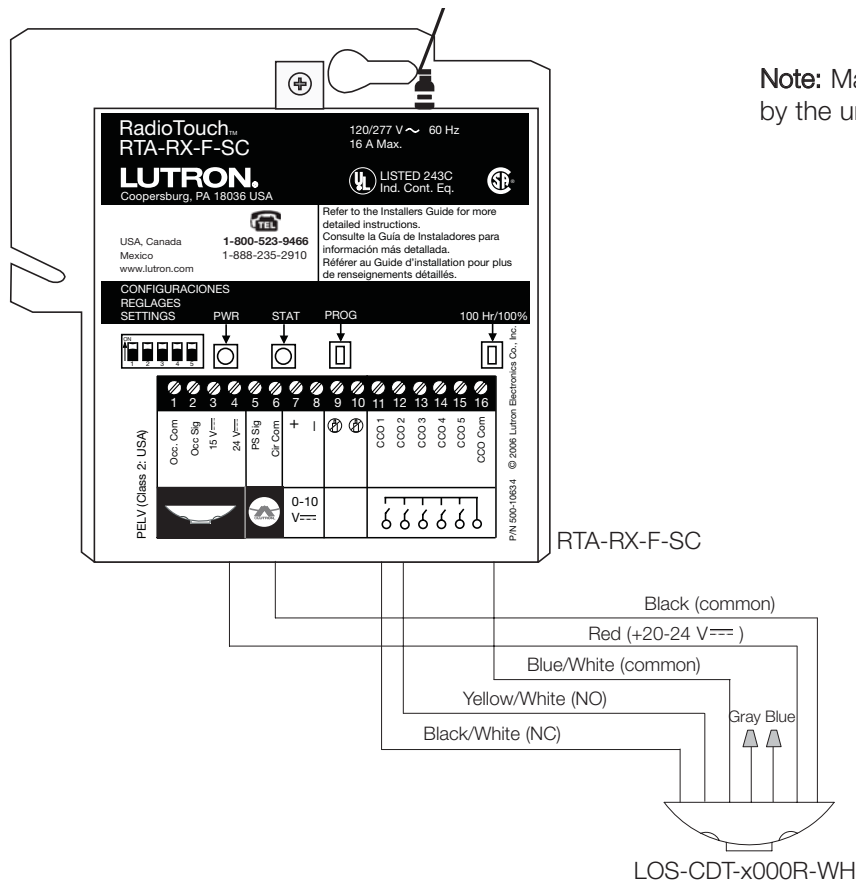


Enables the ability to toggle between two scenes instead of standard occupant sensor ON/OFF operation.

**Note:** BLUE knob on occupant sensor must be turned fully clockwise for unit to function properly.



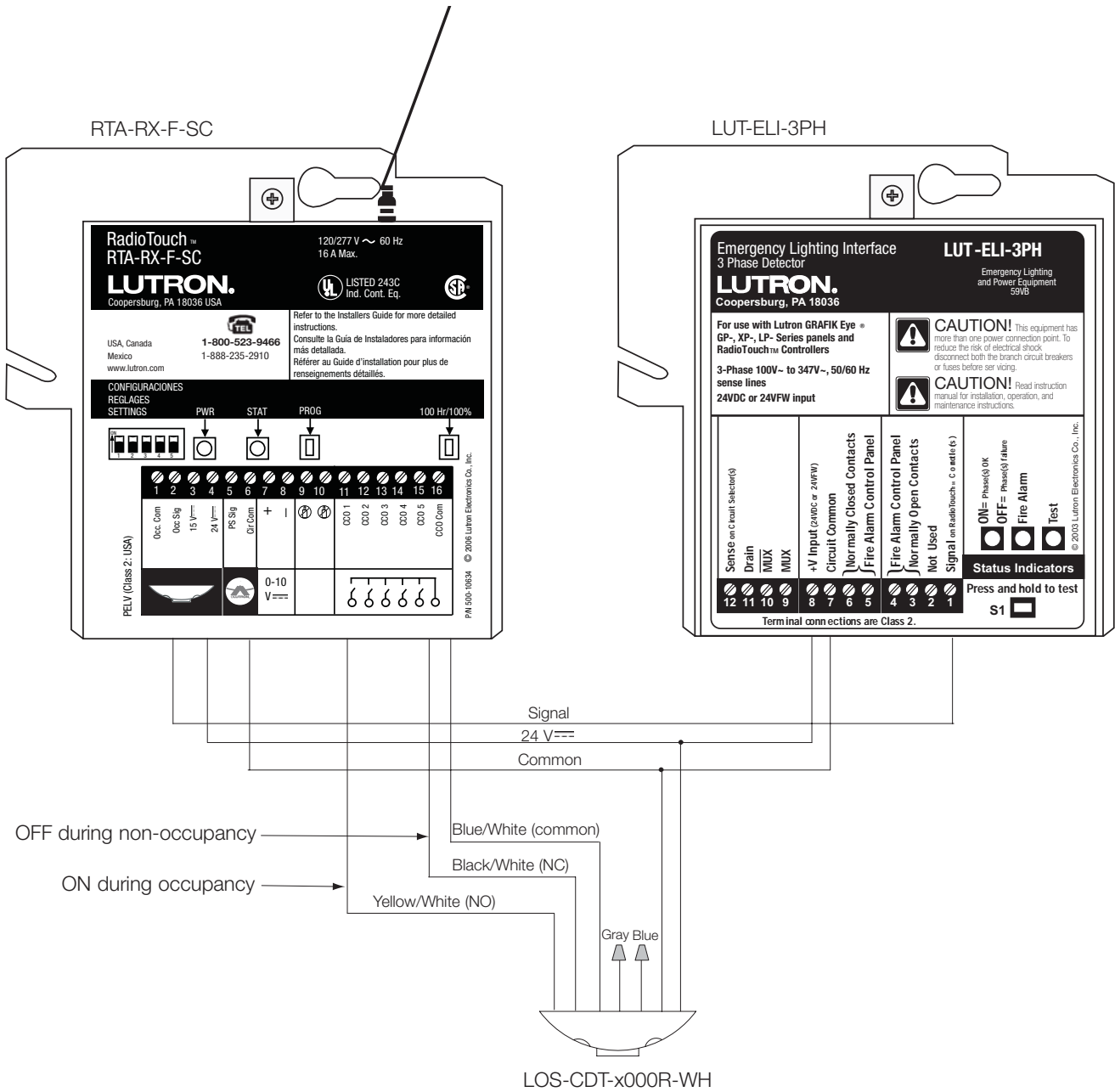
## Creating Toggle Function with RadioTouch™ (for use with -R model sensors only)



**Note:** Maximum of 3 sensors can be powered by the unit.

# Combined Emergency and Occupant Sensor Function with RadioTouch™ (for use with -R model sensors only)

**Note:** Set Radio Touch “Receiver Switch Settings” DIP switch 2 to OFF for emergency mode.

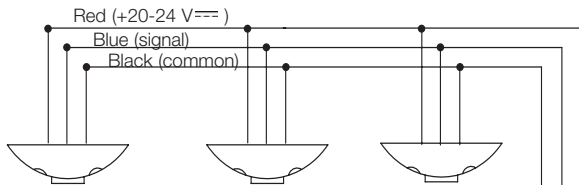
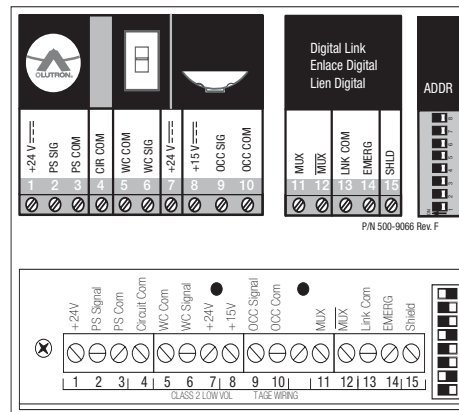


# Lighting Zone Controller Interface (microWATT® and Digital microWATT™): Single-Zone Example

**Notes:**

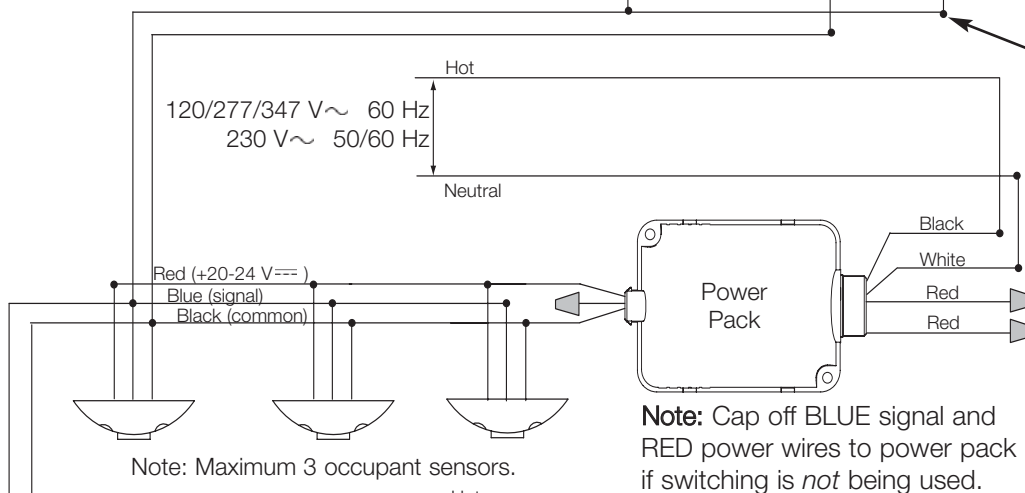
- At least 1 occupant sensor must be connected to the *microWATT* interface to ensure proper operation.
- A maximum of 3 occupant sensors are able to be powered by the *microWATT* unit alone.
- A maximum of 10 occupant sensor signal lines are permitted to be connected to one *microWATT* unit.

Lighting Zone Controller



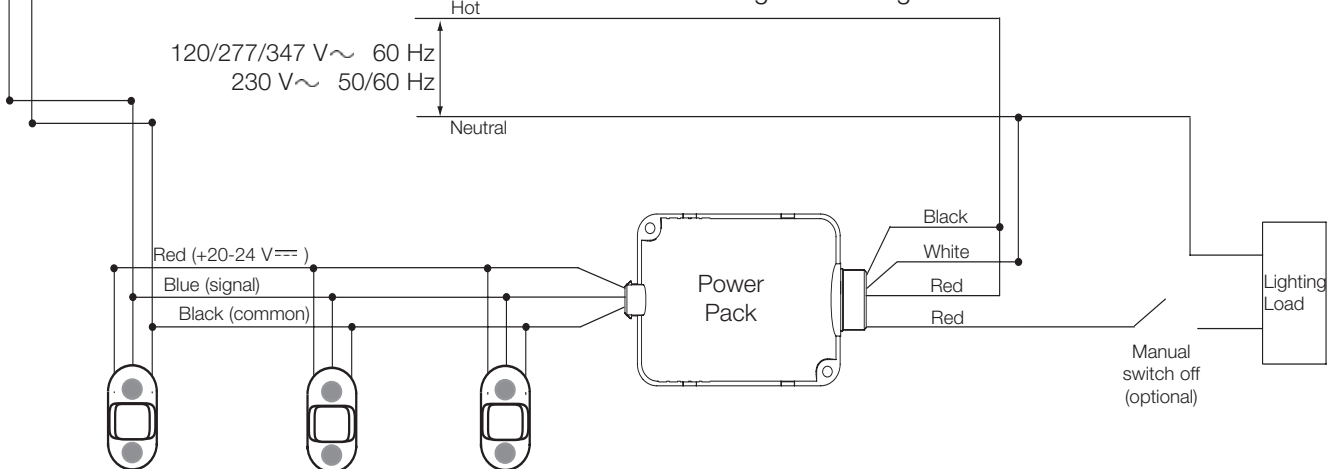
Note: Maximum 3 occupant sensors.

**Note:**  
For -R model sensors use gray wire instead of blue as seen in installation manual.



Note: Maximum 3 occupant sensors.

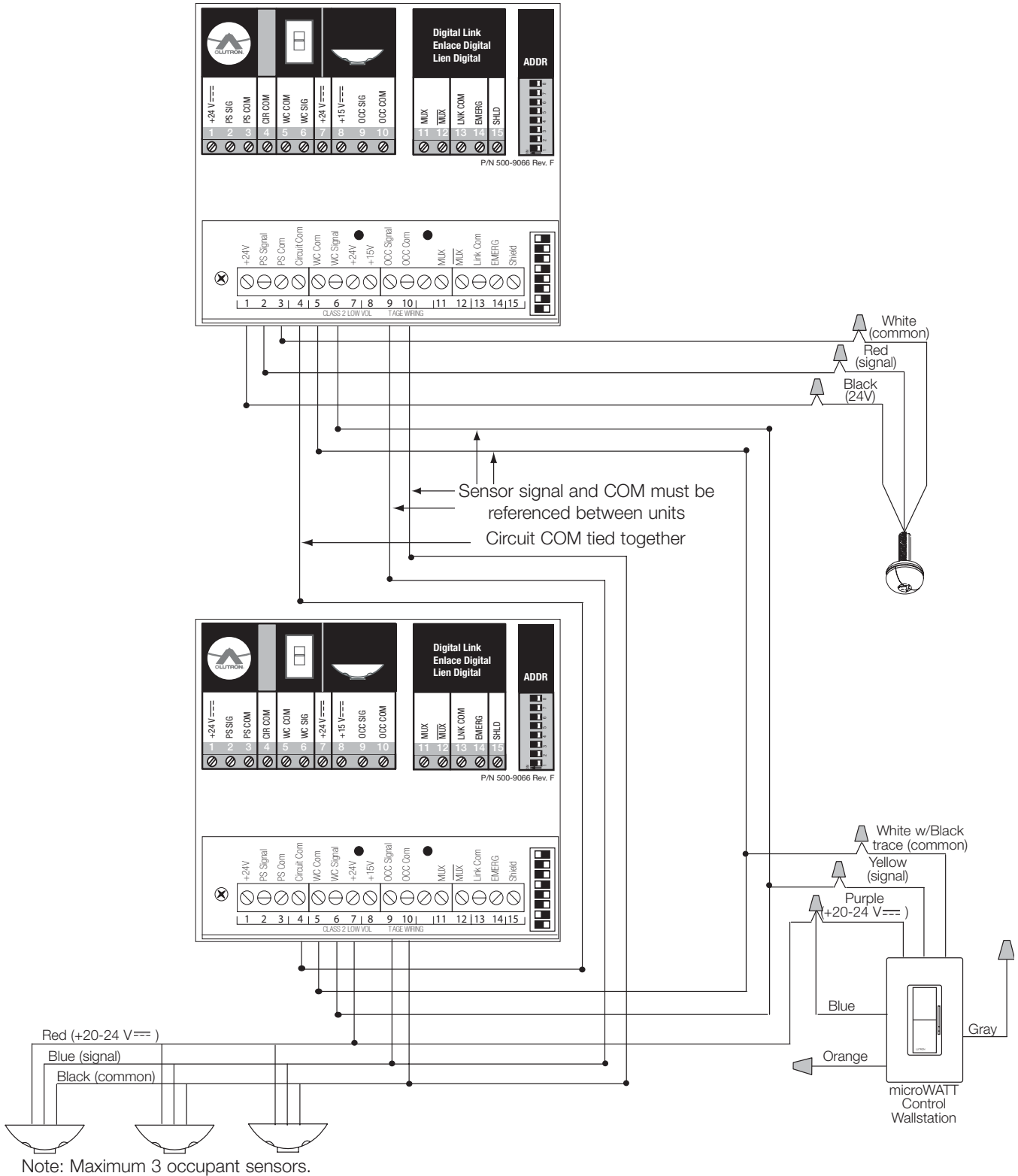
**Note:** Cap off BLUE signal and RED power wires to power pack if switching is *not* being used.



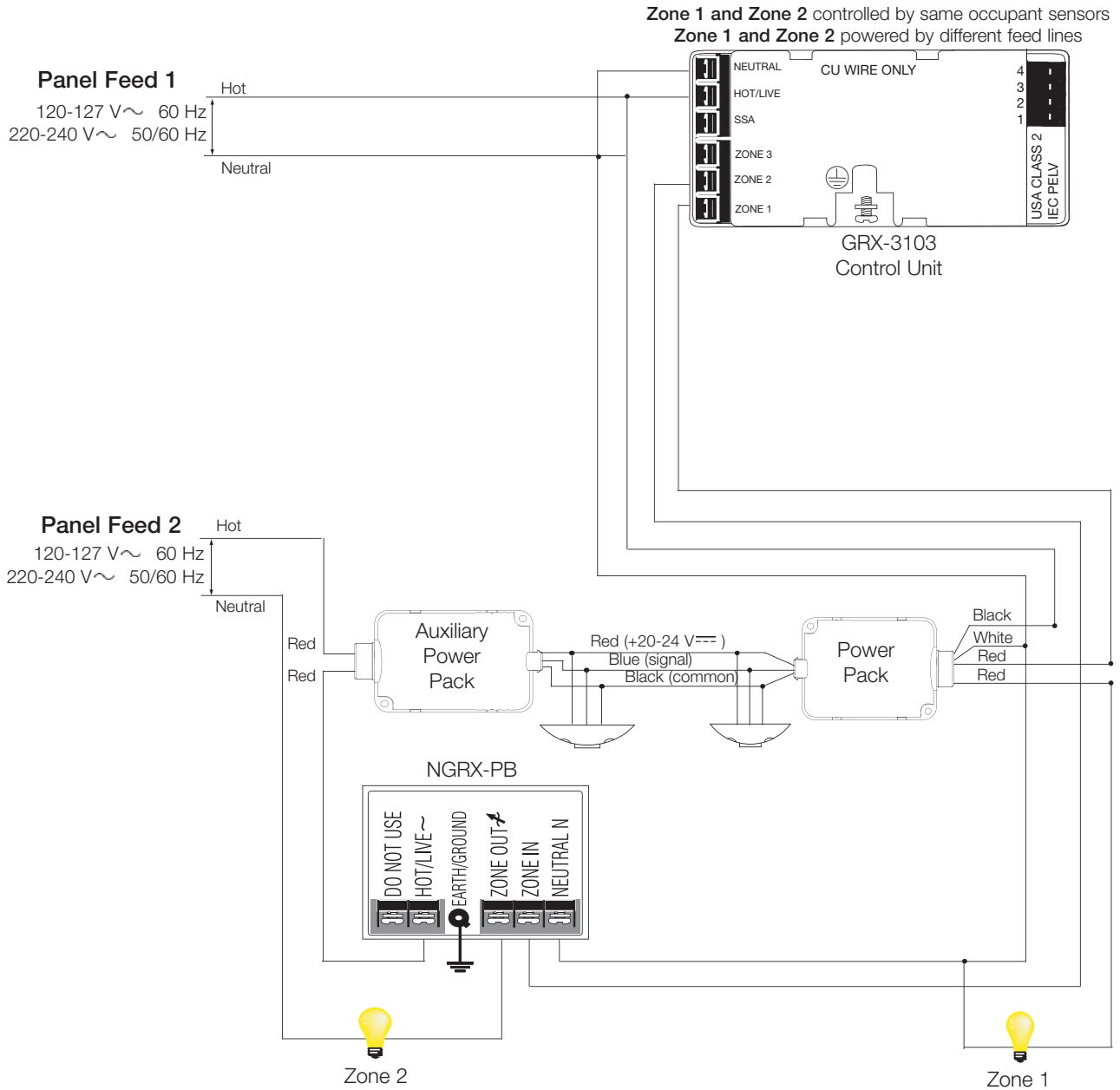
Note: Maximum 3 occupant sensors.

# Multi Lighting Zone Controller System: Interfacing Peripheral Connections between Lighting Zone Controllers

Lighting Zone Controller

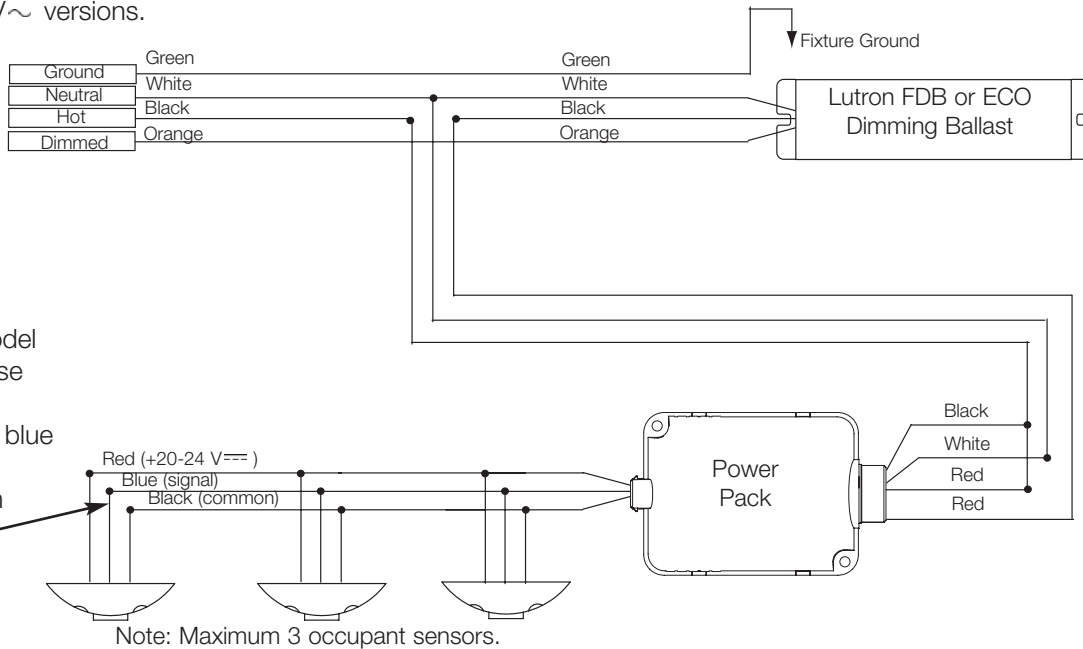


# Controlling Zone with Dual Feeds: Power Booster Example



## Fluorescent Dimming Ballast (FDB) with Occupant Sensors: Single-Zone Example

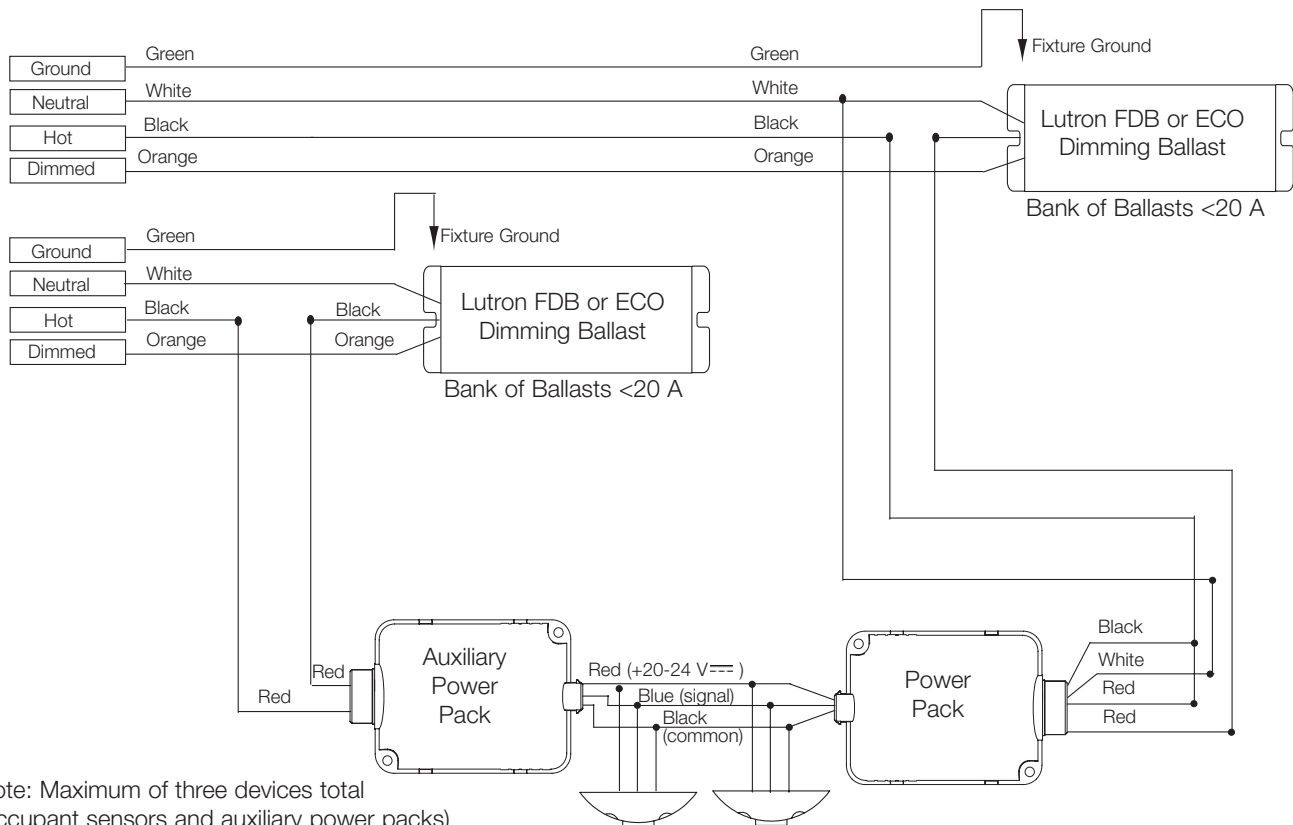
**Note:** Power Packs can switch 20 A ballast current for 120/277 V~ versions.



**Note:**  
For -R model sensors use gray wire instead of blue as seen in installation manual.

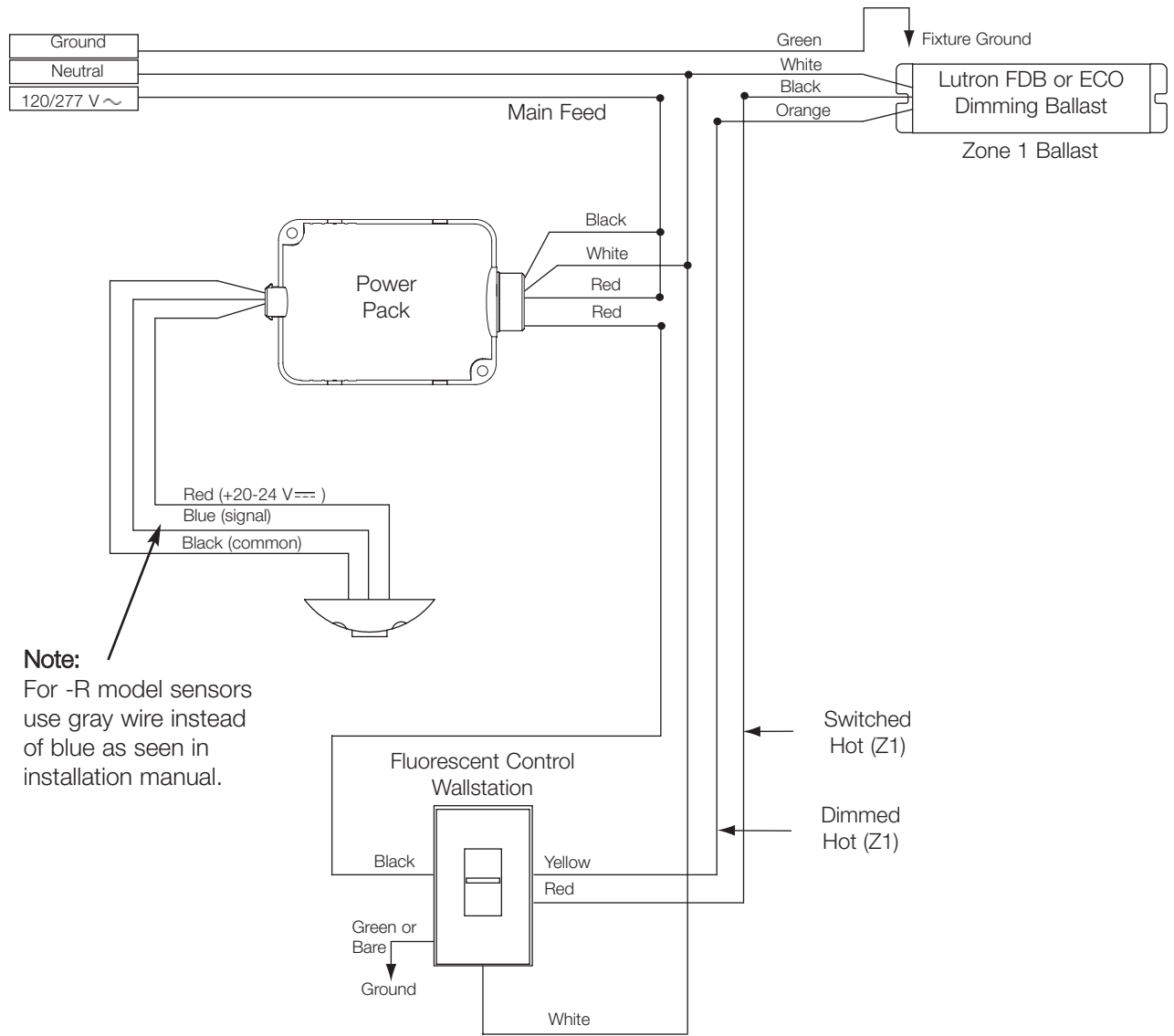
## Dual Circuit Switching of FDBs (<20 A/Zone): Single-Zone Example

**Note:** Power Packs can switch 20 A ballast current for 120/277 V~ versions.

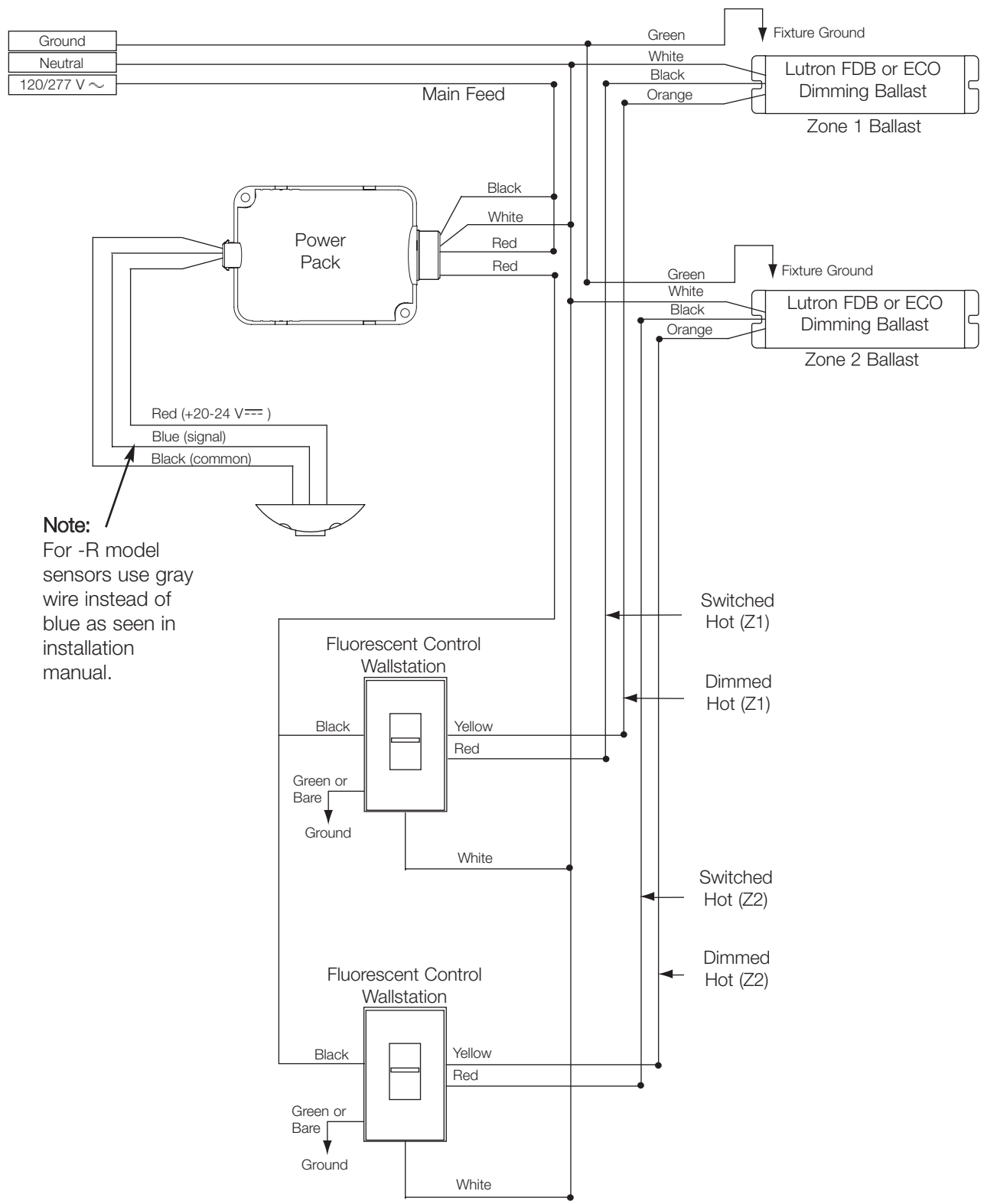




# Switching Dimmed Hot to FDB: Single-Zone Example, NOVOTAR® Wallstation



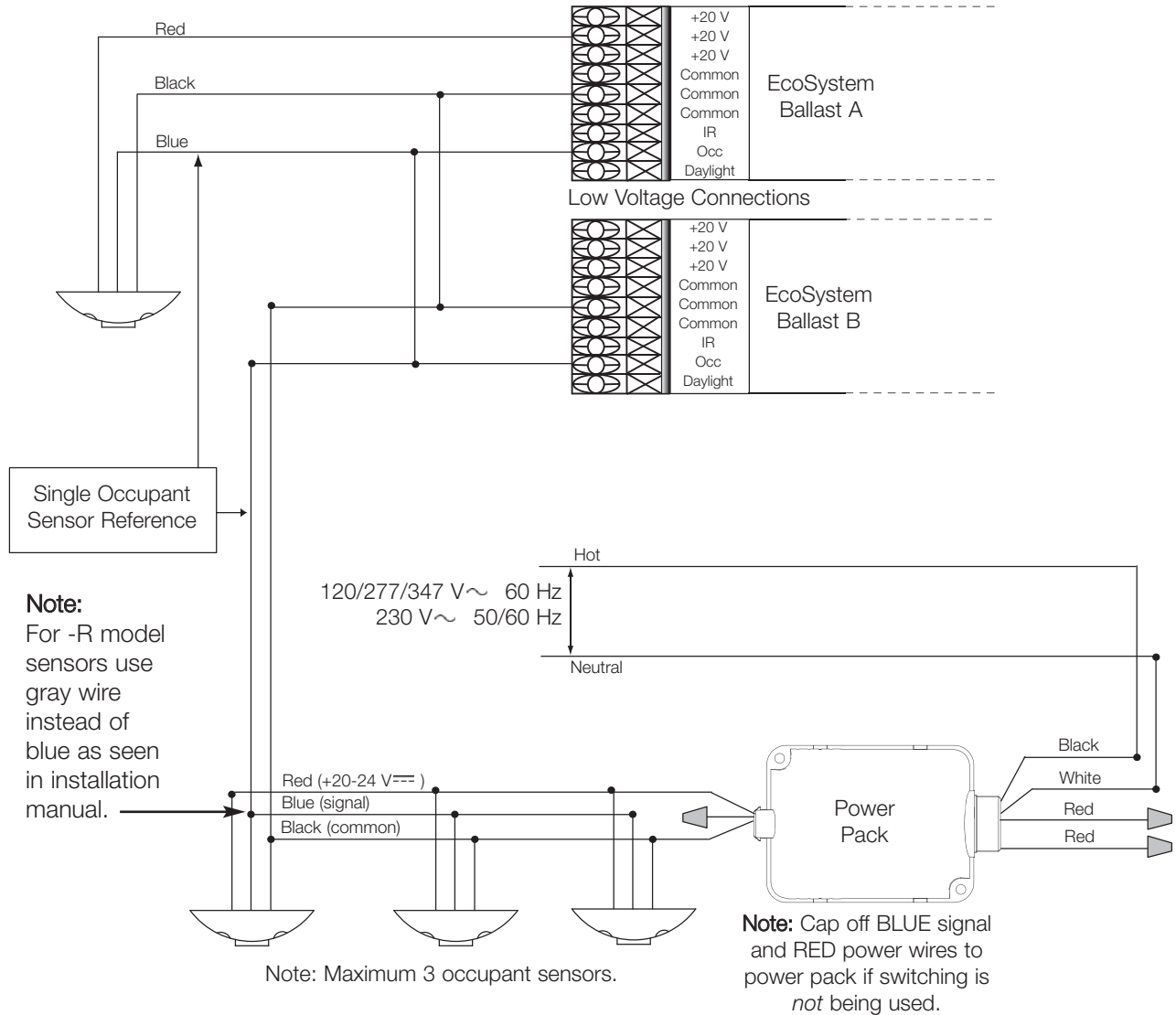
# Switching Dimmed Hot to FDB: Dual-Zone Example



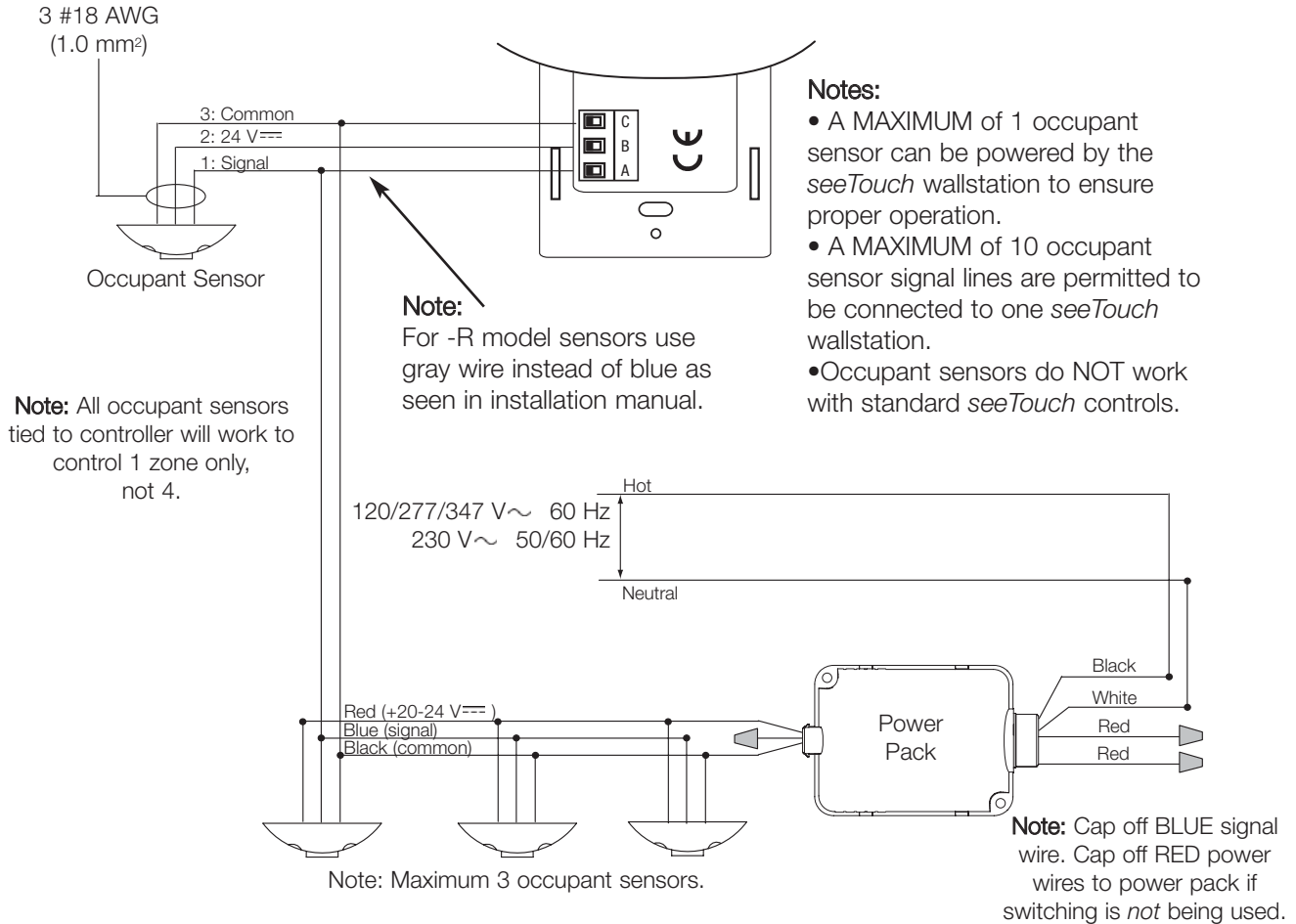
**Note:**  
For -R model sensors use gray wire instead of blue as seen in installation manual.

# Ecosystem™ Ballast Interface: Single-Zone Example

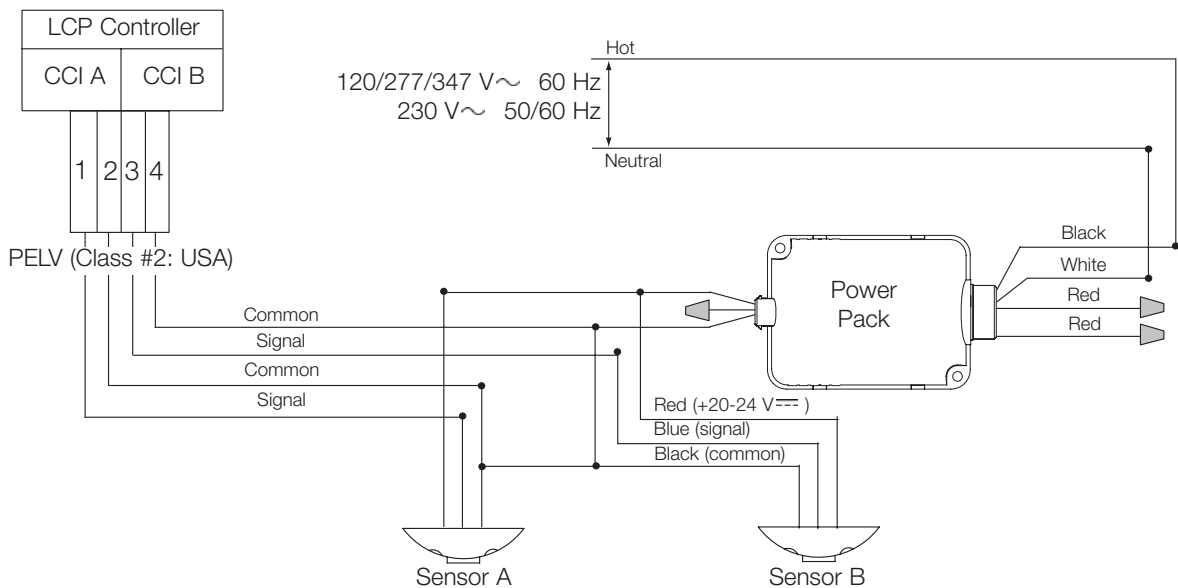
**Note:** All occupant sensors tied to ballasts will control a single zone, not 4.



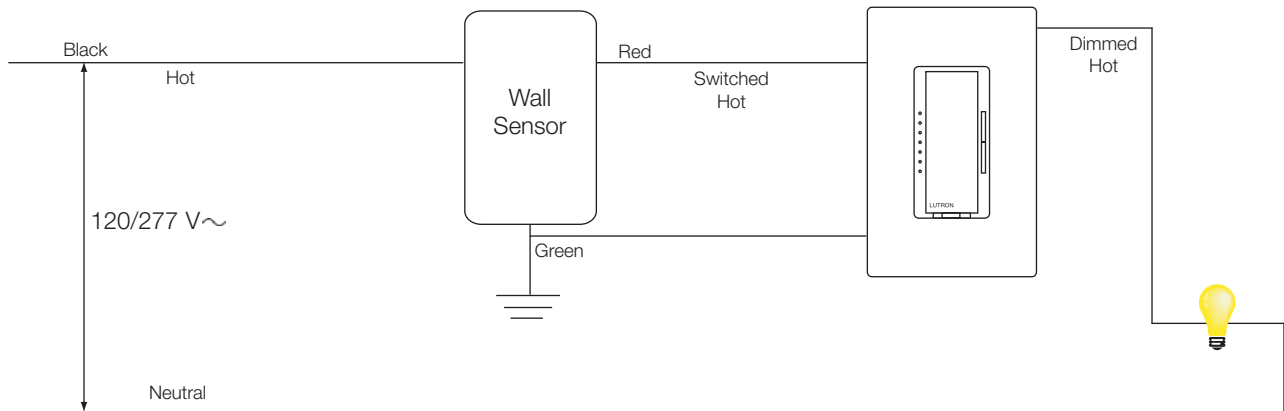
# Wiring to a seeTouch™ allstation: Single-Zone Example



# Wiring to a Contact Closure Input: LCP Controller Example



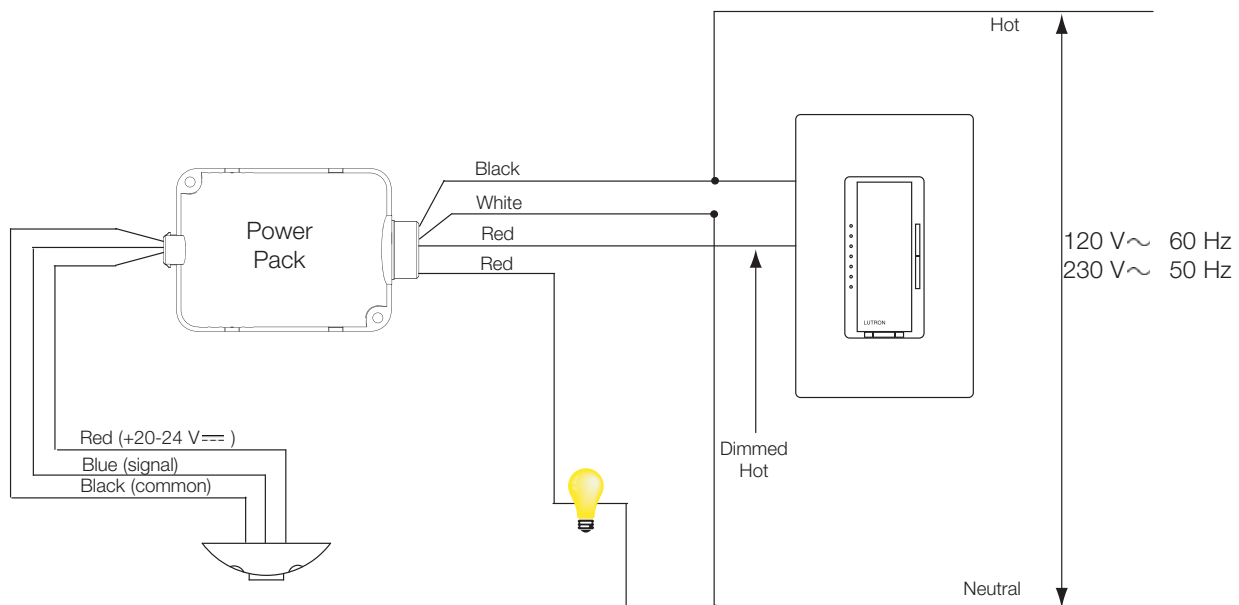
## Interfacing Wallbox Occupant Sensors with Wallbox Dimming Products: Maestro® Wallstation Example



### Notes:

- LOS-SIR is a wallbox-mounted occupant sensor that is used to switch power to a load.
- Dimmer will retain previous settings when power is returned (based off assumed normal operation of a *Maestro* wallstation control).
- This is a simple solution to this type of situation.
- Do NOT use LOS-SUS units to switch a dimming load.
- Unit must be wired on live side of dimmer.

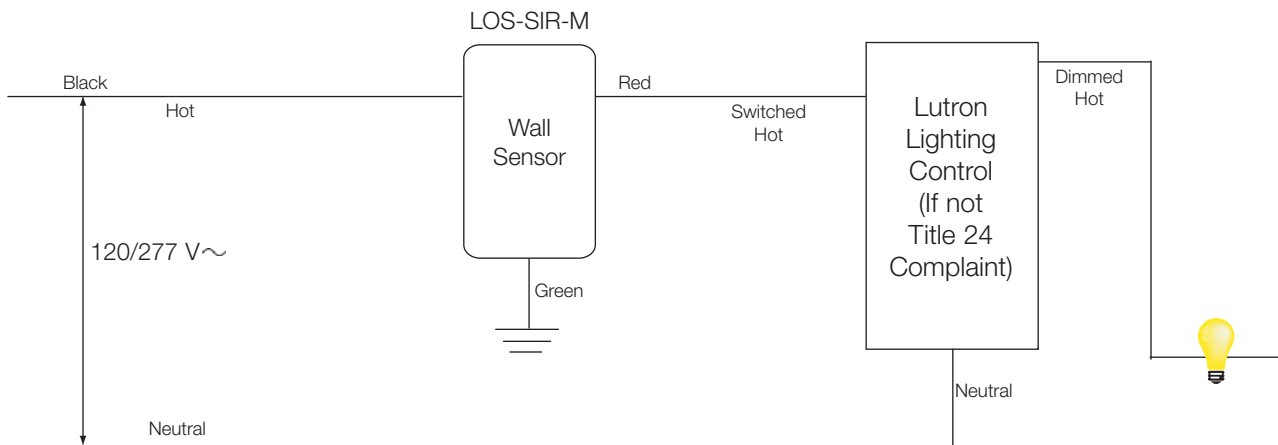
## Interfacing Low-Voltage Occupant Sensors with Wallbox Dimming Products



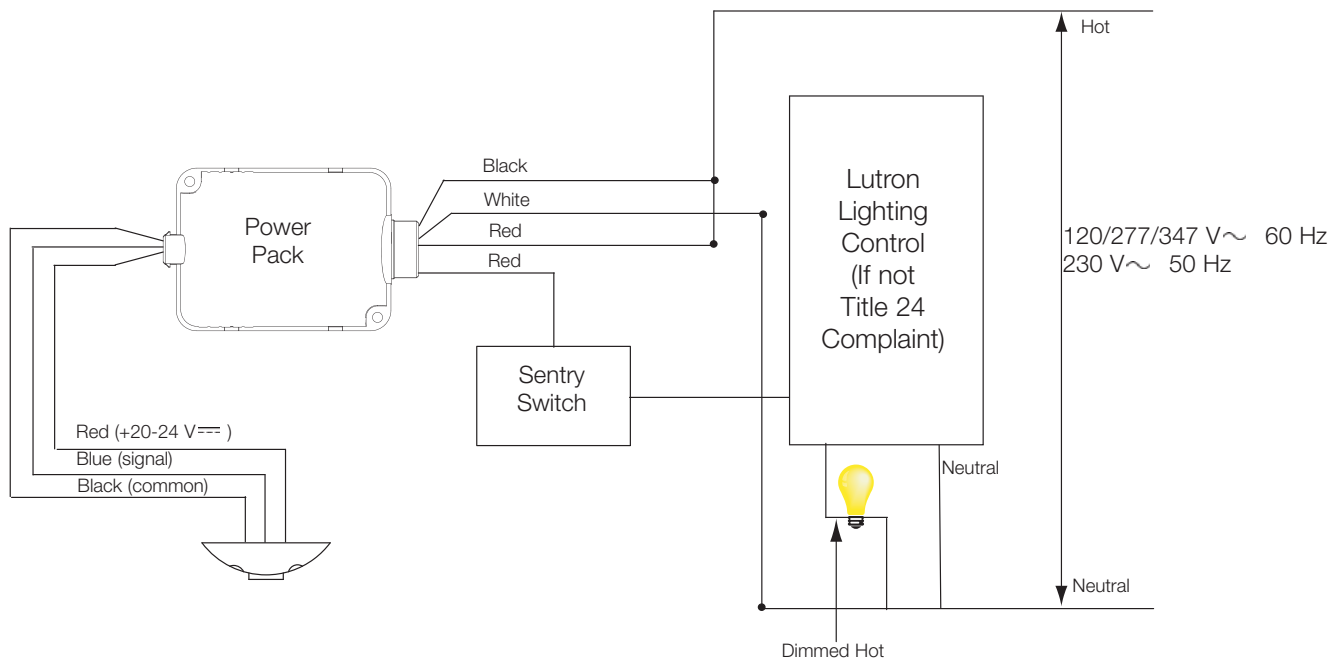
### Notes:

- The dimmed hot signal is switched in this circuit versus the hot signal in the previous drawing.
- This is a more complex method that allows for the use of versatile low-voltage occupant sensors in place of a wallbox unit.

**Title 24 Circuits: LOS-SIR-M Manual ON/Auto OFF**

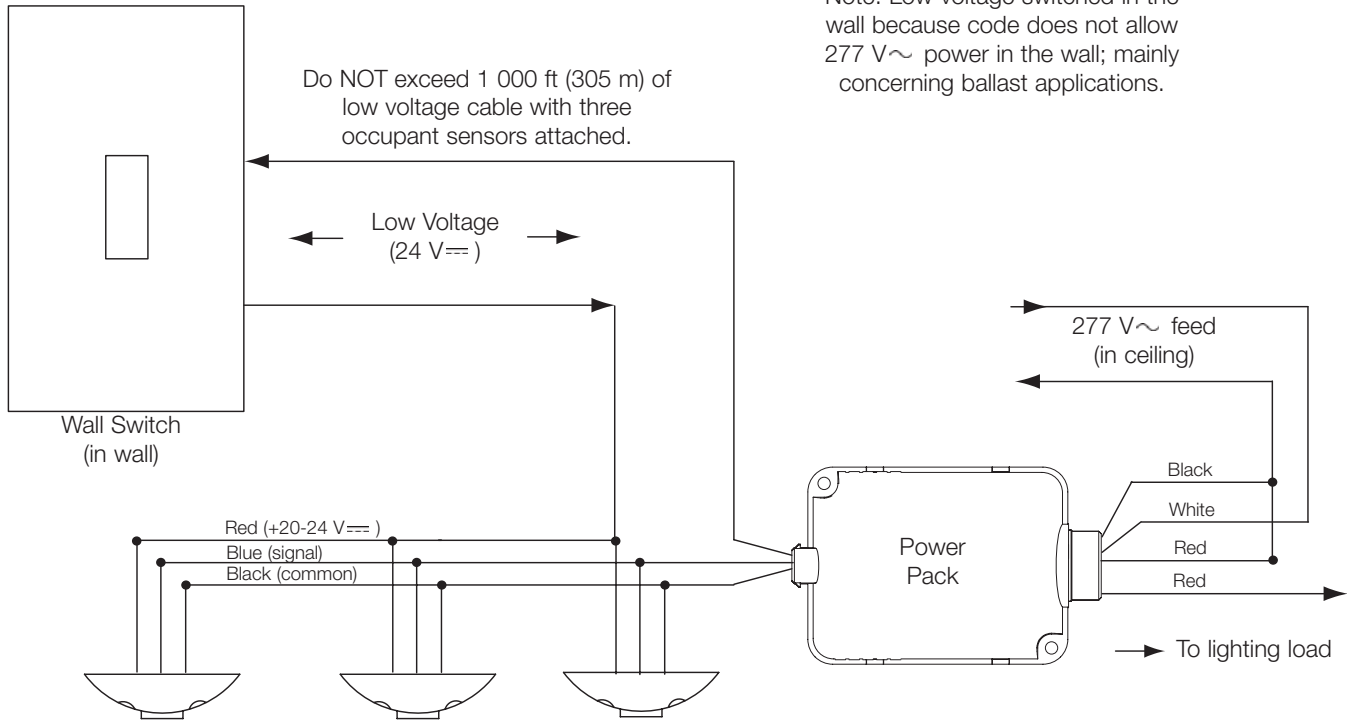


**Title 24 Circuits: Sentry Switch Manual ON/Auto OFF**



# Chicago Code Violation Solution: No 277 V $\sim$ in the Wall

Wallstation "ON" -  
 sensor powered;  
 automatic sense of  
 occupancy  
 Wallstation "OFF" -  
 sensor not powered;  
 lights off



Do NOT exceed 1 000 ft (305 m) of  
 low voltage cable with three  
 occupant sensors attached.

Note: Low voltage switched in the  
 wall because code does not allow  
 277 V $\sim$  power in the wall; mainly  
 concerning ballast applications.

Note: Maximum 3 occupant sensors.

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## Worldwide Technical and Sales Assistance

If you need assistance, call the toll-free  
**Lutron Technical Support Center.**  
Please provide exact model number when calling.  
24 hours/day + 7 days/week

### North and South America

U.S.A., Canada, Caribbean: 1.800.523.9466  
Mexico: +1.888.235.2910  
Central/South America: +1.610.282.6701

### Europe

Technical support: +44.(0)20.7680.4481

### Asia

Northern China: 10.800.712.1536  
Southern China: 10.800.120.1536  
Hong Kong: 800.901.849  
Japan: +81.3.5575.8411  
Singapore: 800.120.4491  
Taiwan: 00.801.137.737  
Thailand: 001.800.120.665853  
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