

# OSP/OSA Power Pack Series

## Provides low voltage power and line voltage control for Occupancy Sensor



### Description

Containing both a 24VDC supply and a 20A line voltage relay for most models of occupancy sensors, the Leviton Compact Power Pack provides low voltage power and line voltage control for Leviton occupancy sensors. Versions include Auto-ON and Manual-ON inputs for occupancy sensors, Hold-ON and Hold-OFF capabilities and a local input for momentary or maintained dry contact switches.

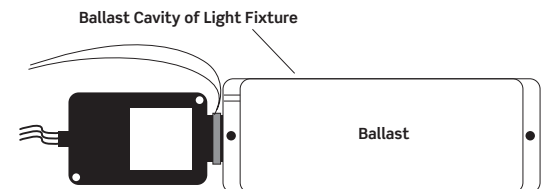
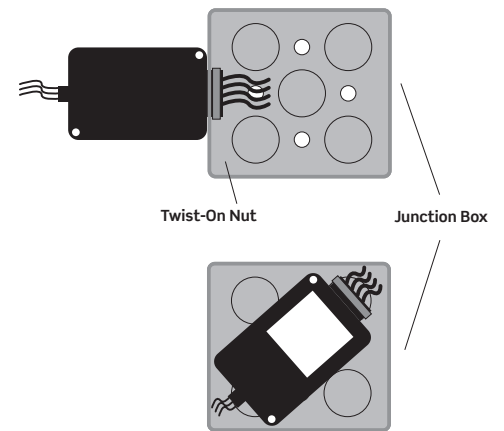
The internal relay can control up to 20A for 120, 230, 277VAC or 347VAC ballast loads and 120VAC incandescent loads. The OSP Power Pack Series is also used to supply power to the OSA Add-A-Relay model. The power pack conveniently mounts in a knockout hole of a standard junction box. The unit can be placed inside or outside the junction box with a simple twist-on nut.

### Applications

Use a Leviton Power Pack with Leviton occupancy sensors in the following applications:

- Anywhere optimal lighting and energy savings are desired
- Load shed/interface hold-OFF applications
- Retail hold-ON/bypass applications
- OSP20-RDH Applications
  - Bi-level or A/B lighting
  - Shared emergency lighting
  - Inexpensive 3-way switching
- OSA20 Applications
  - Expanding circuit switching capacity
  - Cost-conscious mixed voltage solutions

### Easy Mounting



## Features

### OSP15-R30

- Self-contained transformer and relay
- Internal voltage regulator—regulated 24VDC current, 150mA output
- Fast installation—mounts inside or outside of a junction box, or inside a fluorescent ballast cavity with a simple twist-on nut
- Single or multiple luminaire control
- Zero-crossing circuitry
- UL 2043 Plenum Rated
- Companion Add-A-Relay provides additional capacity (OSA20-R00)
- NAFTA compliant
- Dry contact relay for combined sensor control of lighting and heating/air conditioning
- Dry contact for designing controlled closure
- Form A relay for interface to BAS/BMS

### OSP20-RDH

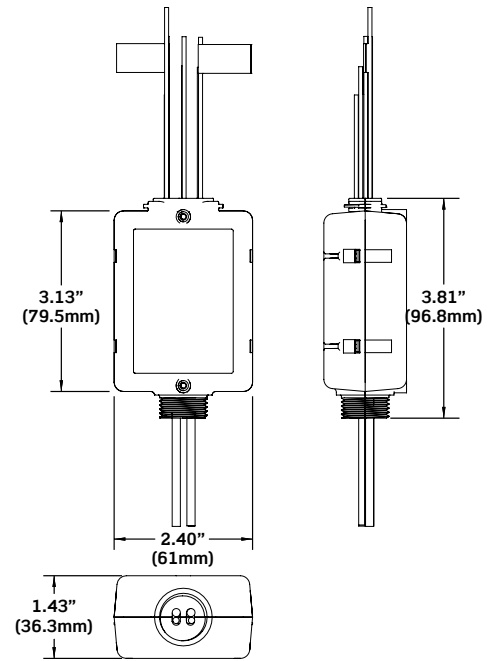
Includes the same features as the OSP15-R30 plus:

- Auto-ON and manual-ON inputs for occupancy sensors
- Hold-ON input—when activated, unit is always ON regardless of any other input
- Hold-OFF input—when activated, unit is always OFF regardless of any other input
- Local inputs for momentary or maintained dry contact low voltage switching
- Robust mechanical latching relay designed to perform as a Form C normally closed device
- Increased power supply output to 255mA
- Upon loss of power, latching relay maintains current state (closed or open)
- H.I.S. >(High In-rush Stability)
- Heavy-duty zero-crossing circuitry
- Robust mechanical latching relay

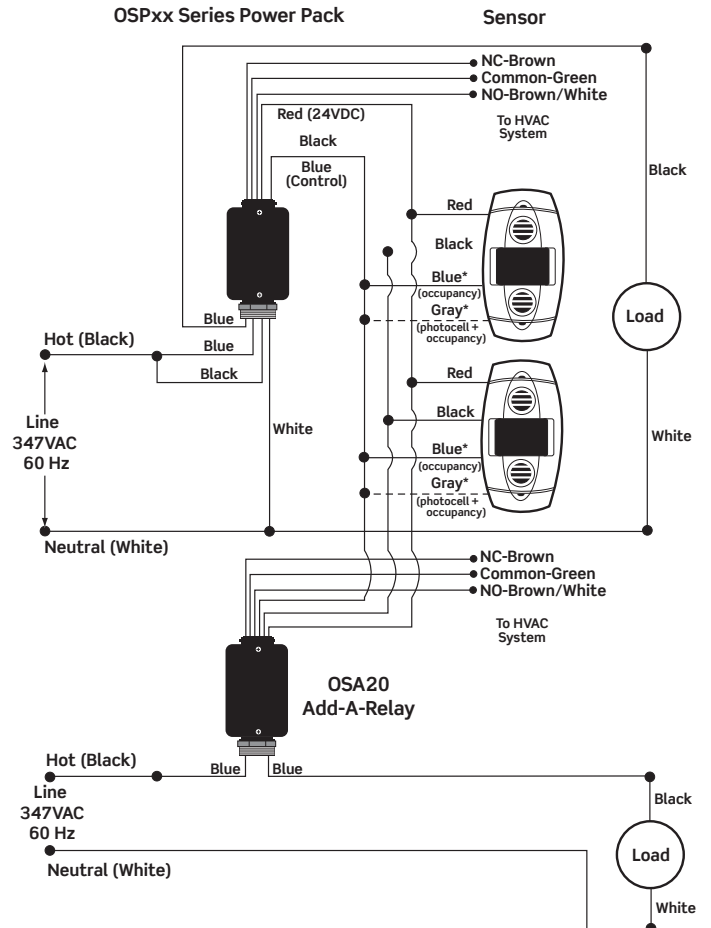
### OSA20-R00

- 15A relay can be added to any OSP20 power pack for flexible design
- Provides cost-conscious design flexibility
- Inexpensive solution for mixed voltage lighting design
- Used for expanding circuit switching capacity
- Use OSP20 power packs for emergency lighting circuits and OSA20 Add-A-Relays for inexpensive control of normal lighting

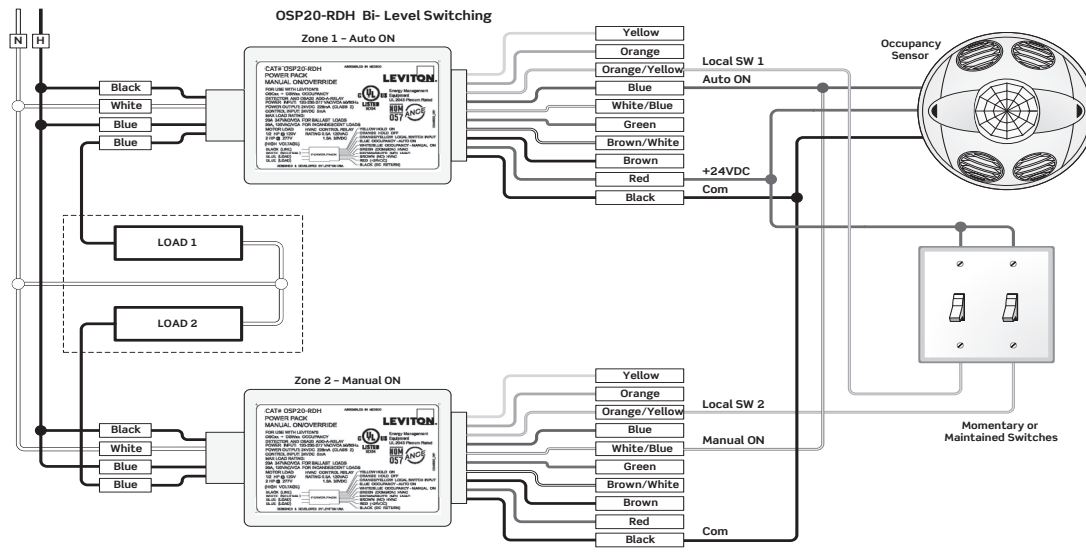
## Dimensions



## Wiring Diagram



## OSP20 RDH Bi-Level Switching



## Wiring Designations

Signal Type	Color	Gauge
<b>Line Voltage</b>		
Line 120-230-277VAC (OSP20-RDH)	Black	18AWG
Neutral	White	18AWG
Load	Blue	14AWG
Load	Blue	14AWG
<b>Class 2 Wires</b>		
Power (24VDC)	Red	22AWG
DC Return	Black	22AWG
Occupancy Auto-ON	Blue	22AWG
Occupancy Manual-ON	Blue/White	22AWG
Hold-ON	Yellow	22AWG
Hold-OFF	Orange	22AWG
Local Switch Input	Yellow/Orange	22AWG

Signal Type	Color	Gauge
<b>HVAC Wires</b>		
Dry Contact Common	Green	22AWG
Dry Contact NO (Normally Open)	Brown/White	22AWG
Dry Contact NC (Normally Closed)	Brown	22AWG

- All wires rated at 221°F (105°C), 600V insulation
- Class 2 wires are Teflon jacketed, for plenum applications
- Dry contact wiring is Class 1 and Class 2 rated

## Power Pack Capacity Formula

Leviton power packs can be used to provide power to one or more occupancy sensors. Since current consumptions of occupancy sensors may vary, the best way to ensure you order the correct number of power packs and add-a-relays is by using this formula:

$$\begin{array}{|c|} \hline \text{\# of sensor} \\ \text{Model As} \\ \times \\ \text{Sensor A current} \\ \text{consumption rating} \\ \hline \end{array}
 +
 \begin{array}{|c|} \hline \text{\# of sensor} \\ \text{Model Bs} \\ \times \\ \text{Sensor B current} \\ \text{consumption rating} \\ \hline \end{array}
 +
 \begin{array}{|c|} \hline \text{\# of Add a} \\ \text{Relays} \\ \times \\ \text{50mA} \\ \hline \end{array}
 < 225\text{mA per power pack}$$

Description	Current Consumption
OSC04-I, OSC15-I, OSWHB-I, OSWLR-I, OSWVV-I	10-15mA
OSC05-M, OSC05-U, OSW12-U	25mA
OSC10-M, OSC10-U	35mA
OSC20-M, OSC20-U	30mA
OSA20-R Add-a-Relay	50mA
ODC0P-S0W Switching Photocell	10mA

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## Specifications

Electrical	
Line Voltage	120-230-277 VAC
Relay Rating	HVAC Relay: 0.5A @ 120VAC, 1.0A @ 30VDC
Environmental	
Operating Temperature	32 to 104°F (0 to 40°C)
Relative Humidity	0-90% non-condensing, for indoor use only
Other	
Construction	Case: High impact, UL rated plastic Relay: Class B (130°C) insulating material; silver alloy contacts Wire: 6" leads, 18AWG input; LV connections: 7" leads 22AWG
Dimensions	2.400"H x 3.811"W x 1.432"D (60.96mm x 96.80mm x 36.37mm)
Listings	UL/CUL Listed, FCC Certified, NOM Certified, Can be used to comply with IECC, ASHRAE 90.1 and 2022 Title 24, Part 6 Auto-ON, demand response, and occupancy/vacancy sensing
Color	Black
Warranty	Limited five-year warranty

## Ordering Information

Power Pack					
Cat. No.	Description	Power Input	Relay Rating	Control Input	Power Supply Output
OSP15-R30	Power Pack with Dry Contact Relay	347VAC, 60 Hz	15A fluorescent/LED @ 347V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	120mA, 24VDC
OSA20-R00 OSA20-RA0 (Made in USA with globally sourced components)	Add-A-Relay Unit with Dry Contact Relay	—	15A incandescent @ 120V, 20A fluorescent/LED @ 120V, 20A fluorescent/LED @ 277V, 15A fluorescent/LED @ 347V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	—
OSP20-RDH	Power Pack with Dry Contact Relay and Override Inputs for Occupancy Sensors	120-230-277VAC, 50/60 Hz	20A fluorescent/incandescent/LED @ 120V; 20A fluorescent/LED @ 277V; 1HP @ 120V, 2HP @ 240V; HVAC; .05A @ 120VAC, 1A @ 20VDC and @ 347V; 1HP @ 120V; 2HP @ 240; HVAC: 0.5A @ 120V, 1A @ 30VDC	5mA, 24VDC	225mA, 24VDC

Consult factory for 208, 220, and 240V models

### Leviton Manufacturing Co., Inc. Lighting & Controls

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Visit our Website at: [www.leviton.com/sensors](http://www.leviton.com/sensors)

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