LEVITON®

OSP/OSA Power Pack Series
Provides low voltage power and line voltage control for Leviton Occupancy Sensors

Containing both a 24VDC supply and a 20A line voltage relay for most models, 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.
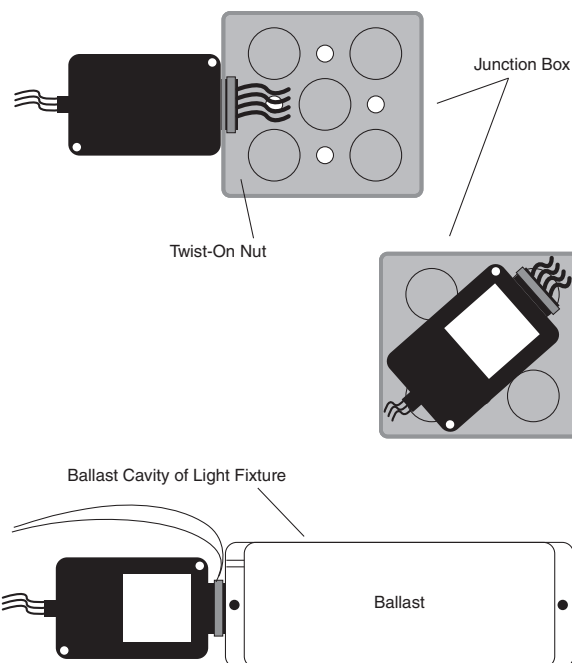
The internal relay can control up to 20A for a 120, 230, 277VAC or 347V ballast load and 20A for a 120VAC incandescent load. The OSP Power Pack Series is also used to supply power to the OSA Add-A-Relay model. The Power Pack conveniently mounts in a knockout hole of a standard junction box. The unit 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.

• Bi-level lighting applications
• Class Rooms
• Conference Rooms
• Offices
• Anywhere optimal lighting and energy savings are desired

EASY MOUNTING

Junction Box

Twist-On Nut

Ballast Cavity of Light Fixture

Ballast

OSP/OSA Power Pack Series

Leviton Mfg. Co., Inc. Lighting Management Systems

PRODUCT DATA

FEATURES
OSP20-0D0/OSP20-ND0

- Self-contained transformer and relay
- Internal voltage regulator – regulated 24VDC current, 150mA output
- Fast installation - mounts inside or outside junction box, or inside fluorescent ballast cavity with a simple twist-on nut
- Single or multiple luminaire control
- Heavy duty zero crossing circuitry
- UL 2043 Plenum Rated
- NAFTA/Buy America compliant (OSP20-ND0)

OSP20-RD0/OSP15-R30/OSP20-NH0
Includes the same features as the OSP20-0D0, plus:

- HVAC Relay Option
- Companion Add-A-Relay provides additional capacity (OSA20-R00)
- NAFTA/Buy America compliant (OSP20-NH0)

OSP20-RDH/OSP20-RNH
Includes the same features as the OSP20-RD0, plus:

- Auto-ON and Manual-ON inputs for occupancy sensors
- Retains current relay position at loss of power and power up to last state in "Manual-ON" mode
- Retains current relay position at loss of power and goes to activated state in "Auto-ON/Hold-ON" mode
- "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 switch
- NAFTA/Buy America compliant (OSP20-RNH)

SPECIFICATIONS

Construction: case: high impact, UL rated plastic; relay: Class B (130°C) insulating material; silver alloy contacts; switching power supply: 120-230-277VAC; wire: 6" leads, 18AWG input; LV connections: 7" leads 22 AWG

Dimensions: 2.400" H x 3.811" W x 1.432" D (60.96 mm x 96.80 mm x 36.37 mm)
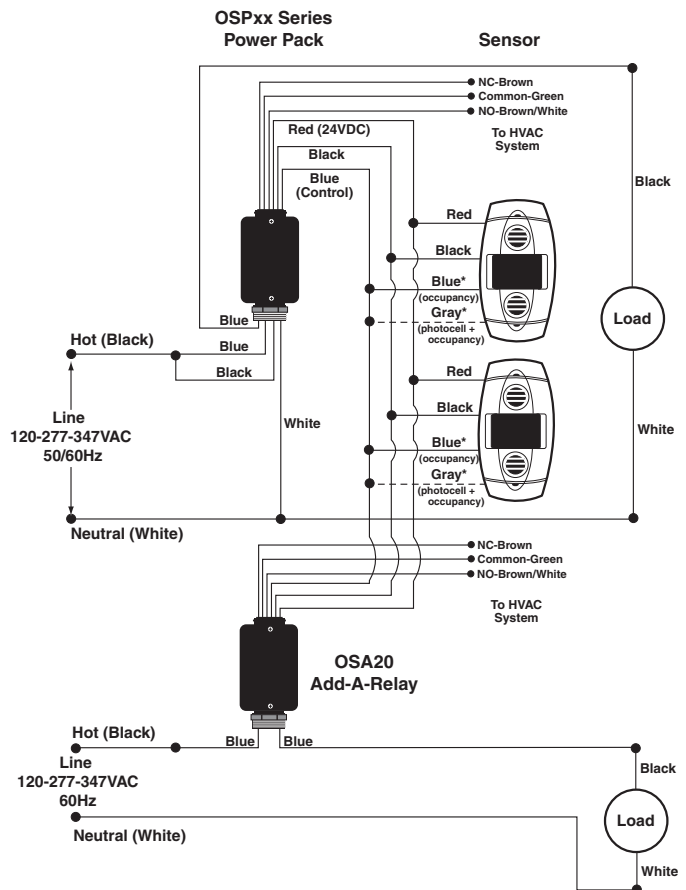
Color: Black

Operating Environment: 32°F to 104°F (0°C to 40°C); 0% to 90% non-condensing, relative humidity; for indoor use only
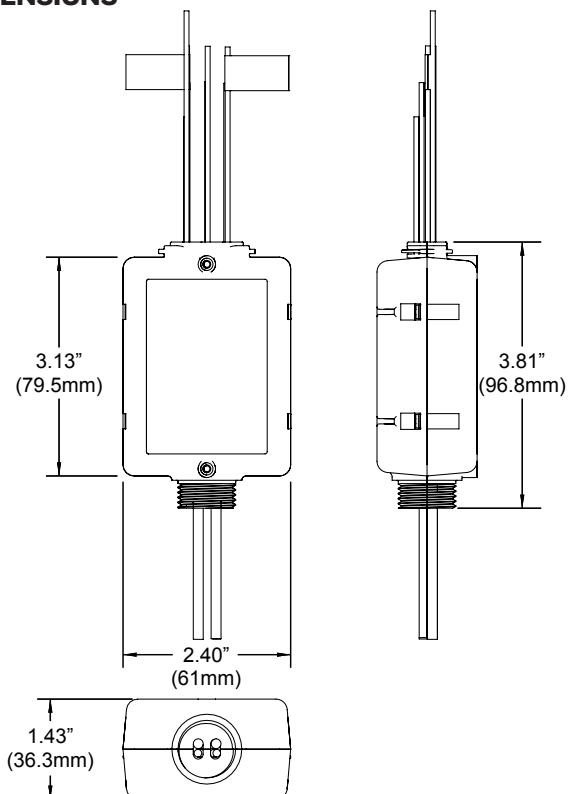
Warranty: Five years

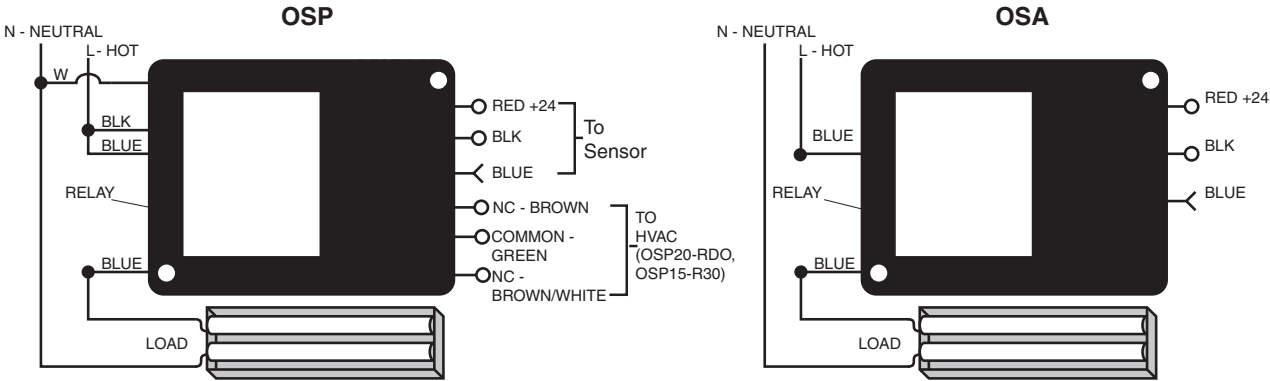**Listings:** UL/CUL Listed, FCC Certified, NOM Certified, and meets ASHRAE 90.1 requirements

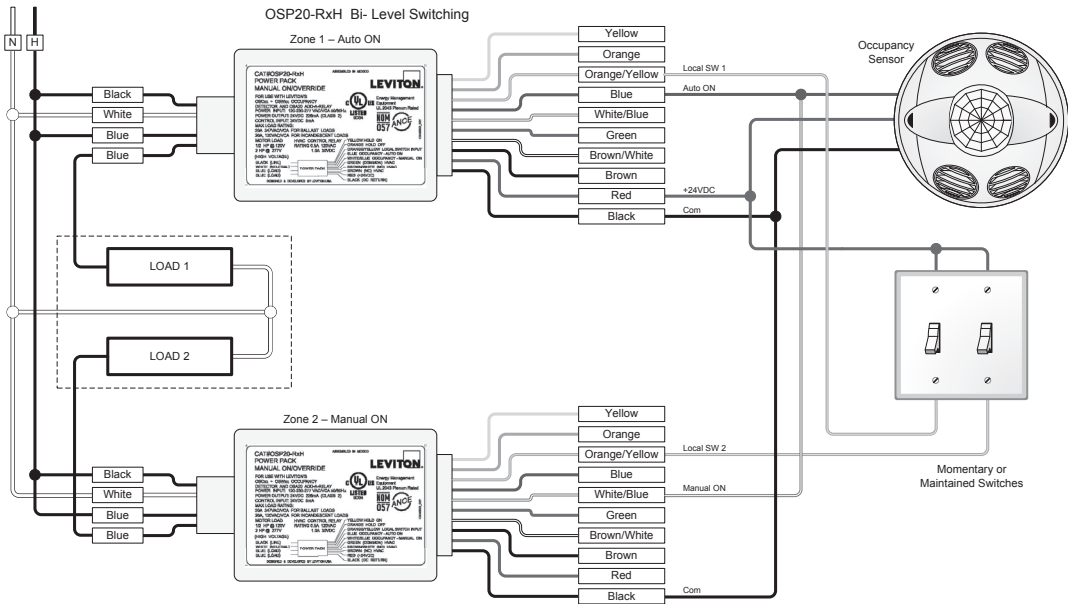**Optional:** HVAC Relay: 0.5A @ 120VAC, 1.0A @ 30VDC

DIMENSIONS

3.13" (79.5mm)

3.81" (96.8mm)

2.40" (61mm)

1.43" (36.3mm)

WIRING DIAGRAMS

OSP

N - NEUTRAL
L - HOT
W
BLK
BLUE
RELAY
BLUE
LOAD

RED +24
BLK
BLUE } To Sensor

NC - BROWN
COMMON - GREEN
NC - BROWN/WHITE } TO HVAC (OSP20-RDO, OSP15-R30)

OSA

N - NEUTRAL
L - HOT
BLUE
RELAY
BLUE
LOAD

RED +24
BLK
BLUE

OSP20-RXH Bi-Level Switching

OSP20-RxH Bi- Level Switching

Zone 1 – Auto ON

CAT#OSP20-RxH POWER PACK MANUAL ON/OVERRIDE

Black
White
Blue
Blue

Yellow
Orange
Orange/Yellow
Blue — Auto ON
White/Blue
Green
Brown/White
Brown
Red — +24VDC
Black — Com

Local SW 1

LOAD 1

LOAD 2

Occupancy Sensor

Zone 2 – Manual ON

CAT#OSP20-RxH POWER PACK MANUAL ON/OVERRIDE

Black
White
Blue
Blue

Yellow
Orange
Orange/Yellow
Blue
White/Blue — Manual ON
Green
Brown/White
Brown
Red
Black — Com

Local SW 2

Momentary or Maintained Switches

WIRING DESIGNATIONS

SIGNAL TYPE	COLOR	GAUGE
LINE VOLTAGE WIRES		
Line 120-277V (OSP20-Rx0)	Black	18AWG
Neutral	White	18AWG
Load	Blue	14AWG
Load	Blue	14AWG
CLASS 2 WIRES		
Power (24VDC)	Red	22AWG
DC Return	Black	22AWG
Occupancy Auto-ON	Blue	22AWG
Occupancy Manual-ON	Blue/White	22AWG
HoldON	Yellow	22AWG
HoldOFF	Orange	22AWG
Local Switch Input	Yellow/Orange	22AWG
HVAC WIRES		
HVAC Common	Green	22AWG
HVAC NO (Normally Open)	Brown/White	22AWG
HVAC NC (Normally Closed)	Brown	22AWG

• All wires rated at 105°C, 600V insulation.
• Class 2 wires are Teflon jacketed, for plenum applications.
• HVAC wiring is Class 1 and Class 2 rated.

PRODUCT DATA

LEVITON®

ORDERING INFORMATION

DESCRIPTION	CAT. NO.	POWER INPUT	RELAY RATING	CONTROL INPUT	POWER SUPPLY OUTPUT
Power Pack	OSP20-0D0 (OSP20-ND0 NAFTA)	120-230-277VAC, 50/60 Hz	20A fluorescent/incandescent @ 120V, 20A fluorescent @ 230-277V; 1HP @ 120V, 2HP @ 240V	5mA, 24VDC	150mA, 24VDC
Power Pack with HVAC Relay	OSP20-RD0 (OSP20-NH0 NAFTA)	120-230-277VAC, 50/60 Hz	20A fluorescent/incandescent @ 120V, 20A fluorescent @ 277V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	5mA, 24VDC
Power Pack with HVAC Relay	OSP15-R30	347VAC, 60 Hz	15A fluorescent @ 347V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	120mA, 24VDC
Add-A-Relay Unit with HVAC Relay	OSA20-R00 (OSA20-RN0 NAFTA)	—	15A incandescent @ 120V, 20A fluorescent @ 120V, 20A fluorescent @ 277V, 15A fluorescent @ 347V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	—
Power Pack with HVAC Relay with Auto-ON and Manual-ON Inputs for Occupancy Sensors	OSP20-RDH (OSP20-RNH NAFTA)	120-230-277VAC, 50/60Hz	20A incandescent @ 120V, 20A fluorescent @ 120-230-277/347VAC; 1/2HP @ 120V, 2HP @ 240-277V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	255mA, 24VDC

* Consult factory for 208, 220, and 240V models.

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:

$$\left(\begin{array}{c}\text{\# of sensor Model As} \\ \times \\ \text{Sensor A current consumption rating}\end{array}\right) + \left(\begin{array}{c}\text{\# of sensor Model Bs} \\ \times \\ \text{Sensor B current consumption rating}\end{array}\right) + \left(\begin{array}{c}\text{\# of Add a Relays} \\ \times \\ \text{50mA}\end{array}\right) < 150\text{mA per power pack}$$

OSP20-RDH

DESCRIPTION	CURRENT CONSUMPTION
OSC04-I, OSC15-I, OSWHB-I, OSWLR-I, OSWWV-I	20mA
OSC05-M, OSC05-U, OSW12-M	30mA
OSC10-M, OSC10-U	30mA
OSC20-M, OSC20-U	40mA
OSA20-R00 Add a Relay	50mA

LEVITON SPECIFICATION SUBMITTAL

JOB NAME:	CATALOG NUMBERS:
JOB NUMBER:	

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