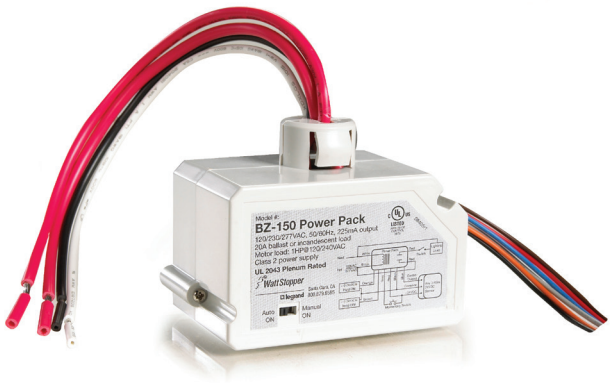
UNIVERSAL VOLTAGE POWER PACK

BZ-150



MODELS
BZ-150
SPECIFICATIONS & FEATURES
120/277VAC, 50/60Hz voltage input
Secondary voltage of 24VDC
Secondary output of 225 mA (with relay connected)
Low-Voltage leads are rated for 300 volts
For use with all low voltage fixture sensors
Operating Temperature 32-104° F (0-40° C)
Weight 5.6 oz (158.8 g)
UL and cUL listed
Indoor Use Only
5 year warranty
MATERIALS
UL-rated, gray plastic enclosure

PRODUCT OVERVIEW

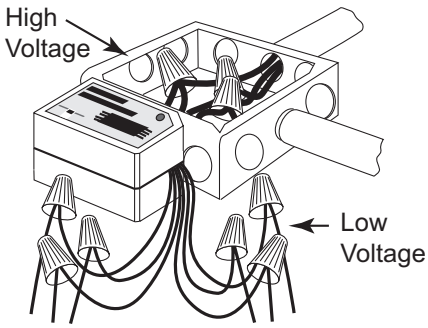
The BZ-150 power pack is the foundation for any low voltage lighting control system. The BZ-150 supplies low voltage power to occupancy sensors and other control devices, switching line voltage in response to signals from control devices. The BZ-150 power pack is attached to existing junction boxes or mounted into fixture wiring trays.

Low voltage wiring should use at least 22-gauge wire. High voltage connections should use at least 14-gauge. Always check local building codes. After initial wiring is complete, check wiring diagrams to verify the power pack is wired correctly. Improper wiring can cause damage to the power pack, lighting system, occupancy sensor and other control devices.

The BZ-150 power pack is attached to an existing junction box or mounted into a fixture wiring tray.

INSTALLING THE BZ-150

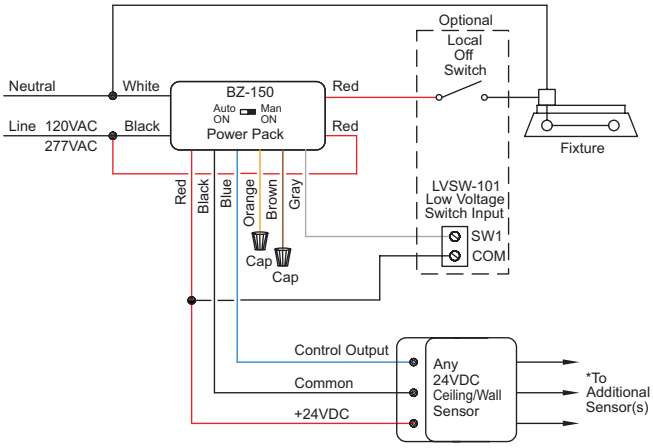
1. Make sure power has been turned off at the circuit breaker.
2. Connect wires as shown in the wiring diagrams on page 2, depending on application.
   At least three sensors can be powered by the power pack.



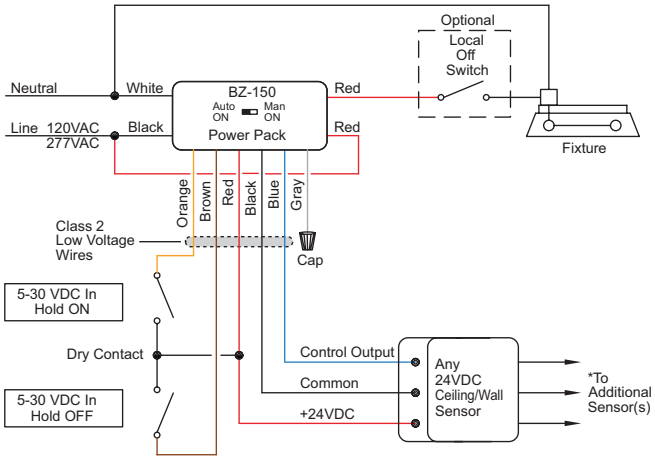
Installation Notes

1. Power packs should be installed in accordance with state, local and national electrical codes and requirements.
2. Power packs are designed to attach to existing or new electrical enclosures with 1/2 inch knockouts.
3. Most applications require UL listed, 18-22 AWG, 3-conductor, Class 2 cable for low voltage wiring. For plenum return ceilings, use UL listed plenum-approved cables.
4. The BZ-150 is a Class 2 Output Power Supply, suitable for parallel interconnection of up to 10 units maximum. This power pack is UL Listed for Interconnection of Power Sources in accordance with National Electric Code.

WIRING DIAGRAMS FOR BZ-150



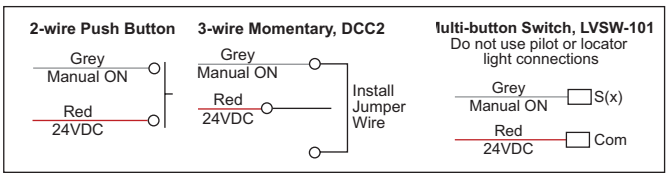
Single BZ-150 with one or more sensors



BZ-150 with Hold On or Hold Off

CONTROL MODE SEQUENCE OF OPERATION

With the BZ-150, the load can be turned ON and OFF automatically using an occupancy sensor input, a timer, panel or BAS input, and manually from an optional low voltage momentary switch. Use the Mode Switch to select either the Auto ON mode, or the Manual ON mode. Remove power from the BZ-150 when changing the switch setting, or cycle power to it after changing the setting.



Auto ON (Mode Switch LEFT - default)

The occupancy sensor input, Hold ON input and the optional momentary switch input can all be used turn ON the load.

When the load is turned OFF using the momentary switch, the BZ-150 does not turn it ON automatically until after the sensor time delay expires (e.g., as might be required for a presentation). Pressing the momentary switch before the sensor time delay expires turns ON the load.

When the occupancy sensor's time delay expires, the BZ-150 reverts to Auto ON mode and it turns ON the load with the next input from the occupancy sensor.

Manual ON (Mode Switch RIGHT)

Occupants must press the low voltage momentary switch to turn ON the load.

When the occupancy sensor is the only input keeping the load ON, the load turns OFF when the sensor's time delay expires. If the sensor input re-triggers within 30 seconds after the load turns OFF, the load turns ON again. After 30 seconds expire with no sensor input, press the momentary switch to turn ON the load.

Low Voltage Inputs

Four 12-24VDC input wires are provided to control the load relay. The inputs may be used in combination or individually, depending on the needs of the application. See the WIRING section for wiring information.

Maintained Inputs:

Control ON (Blue) – This input is intended for occupancy sensor input. Applying 12-24VDC closes the relay. Remove the voltage and the relay opens if no other input is holding it closed.

Hold ON (Orange) – This input is intended for timer or panel input. Applying 12-24VDC closes the relay. Remove the voltage and the relay opens if no other input is holding it closed. It overrides Control ON input.

Hold OFF (Brown) – This input is used for timer, panel, BAS or load shed input. Applying 12-24VDC opens the relay. Remove the voltage and the relay can accept any other input. It overrides Control ON and Hold ON inputs.

Momentary Input:

Manual ON/OFF (Grey) – This input is for a low voltage momentary switch. Applying 12-24VDC momentary input changes the relay to the opposite state. It overrides Control ON, Hold ON and Hold OFF inputs.

Bi-Level Control with Manual ON

The diagram to the right shows how to configure BZ-150s to provide bi-level lighting control with both Automatic ON and Manual ON features.

As shown, upon occupancy detection load A turns ON automatically. To turn ON load B the user must press momentary switch B. Both loads turn OFF automatically when the sensor time delay expires, or manually using switch A and B.

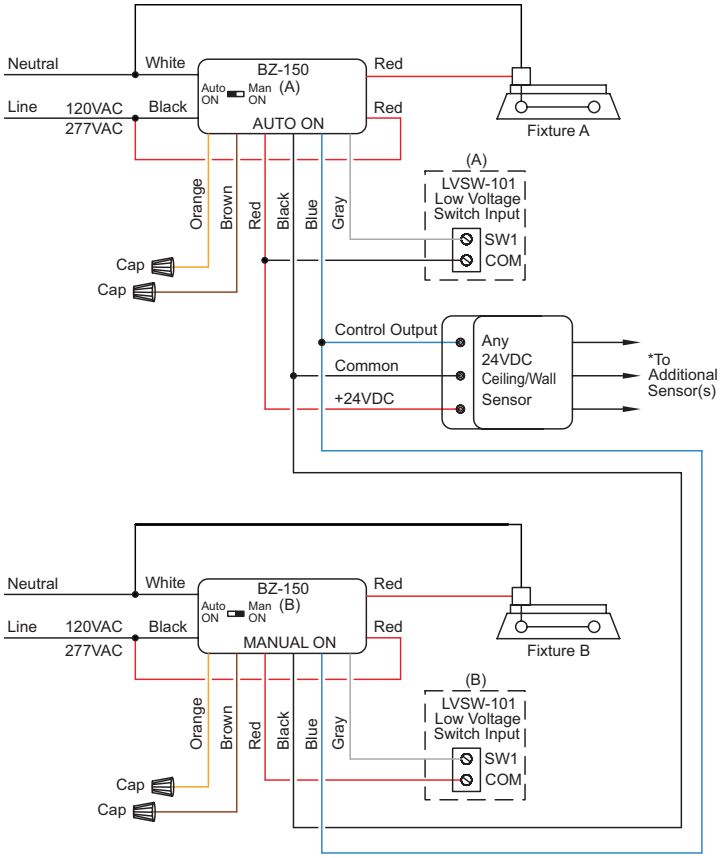
Over Current Protection

The BZ-150 contains built-in short circuit and thermal protection circuitry that shuts down the 24VDC output (low voltage red wire) to prevent permanent damage to the power pack. Removing the excess load from the output restores the BZ-150 to proper operation. Connect the excess load to another power pack.

LED Indicator

The LED on the reverse side of the BZ-150 indicates the following conditions:

- **LED OFF:** no power to the BZ-150, or the 24VDC output is shorted.
- **LED blinking continuously:** current output limit is exceeded (too many sensors are connected to the power pack); 24VDC output shut down.
- **LED ON, blinks once every 4 or 5 seconds:** the relay is closed (load ON).
- **LED ON continuously:** the relay is open (load OFF).



Bi-level lighting control

TROUBLESHOOTING

The lights came ON automatically after I deliberately turned them OFF for a presentation.

- The BZ-150 is set for the Auto ON Mode and the occupancy sensor time delay expired. The BZ-150 reverted to Auto ON and then motion was detected.
  - Consider increasing occupancy sensor sensitivity and/or time delay
  - Generate more motion during presentations.

The load does not turn ON with occupancy detection.

- Mode Switch is set to Manual ON.
- Hold OFF input is active.

The load does not turn OFF after sensor time delay expires.

- Hold ON input is active.

The load does not respond when I press the momentary switch.

- Check wiring.

The load does not come on automatically although the Mode Switch is set to Auto ON.

- Cycle power to the unit to reset operating mode to Auto ON. Mode Switch location was changed while the power pack was powered (line voltage).

The load comes on automatically with occupancy although the Mode Switch is set to Manual ON.

- Cycle power to the unit to reset operating mode to Manual ON. Mode Switch location was changed while the power pack was powered (line voltage).

ORDERING INFORMATION

Catalog #	Master Pack Details					Inner Pack Details				
	Master Pack Quantity	Case dimensions (inches)			Weight (pounds)	Inner Pack Quantity	Case dimensions (inches)			Weight (pounds)
		Length	Width	Height			Length	Width	Height	
BZ-150	40	12.6	8.7	12.6	17.3	20	12.3	12.2	4	4.1

Catalog #	Color	Description	Voltage
☐ BZ-150	White	Universal Voltage Power Pack	120/277 VAC, 50/60Hz 230/240 VAC (Single Phase), 50/60Hz
☐ BZ-150-U	White	Universal Voltage Power Pack; BAA/TAA Compliant*	

*Product is compliant with Buy American Act and Trade Agreement Act

Information supplied above is subject to change.
Harmonization code: 8538908080. Country of origin: China.

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