

BZ-200 Series Power Packs

Product Launch Manual

March, 2015



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1. Strategy

Why WattStopper?



- BZ-200 and BZ-250 Lighting and Plug Load Power Packs
 - Power packs are the heart of a load control system, and the 2nd Generation of BZ Power Packs are the most robust load control devices made by WattStopper. These power packs provide 20 Amp load control for both lighting and plug loads (BZ-250-347 rated for 15A).
- Major improvements and benefits:
 - NEW, more installation-friendly form factor
 - Load On/Off button for instant load activation
 - Rated for lighting and plug load control (UL244A & UL 508)
 - NEW mechanically latching relay in BZ-250 (120-277VAC and 120-347VAC) allows for added functionality

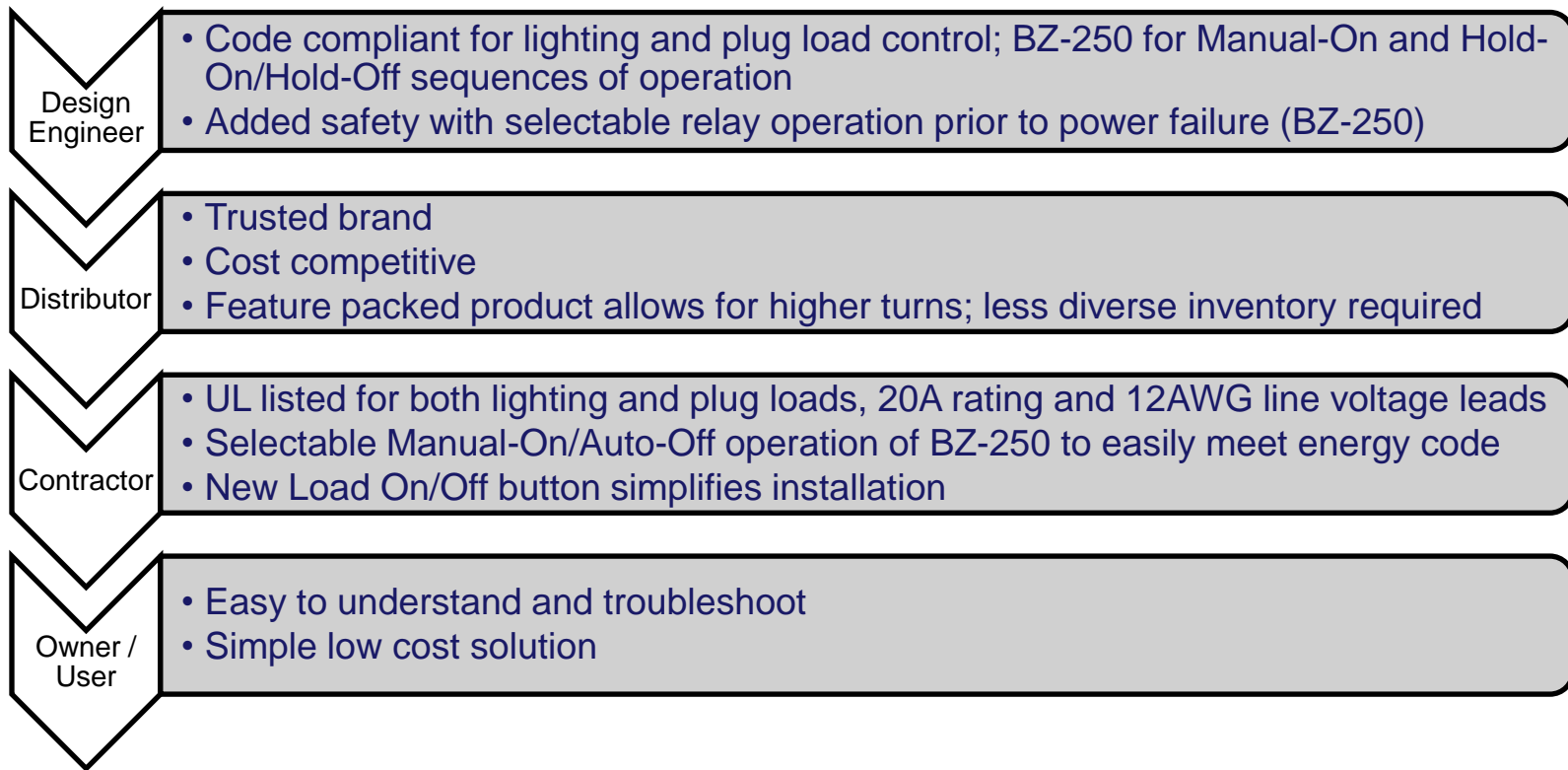
Why the BZ-200 Power Pack?

- New generation BZ-200 power packs have the same key features as the first generation BZ-50, including zero crossing and UL 2043 plenum rating. Advances ensure ultimate reliability and convenience:
 - Added load On/Off button similar to button on DLM room controller allows the contractor to activate the lighting or plug load immediately following installation
 - UL listings to control Plug Loads; Lighting Loads including Ballast, ELV, MLV, Incandescent, LED, E-Ballast and CFL; and Motor Loads
 - Tested to NEMA 410 for E-ballast and LED driver inrush current
 - UL listed for harsher operating conditions, including temperatures from -4° to 131°F (-20° to 55°C)
 - Improved short circuit and thermal protection to prevent catastrophic failure

Why the BZ-250 (BZ-250-347) Power Pack?

- New generation BZ-250 power packs have the same robust features as the BZ-200 with added Flex Control. Flex Control includes NEW integrated voltage detection circuit technology and features familiar to BZ-150 users including low voltage leads for Hold-On/Hold-Off as well as a choice of Manual-On or Auto-On for advanced sequences of operation. New in the BZ-250 are:
 - Load On/Off button similar to button on DLM room controller allows the contractor to activate the load immediately following installation
 - UL listings to control Plug Loads; Lighting Loads including Ballast, ELV, MLV, Incandescent, LED, E-Ballast and CFL; and Motor Loads
 - Tested to NEMA 410 for E-ballast and LED driver inrush current
 - UL listed for temperatures from -4° to 131°F (-20° to 55°C)
 - Improved short circuit and thermal protection to prevent catastrophic failure
 - Mechanical relay coupled with voltage detection circuit can be set to open, close or maintain state just prior to a power failure, so that lighting is in the preferred state (On, Off or previous/last state) when power is restored.

Benefits of WattStopper BZ-200 Series¹ Strategy Power Packs



Typical Applications

- Commercial offices
- Classrooms
- Conference rooms
- Occupancy controlled applications
- High bay applications

2. Product Presentation

Components Overview

BZ-200



BZ-250



BZ-200 Power Pack

Features & Benefits

- New, more installation friendly form factor
- Load On/Off button for manual load activation
- LED load status indicator
- 12AWG line voltage leads match 20A rated building wiring
- Threaded nipple with steel mounting nut for a secure installation in plenum applications
- 20 Amp rating for lighting and plug loads at 120-277VAC



BZ-200 Power Pack

Specifications

- Input/output voltage: 120-277VAC, 50/60Hz
- Secondary output: 24VDC, 225mA (with relay connected)
- Low-voltage leads rated for 300 volts
- UL-rated 94 V-O plastic enclosure
- Dimensions: 1.5" x 3" x 2.4" (37mm x 77mm x 61mm) H x W x D with .6" L (15mm) threaded nipple
- ROHS Compliant
- UL and cUL listed
- Five year warranty



BZ-250 Power Pack

Features & Benefits

- New, more installation friendly form factor
- Load On/Off button for manual load activation
- Selectable relay operation; choice of On, Off or current state prior to power loss
- Auto-On or Manual-On operation for code compliance
- 12AWG line voltage leads match 20A rated building wiring
- Threaded nipple with steel mounting nut for a secure installation in plenum applications
- 20 Amp rating for lighting and plug loads at 120-277VAC



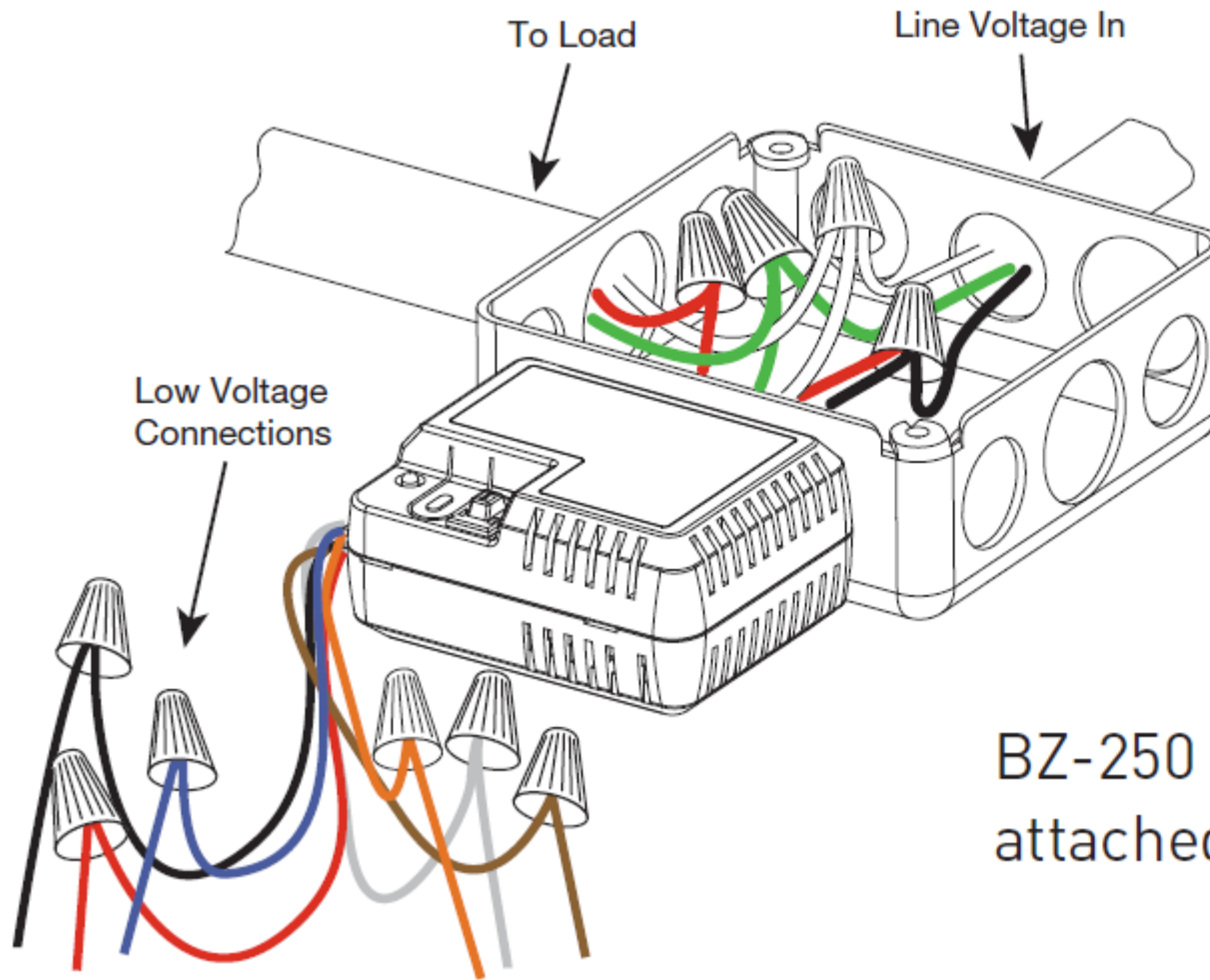
BZ-250 Power Pack

Specifications

- Input/output voltage: 120-277VAC or 120-347VAC, 50/60Hz
- Secondary output: 24VDC, 225mA
- Low-voltage leads rated for 300 volts
- UL-rated 94 V-O plastic enclosure
- Dimensions: 1.5" x 3" x 2.4" (37mm x 77mm x 61mm) H x W x D with .6" L (15mm) threaded nipple
- ROHS Compliant
- UL and CUL listed
- Five year warranty



BZ-200 Series Installation



BZ-250 power pack attached to J-box

Part numbers and pricing

Catalog No.	Description	UPC Code	List Price
BZ-200	Power Pack, 120-277V,50/60Hz,24VDC, 225mA	754182938032	\$41.00
BZ-250	Power Pack, 120-277V,50/60Hz24VDC, 225mA, with Auto/ Man-On Control	754182938049	\$53.85
BZ-250-347	Power Pack, 120-347V,50/60Hz24VDC, 225mA, with Auto/ Man-On Control	754182938056	\$62.00
BZ-200-U	Power Pack, 120-277V,50/60Hz,24VDC, 225mA, Assembled in USA	754182938407	\$44.28
BZ-250-U	Power Pack, 120-277V,50/60Hz24VDC, 225mA, with Auto/ Man-On Control, Assembled in USA	754182938414	\$61.22

4. Marketing Materials

Literature

- ❖ Cut sheets
- ❖ Installation instructions
- ❖ Press release

SENSORS

Power Packs

C121

Lighting and Plug Load Power Pack (BZ-200)

SENSORS

Power Packs

C121

Product Overview

Description

The BZ-200 power pack switches connected loads On and Off in response to WattStopper low voltage occupancy sensors. It also provides up to 225mA at 24VDC to power the sensors. This device is constructed with environmentally friendly materials and is RoHS-compliant.

Operation

The BZ-200 consists of a high-efficiency switching power supply and a high-current relay. It has an input of 120-277VAC, 50/60Hz, and an integral On/Off button to switch out power, allowing the installer to quickly verify load operation. Following installation, the power pack turns the connected load On and Off automatically based on occupancy sensor input.

Plug Load

Increasingly, selected receptacles for this application require plug load control. The BZ-200 is installed for compliance with energy codes requiring return on investment.

Application

The BZ-200 power pack control lights and plug loads including pumps, fans, controls. It is designed for low-voltage occupancy sensors of up to 225mA including lighting packs may be sensors.

Features

- Efficient switching power supply provides optimized current output based on number of sensors
- Includes short circuit and thermal protection
- LED indicates status of relay or presence of low-voltage overcurrent
- UL 2043 plenum rated for cost-effective installation
- UL listed for control of lighting and plug loads
- Tested to 1000V and driver
- 1/2" threaded enclosure
- 12 AWG wires on the relay for 20A operation
- RoHS-compliant
- Qualifies for LEED certification

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SENSORS

Power Packs

C121

Lighting and Plug Load Flex Control Power Pack (BZ-250)

SENSORS

Power Packs

C121

Product Overview

Description

The BZ-250 power pack switches lighting or plug loads On and Off in response to low-voltage control inputs, and provides up to 225mA at 24VDC to power WattStopper occupancy sensors. It enables Manual-On sequences of operation, as well as Hold-On, Hold-Off and load shed applications when used with lighting control panels or building automation systems. This device is constructed with environmentally friendly materials and is RoHS-compliant.

Operation

The BZ-250 consists of a high-efficiency switching power supply and a high-current relay. It turns the connected load Off automatically based on occupancy sensor input, and On either automatically based on occupancy, or manually in response to a low-voltage momentary switch. The installer can select Auto-On or Manual-On operation via an actuator switch on the power pack. The BZ-250 also accepts low-voltage Hold-On and Hold-Off inputs for broader applications. The BZ-250 relay can be set to operate as normally open or normally closed.

Manual-On and Bi-Level Switching

Increasingly, energy codes require Manual-On control as well as bi-level switching, and the BZ-250 enables both of these requirements. When used with a low-voltage wall switch, Manual-On operation can be selected while in the field by using the conveniently located actuator switch on the front. Combining switches, power packs and sensors provides easy and cost-effective code-compliant solutions.

Applications

The BZ-250 can control lighting circuits, plug load circuits, self-contained air conditioners, pumps, fans, motors and mounted damper controls. Bi-level switching with Manual-On operation can be achieved using two low-voltage switches, a ceiling sensor and two BZ-250s (one set to Auto-On and one set to Manual-On). The Hold-On input is ideal for overriding an occupancy sensor to force lighting On during normal business hours in retail and commercial facilities. After hours, a time clock signals the BZ-250 to cancel the Hold-On mode, allowing the sensor to resume control. The Hold-Off input can be used for load shedding or security systems.

Features

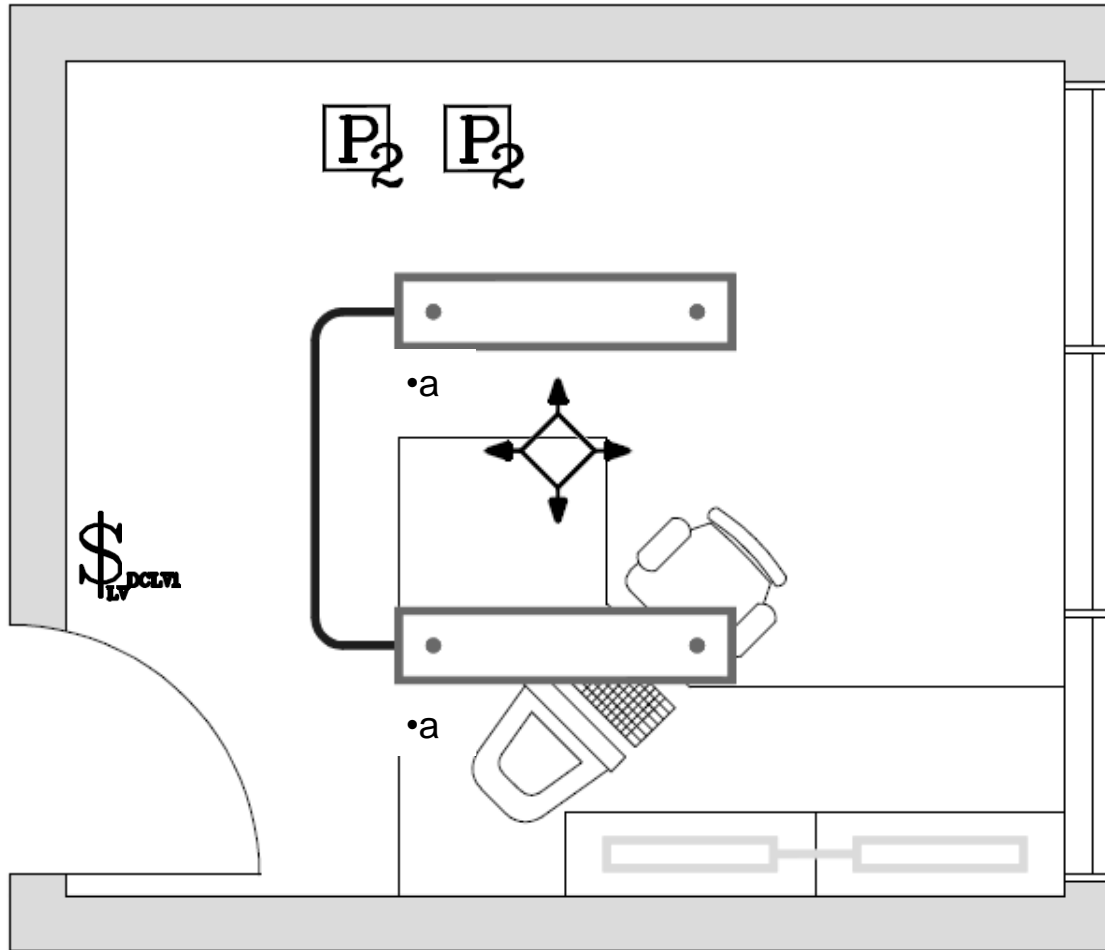
- Hold-On and Hold-Off inputs integrate with BAS, lighting control panels & other building systems
- Integrates with low-voltage momentary switch to control any 24VDC occupancy sensor
- Field-selectable Auto-On or Manual-On operation
- Efficient switching power supply provides optimized current output based on number of sensors
- Includes short circuit and thermal protection
- LED indicates status of relay or presence of low-voltage overcurrent
- UL 2043 plenum rated for cost-effective installation
- UL listed for control of lighting and plug loads
- Tested to NEMA 410 criteria for electronic ballast and driver inrush current
- 1/2" threaded nipple attaches to standard electrical enclosures through 1/2" knockouts
- 12 AWG wires on the relay for 20A operation
- RoHS-compliant
- Qualifies for ARRA-funded public works projects

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5. Product Application Examples

Small Private Office – Title 24 (2013) & ASHRAE 90.1 2010 Compliant

- BZ-250
Lighting and Plug Load
- DT-305
Dual Tech Occ Sensor
- DCLV1
0-10V Low Voltage Wall Switch



- § 130.1(b): Multi-Level Controls (Dimming Req)
- § 130.1(a)1-3: Area Controls (Step Uniformity)
- § 130.1(c)5: Indoor Lighting Controls (Mandatory Sensors)
- § 130.5(d): Plug Loads

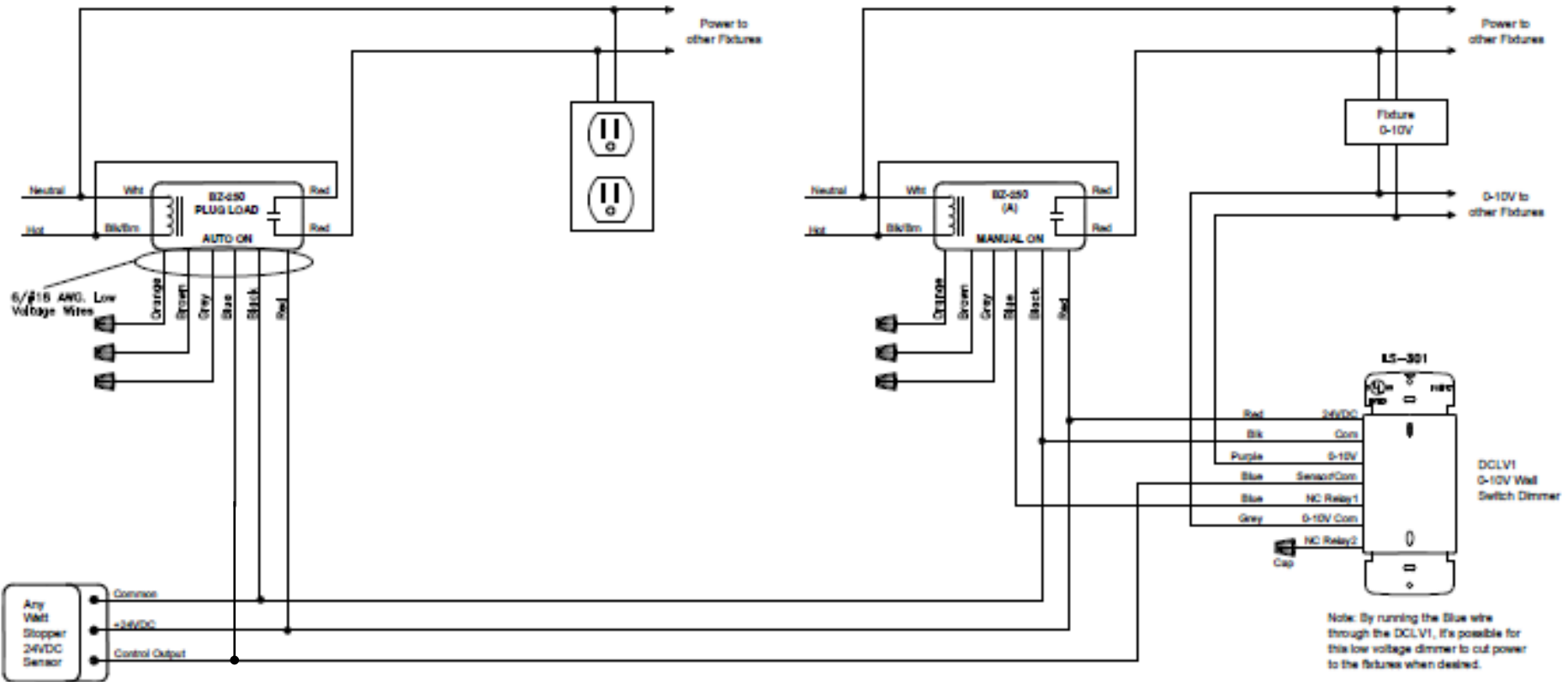
• Allowed LPD per Area Category Method: 1.0 W/sq. ft.

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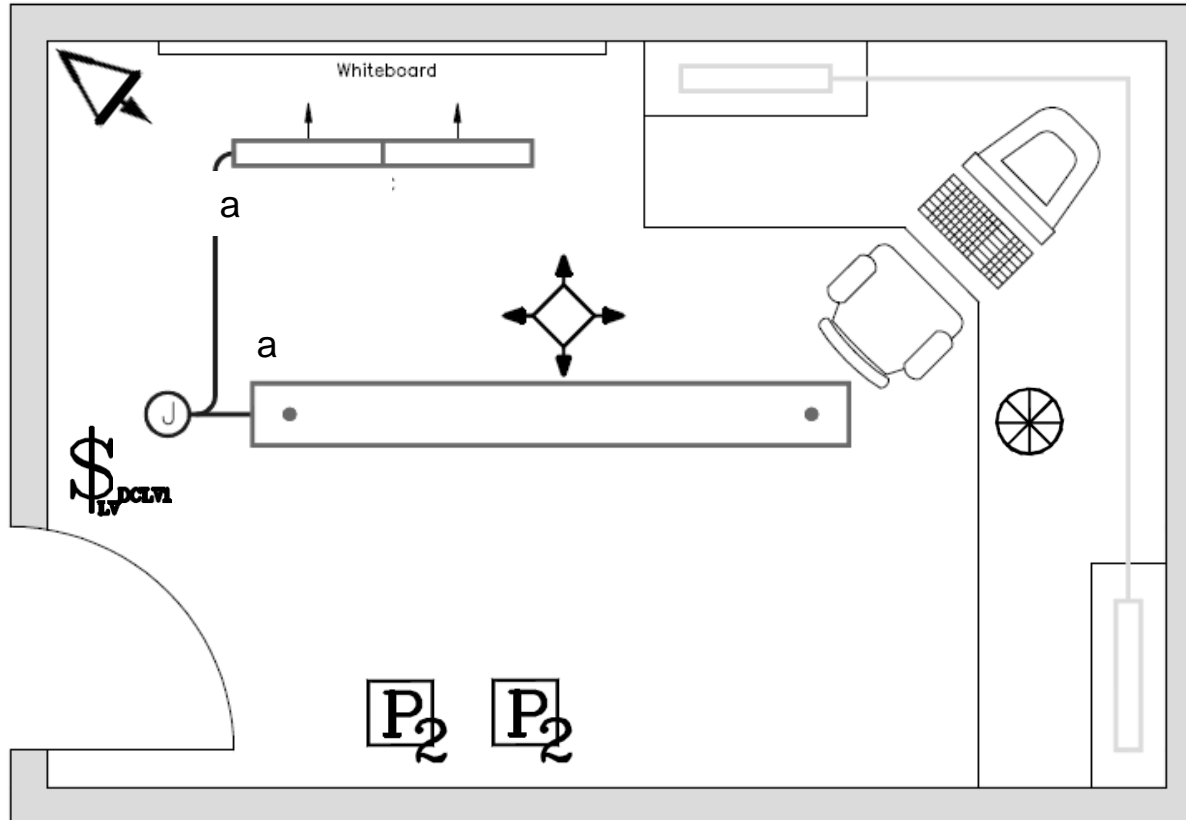
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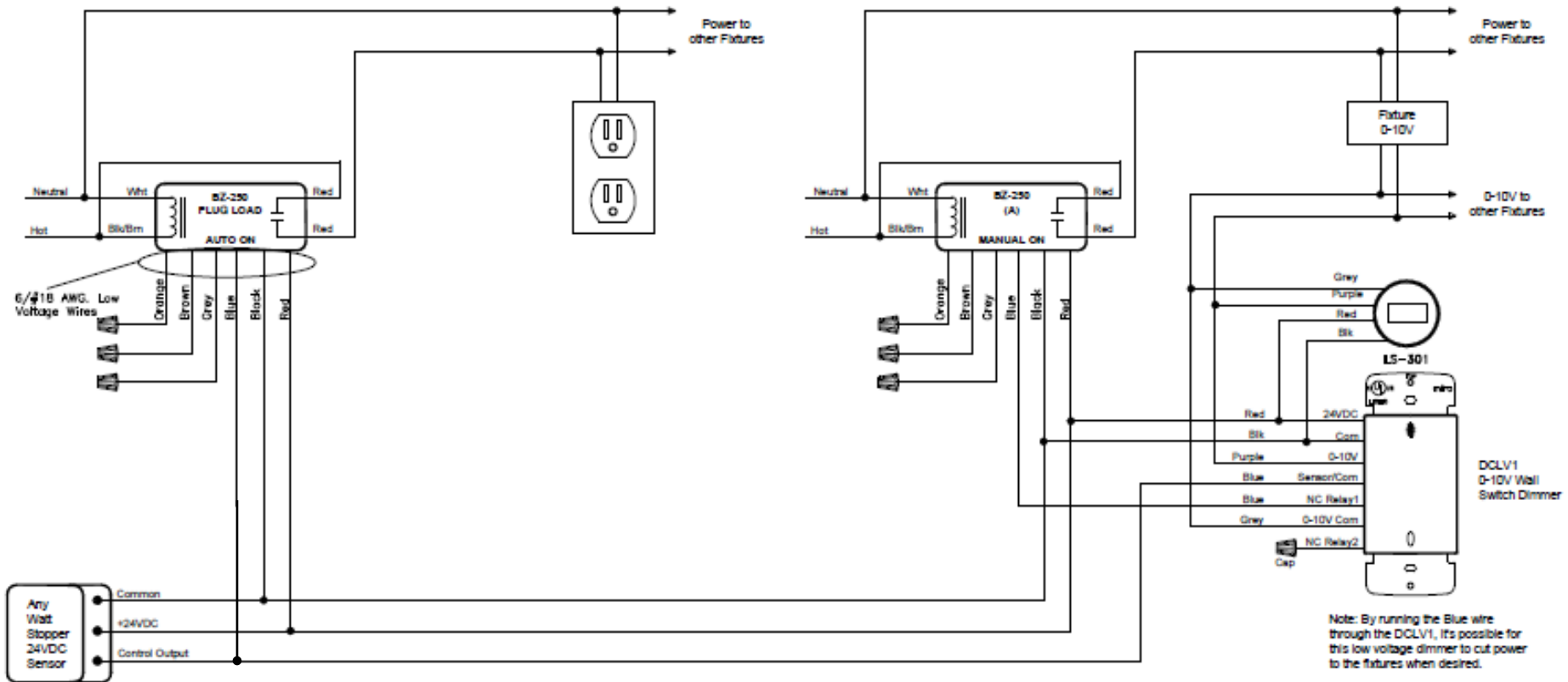
Large Private Office - Title 24 (2013) & ASHRAE 90.1 2010 Compliant

- BZ-250
Lighting and Plug Load
- DT-305
Dual Tech Occ Sensor
or
- DT-205
Dual Tech Occ Sensor
- DCLV1
0-10V Low Voltage Wall Switch
- LS-301
Daylighting Control



- § 130.1(b): Multi-Level Controls (Dimming Req)
- § 130.1(a)1-3: Area Controls (Step Uniformity)
- § 130.1(c)5: Indoor Lighting Controls (Mandatory Sensors)
- § 130.5(d): Plug Loads
- § 130.1 (d)2D: Daylight

Large Private Office - Title 24 (2013) & ASHRAE 90.1 2010 Compliant



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