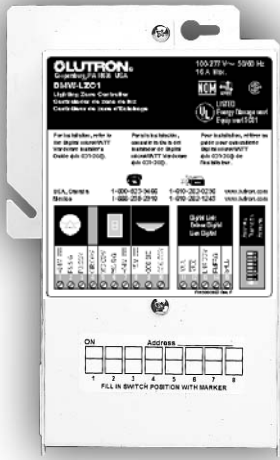


Lighting Zone Controller



LZC1 with cover closed



LZC1 with cover open

The lighting zone controller (LZC) intelligently manages lighting loads to minimize power consumption based on input from wall controls, occupant sensors, and/or daylight sensors. It works as part of a total system by communicating with a *Digital microWATT* router panel and server or *GRAFIK 7000P* processor. Each lighting zone controller includes an integrated current transformer to measure load power consumption.

The Lighting Zone Controller (LZC) works with:

- *Digital microWATT* lighting automation systems
- *GRAFIK 7000* centralized lighting control systems
- Lutron fluorescent dimming ballasts

Specifications

Power

- Input power: 100-277 V \sim , 50/60 Hz
- Controls a full 20 A circuit (16 A of continuous load)
- Model is UL, CSA, and/or NOM listed

Job Name:

Model Numbers:

Job Number:

Specifications (continued)

Features

- Provides direct control of a single 16 A circuit of Lutron Hi-Lume and ECO-10 3-wire fluorescent dimming ballasts
- Capable of switching 16 A of high in-rush lighting load such as magnetic fluorescent ballast, electronic fluorescent ballast, incandescent, magnetic low-voltage, electronic low-voltage and HID loads
- Capable of switching motor loads up to 1/3 HP @ 120 V \sim and 1/2 HP @ 277 V \sim
- Contains Lutron's patented Softswitch™ technology, which prevents arcing that is typically associated with high in-rush loads
- Supports single or multi-location wall controls for dimming and switching zones
- Accepts inputs from most 15- and 24-volt occupant sensors; can supply up to 60 mA to occupant sensors (40 mA at 100 V \sim , 50 Hz input)
- Can control light level due to variations in ambient light using a Lutron daylight sensor
- Provides an automatic 100-hour burn-in function to assist in the seasoning of new fluorescent lamps
- Includes an emergency contact closure to force lights on to a preset level
- Can be daisy-chained to provide a maximum of 63 lighting zone controllers per LZC link
- Wires to the LZC link of a *Digital microWATT* router panel (DMW-RP3) or the LZC link of a *GRAFIK 7000P* processor

The following features require a connection with a *Digital microWATT* or *GRAFIK 7000* system:

- Set minimum and maximum light levels
- Set unoccupied light level
- Set daylight sensor gain
- Start, stop, pause, or resume 100-hour burn-in mode
- Set occupant sensor timeout length
- Enable/disable and monitor daylight sensors, occupant sensors, and/or wall controls
- Measure power and energy usage
- Set unit's current mode (see below)

Unit Modes

- **Normal Working Hours:** This mode is active when no other mode is active. In this mode the unit uses wall controls, daylight sensors, and occupancy sensors to determine the actual light level. These inputs are combined in order to save the maximum amount of energy.
- **Emergency:** In emergency mode the lights will go to the emergency light level and will not respond to any other control input. Emergency mode may be entered by opening the hardware emergency contact closure input at the router panel (in a *Digital microWATT* system), via the circuit selector SENSE connection (in a *GRAFIK 7000* system), or via software. See the Specification Submittal for the *GRAFIK 7000P* processor and/or the *Digital microWATT* router panel for additional wiring details.
- **Flash:** Flash mode changes the actual light level from the high end to the low end every 4 seconds. It is used for locating or troubleshooting a unit.

Job Name:	Model Numbers:
Job Number:	

Specifications (continued)

- **Afterhours:** In afterhours mode, the units will wait a user-configurable period of time (warning time). After the warning time, the lights will flash a user-configurable number of times. Then, the lights will dim to low end for a user-settable period of time (off delay). Finally, the lights will turn off. The lights will go on and the cycle will repeat if the space becomes occupied or the light level is changed via the wall control or via the software.
- **Burn-In:** Burn-in mode sets the lights to the maximum level for a period of 100 hours, after which burn-in mode will automatically end. During this time the lights can only be turned on and off via wall control, timeclock, or through the software. Burn-in mode can be manually started, paused, resumed, or stopped. This mode should be run any time new dimmable fluorescent lamps are installed.
- **Non-Dim:** This mode activates features for units that cannot be dimmed. These features are: during flash mode, lights will turn on and off; when daylight sensor cutback reaches 25%, the lights will turn off; and if load shed is greater than zero, the lights will turn off. This mode can be used in conjunction with any other mode.

Address Switch

- Orientation of switches indicates the lighting zone controller address
- The largest acceptable address is 63

Environment

- Temperature: 32° - 104° F (0° - 40° C)
- Relative humidity: < 90% non-condensing
- For indoor use only

Switchable Load Types

- Incandescent (tungsten/halogen) (16 A maximum per circuit)
- Magnetic low-voltage transformer (16 A maximum per circuit)
- Electronic low-voltage transformer (16 A maximum per circuit)
- Neon/cold cathode (16 A maximum per circuit)
- Magnetic and electronic fluorescent ballasts (16 A maximum per circuit)
- HID (16 A maximum per circuit)
- Motor loads (1/3 HP @ 120 V~, 1/2 HP @ 277 V~ maximum per circuit)

Dimmable Load Types

- Lutron 3-wire phase controlled fluorescent dimming ballasts

Dimmable Load Types Requiring an Interface (120 V~ applications only)

- Lutron Tu-Wire® fluorescent dimming ballasts
- Incandescent (tungsten/halogen)
- Magnetic low-voltage transformer
- Electronic low-voltage transformer
- Neon/cold cathode

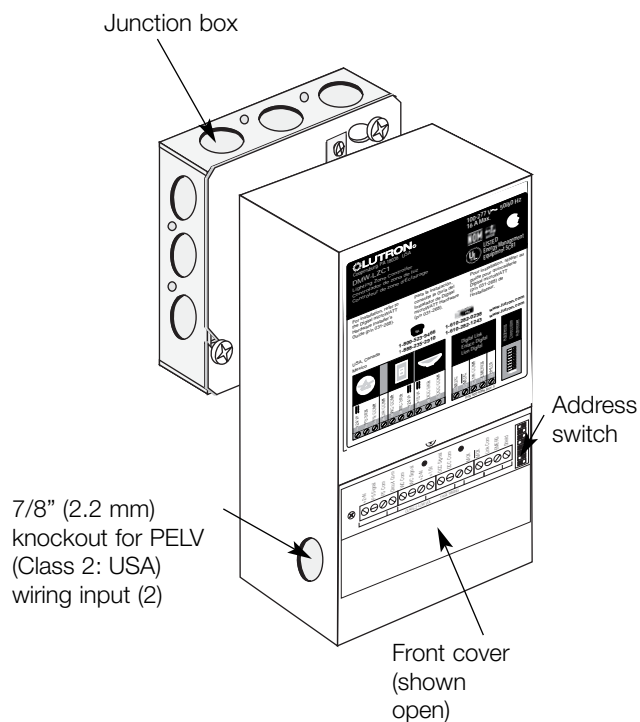
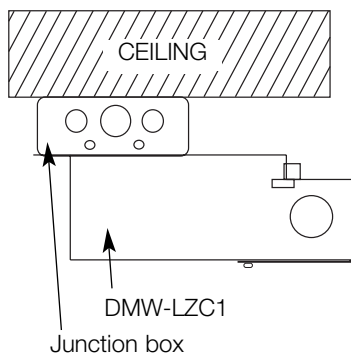
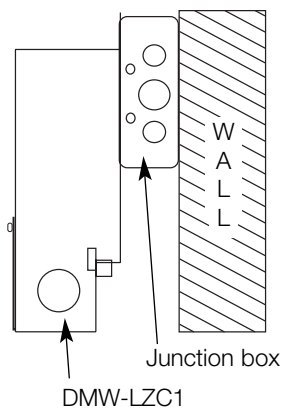
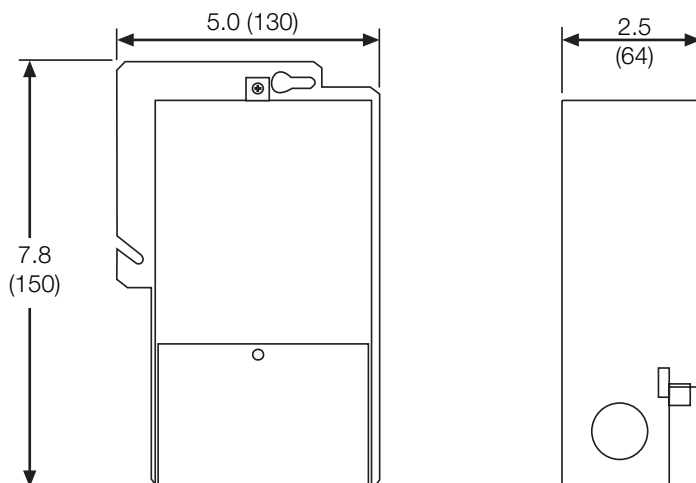
Job Name:	Model Numbers:
Job Number:	

Mounting

- Mount the DMW-LZC1 onto a 4 x 4 in. (102 x 102 mm) standard (1900) junction box (not included, but available; Lutron part number 241-496)
- Mount the unit indoors with ambient temperature between 32° F and 104° F (0° C and 40° C) and humidity <90% (non-condensing)
- Mount on a vertical or horizontal surface (i.e., ceiling); all power wire connections will be made in the junction box; all PELV (Class 2: USA) wire connections must be made within the front cover of the unit
- It is recommended to mount the unit above the ceiling at the entrance of the room. This will simplify locating the unit for future maintenance

Dimensions

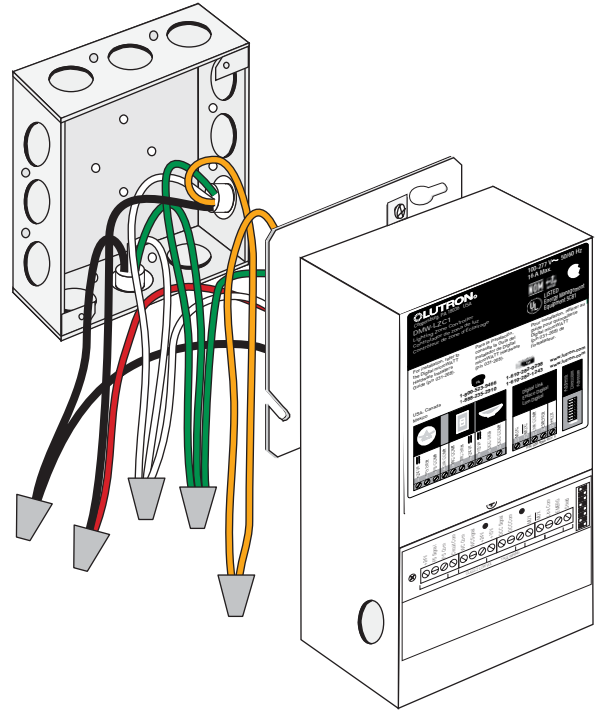
Dimensions are in inches (mm)



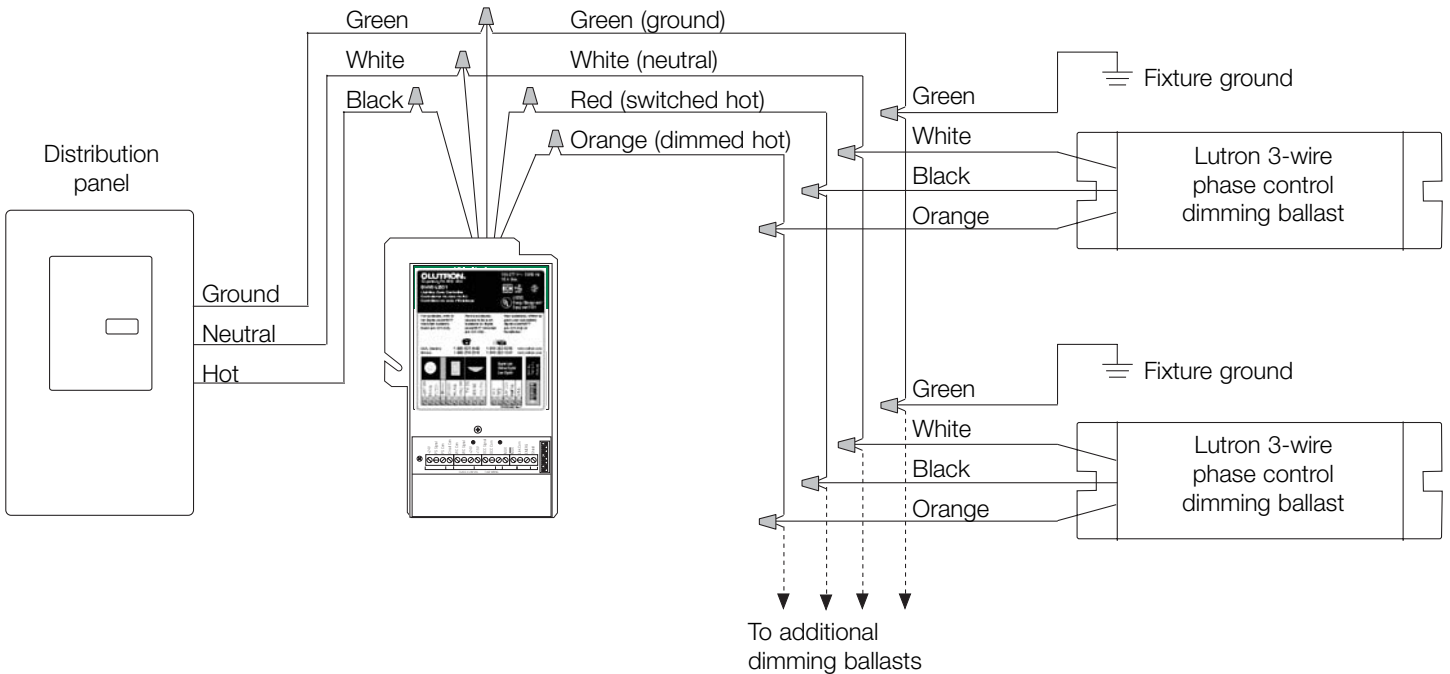
<p>Job Name:</p>	<p>Model Numbers:</p>
<p>Job Number:</p>	

Line Voltage Wiring: Lutron 3-Wire Dimming Ballasts

Connect the input feed wires and the output load wires to the lighting zone controller as indicated in the wiring diagrams below.



Colors indicated refer to the lighting zone controller and ballast wire colors

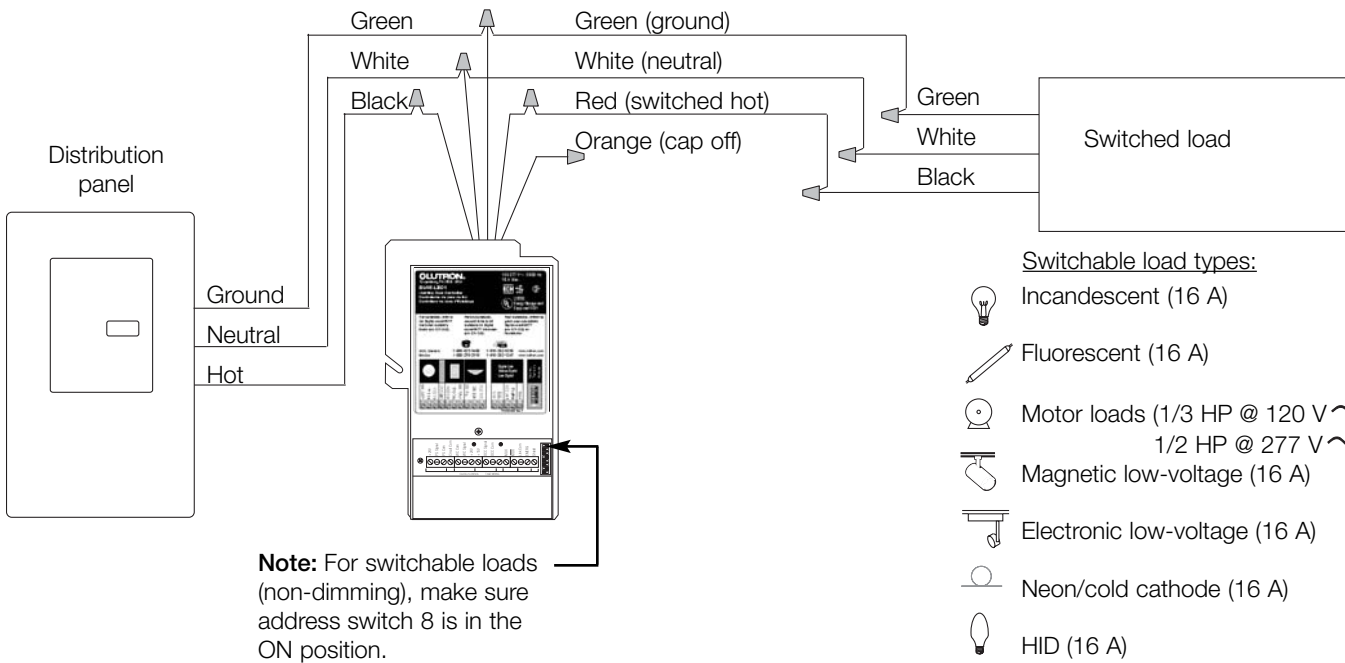


Job Name:	Model Numbers:
Job Number:	

Line Voltage Wiring: Switched Loads

Connect the input feed wires and the output load wires to the lighting zone controller as indicated in the wiring diagrams below.

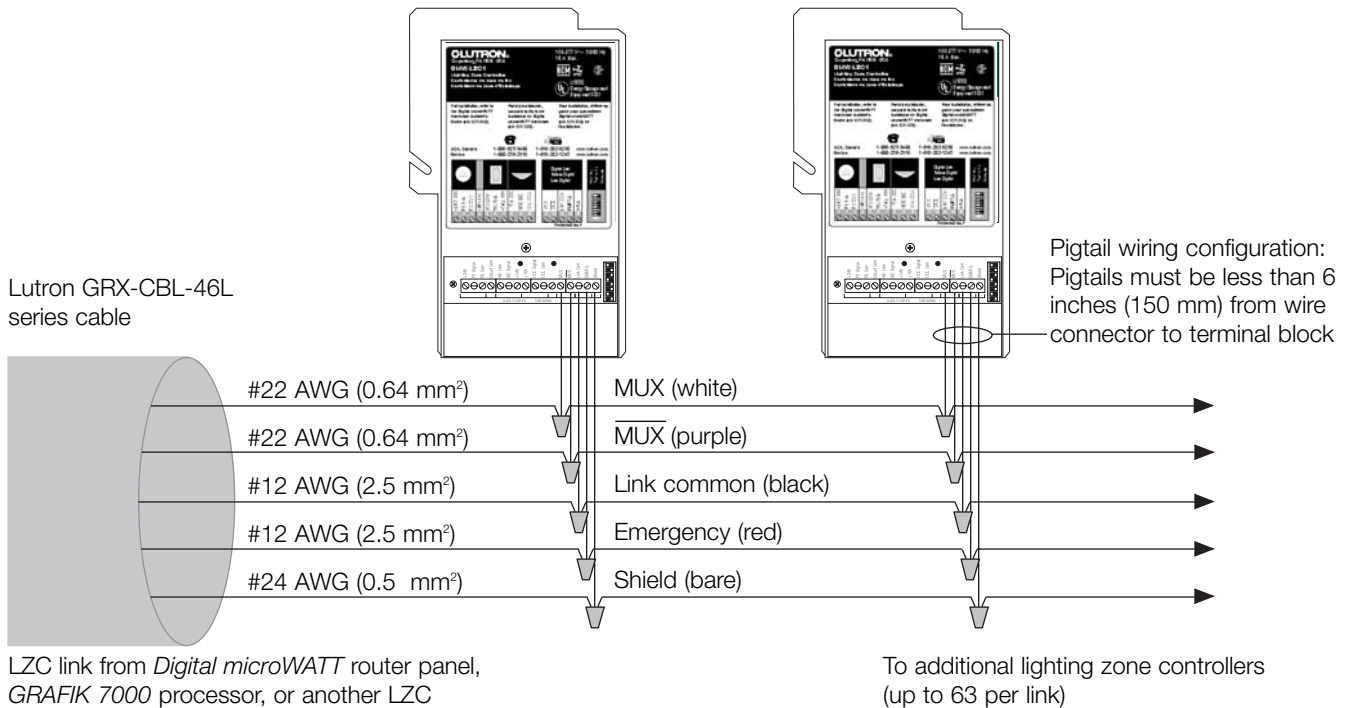
Colors indicated refer to the lighting zone controller wire colors



Job Name:	Model Numbers:
Job Number:	

Low-Voltage PELV (Class 2: USA) Wiring: LZC Link

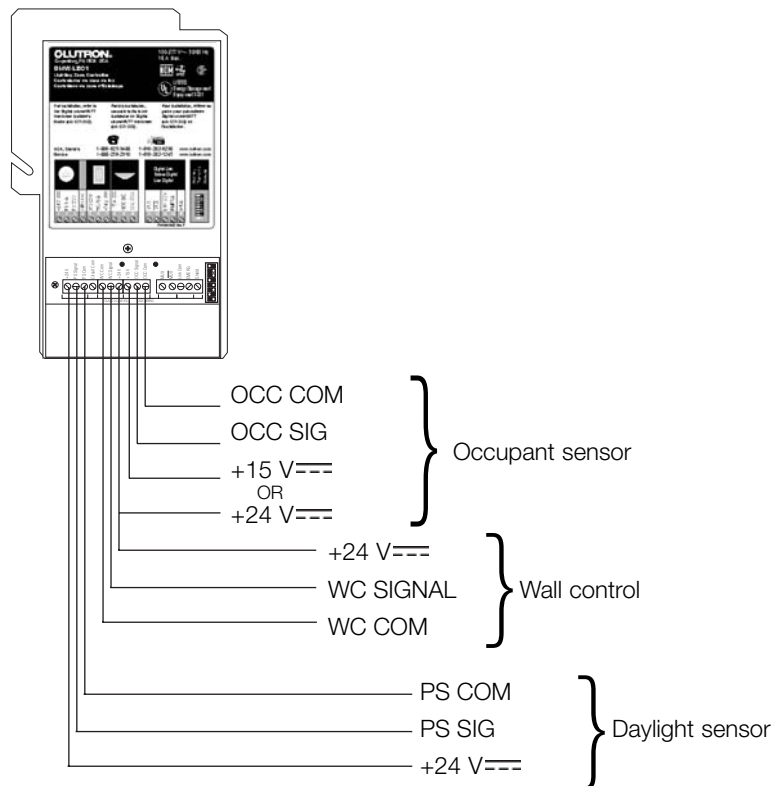
- Connect the PELV (Class 2: USA) lighting zone controller link (LZC link) wires to the lighting zone controller as indicated in the wiring diagram below.
- The lighting zone controller link wiring must be daisy-chained from one controller to another. Do not create T-taps longer than 6 inches (150 mm).



Job Name:	Model Numbers:
Job Number:	

Low-Voltage PELV (Class 2: USA) Wiring: Wall Controls and Sensors

- Connect the PELV (Class 2: USA) wall controls and sensors as indicated in the wiring diagram below
- Controls and sensors can be located up to 250 feet (76 m) from lighting zone controllers, and are wired with #18 AWG (1.0 mm²) cable



Occupant Sensors

- Supports a maximum of three Lutron occupant sensors; additional occupant sensors can be added by using a PP-20 power pack (contact Lutron for details)
- A maximum of three lighting zone controllers can be controlled together by the same occupant sensor(s)
- Supports most third-party 24 VDC and 15 VDC occupant sensors, up to 60 mA (40 mA at 100 V_~, 50 Hz input)

Wall Controls

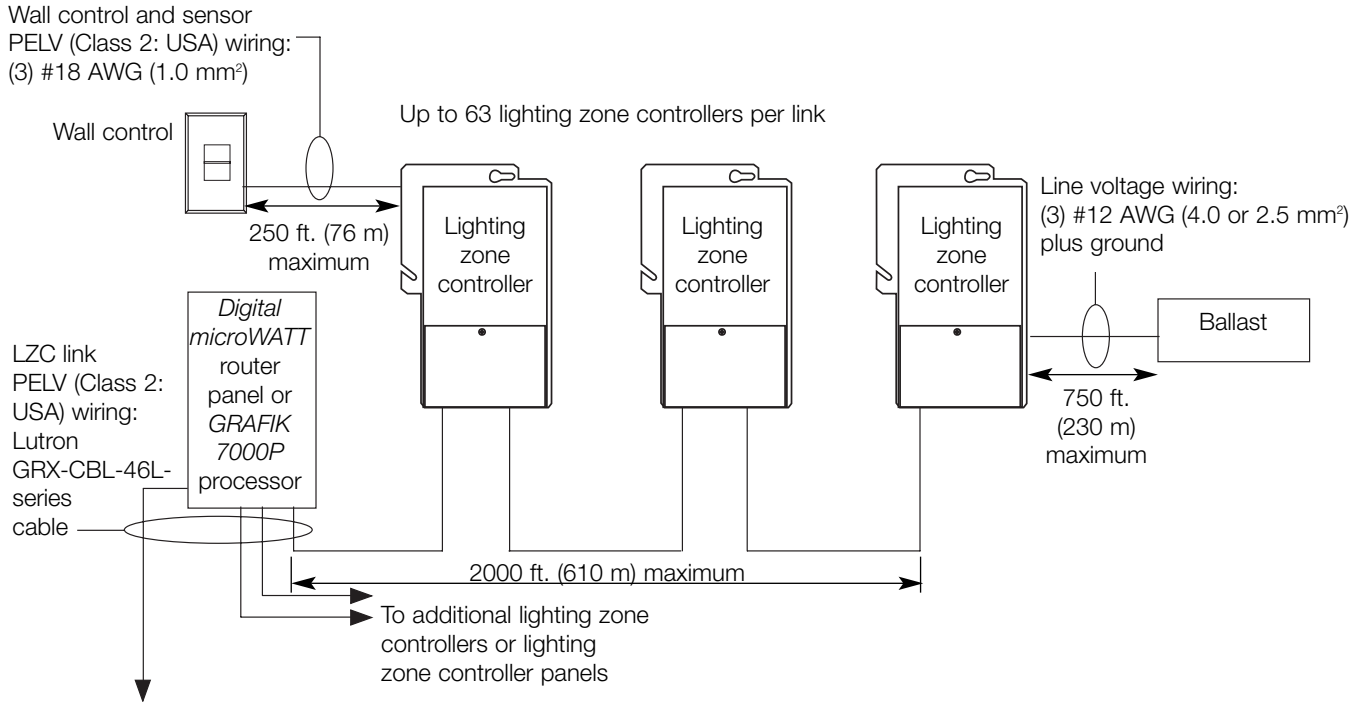
- Supports a maximum of one MW-V or MW-VETS with a maximum of nine VETS-P controls, **OR**
- Supports a maximum of three RX-MIC-MW controls
- A maximum of three lighting zone controllers can be controlled together by the same wall control(s)

Daylight Sensors

- Only one daylight sensor may be connected to a single lighting zone controller
- A single daylight sensor cannot be connected to more than one lighting zone controller

Job Name:	Model Numbers:
Job Number:	

System Wiring Diagram



To additional router panels and *Digital microWATT (DMW)* servers
OR
to *eLumen* manager

Maximum 21 *Digital microWATT* router panels per *Digital microWATT* server;
Maximum 32 *GRAFIK 7000P* processors per *eLumen* manager

See the Specification Submittal for the *GRAFIK 7000P* processor and/or the *Digital microWATT* router panel for system wiring details.

Maximum Wire Lengths		
From	To	Length
Router panel or 7000P processor	Last LZC panel on LZC link	2000 ft. (610 m)
DMW server	Last router panel on link	2000 ft. (610 m)
LZC panel	Wall control/occupant sensor/daylight sensor	250 ft. (76 m)
LZC panel	Last dimming ballast on circuit	750 ft. (230 m)

Job Name:	Model Numbers:
Job Number:	

Address Switch Setting Chart

- Address each lighting zone controller in the link as detailed below.
- For switching only (non-dimming) controllers, switch 8 must be in the ON position.
- Photocopy one page for each link.
- All switches in the OFF position takes the LZC offline.

Router No. _____
 Link No. _____
 Area Name _____



Unit Address	Switch Setting	Unit Address	Switch Setting	Unit Address	Switch Setting	Unit Address	Switch Setting
1		17		33		49	
2		18		34		50	
3		19		35		51	
4		20		36		52	
5		21		37		53	
6		22		38		54	
7		23		39		55	
8		24		40		56	
9		25		41		57	
10		26		42		58	
11		27		43		59	
12		28		44		60	
13		29		45		61	
14		30		46		62	
15		31		47		63	
16		32		48			

Note:

Lighting zone controllers are typically described in system drawings and documentation using their router panel or *GRAFIK 7000P* processor address, followed by their unit address. For example, 5A7 represents a lighting zone controller on router panel or *GRAFIK 7000P* processor 5, link A, unit address 7.

Job Name:	Model Numbers:
Job Number:	