

GPF Dimming Panels



GPF 8-24 Panels

DESCRIPTION

- Controls all Lutron 3-Wire Fluorescent Dimming Ballasts (Hi-Lume, ECO-10, and Compact SE).
- Provide power and dimming for up to 24 fluorescent circuits.

Models available for:

- 120V: 8 to 24 circuits.
- 277V: 8 to 16 circuits.
- 3Ø, 4W with main lugs.

GPF Dimming Panels work with:

- GRX-4000 Control Units
- GRAFIK 5000 and 6000 Systems
- GP Dimming Panels
- LP Dimming Panels
- XP Softswitch™ Panels

<p>JOB NAME:</p> <p>JOB NUMBER:</p>	<p>MODEL NUMBERS:</p>
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SPECIFICATIONS

Standards

- UL Listed.
- Complies with CSA or NOM (where appropriate).

Power

- Input power: 120V and 277V. All voltages 50/60Hz, phase-to-neutral.
- Branch Circuit Breakers: UL-rated thermal magnetic. Protected by bypass jumpers. AIC/RCB ratings (other ratings available):
 - 120V – 10,000
 - 277V – 14,000
- Lightning strike protection: Meets ANSI/IEEE standard 62.41-1980. Can withstand voltage surges of up to 6000V and current surges of up to 3000A.
- 10-year power failure memory: Automatically restores lighting to scene selected prior to power interruption.

Sources/Load Types

Operates all Lutron 3-wire Fluorescent Dimming Ballasts (Hi-Lume, ECO-10, and Compact SE) with a smooth continuous Square Law dimming curve.

Wiring

- Internal: Prewired by Lutron.
- System communications: Low-voltage Class 2 (PELV) wiring connects Dimming Panels to other components.
- Line (mains) voltage: Feed, load, and control circuit wiring only. No other wiring or assembly required.

Dimming Cards

- Panel current ratings are listed for continuous operation.
- RTISS™ filter circuit technology compensates for incoming line voltage variations: No visible flicker with +/-2% change in RMS voltage/cycle and +/-2% Hz change in frequency/second.

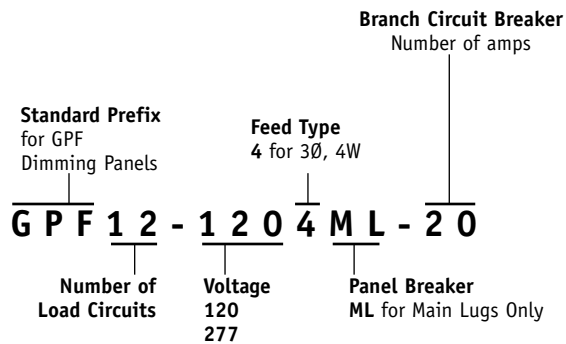
Physical Design

- Enclosure: NEMA-Type 1, IP-20 protection; #16 U.S. Gauge Steel. Indoors only.
- Weight: 115-175 pounds (52-80kg).
- Mounting: Surface mount only. Allow space for ventilating.

Environment/Heat Dissipation

- Patented, ribbed aluminum heat sink base cools Panel by convection. No fans.
- 32-104°F (0-40°C). Relative humidity less than 90% non-condensing.

WHAT A MODEL NUMBER TELLS YOU



JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

GPF 8-24 MODELS (120V AND 277V)

120V Power

NUMBER OF CIRCUITS	MODELS AVAILABLE FOR . . .		MAXIMUM FEED	BRANCH CIRCUIT BREAKER
	FEED TYPE	PANEL FEED		
GPF 8	3Ø, 4W	Main Lugs Only	60A	20A
GPF 12	3Ø, 4W	Main Lugs Only	80A	20A
GPF 16	3Ø, 4W	Main Lugs Only	125A	20A
GPF 20	3Ø, 4W	Main Lugs Only	130A	20A
GPF 24	3Ø, 4W	Main Lugs Only	175A	20A

277V Power

NUMBER OF CIRCUITS	MODELS AVAILABLE FOR . . .		MAXIMUM FEED	BRANCH CIRCUIT BREAKER
	FEED TYPE	PANEL FEED		
GPF 8	3Ø, 4W	Main Lugs Only	60A	20A
GPF 12	3Ø, 4W	Main Lugs Only	80A	20A
GPF 16	3Ø, 4W	Main Lugs Only	125A	20A

WIRE SIZES

Feed Wiring

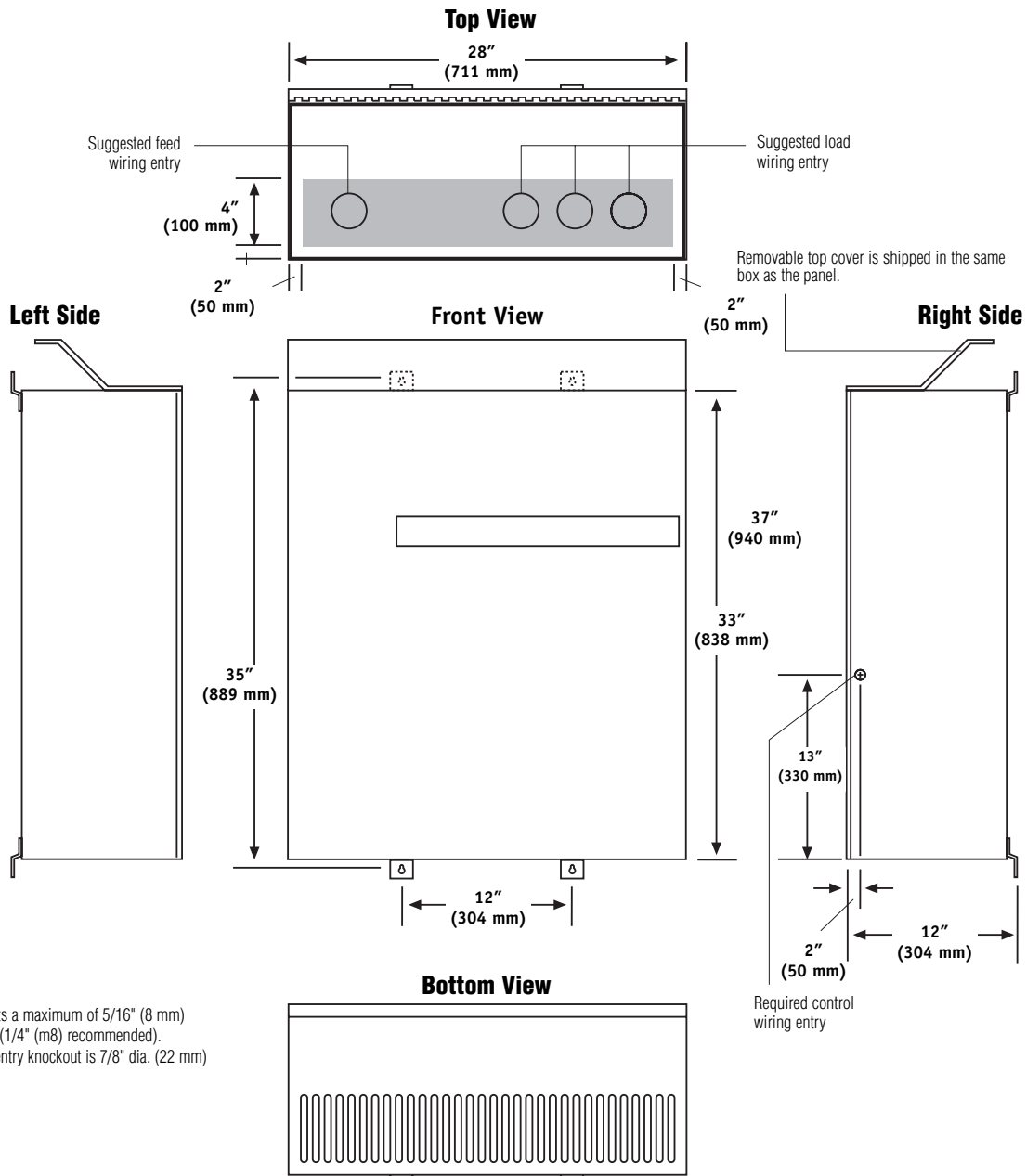
PANEL FEED	WIRE SIZES
Main Lugs Only	#14 AWG (2.0mm ²) to #2/0 AWG (50mm ²)

Load Circuit Wiring

Connect to Terminal Blocks.
#14 AWG (2.0mm²) to #10 AWG (4.0mm²)

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

DIMENSIONS FOR GPF 8-24 PANELS



Keyhole accepts a maximum of 5/16" (8 mm) mounting bolt (1/4" (m8) recommended).
 Class 2/PELV entry knockout is 7/8" dia. (22 mm)

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

MOUNTING FOR GPF 8-24 PANELS

Surface mount indoors.

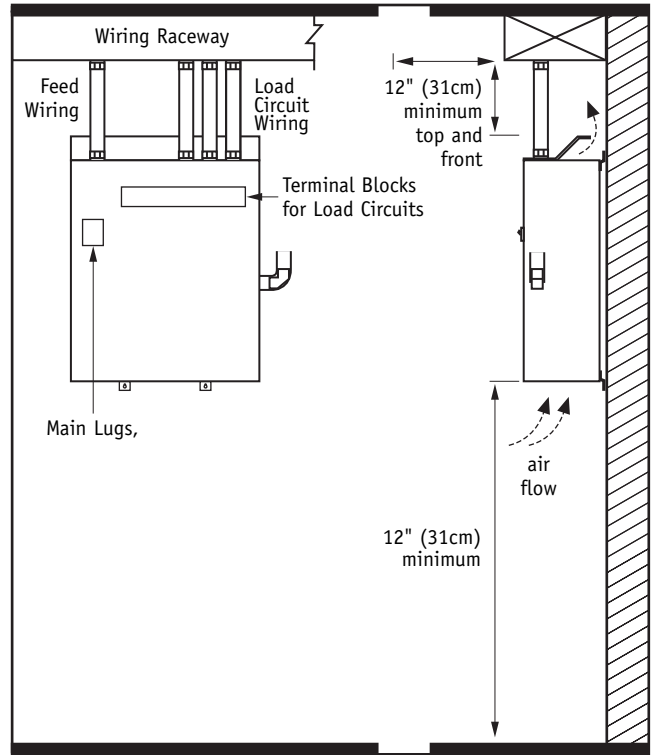
- Panel generates heat. Mount only where ambient temperature will be 0 °C-40 °C (32 °F-104 °F).
- This equipment is air cooled - **vents must not be blocked** or you will void the warranty. Leave 12" (31cm) clearances above, below, and in front of Panel. No clearance necessary on sides.
- Reinforce wall structure for weight and local codes.

PANEL	MAXIMUM BTUs/HOUR	WEIGHT (WITHOUT PACKAGING)
GPF8	1365	115 lbs (52kg)
GPF12	2045	130 lbs (59kg)
GPF16	2725	145 lbs (66kg)
GPF20	3405	160 lbs (73kg)
GPF24	4085	175 lbs (80kg)

- Dimming Panels will hum slightly and internal relays will click while in operation. Mount where audible noise is acceptable.
- Mount Panels so line (mains) voltage wiring is at least 6 feet (1.8m) from sound or electronic equipment and wiring.
- Panels must be mounted within 7° of true vertical.

GPF 8-24 Front View

GPF 8-24 Side View



Maximum Feed and Wire Sizes
Consult Wiring Overview page.



Water damages Panels!
Install Panels in a location where they will not get wet.

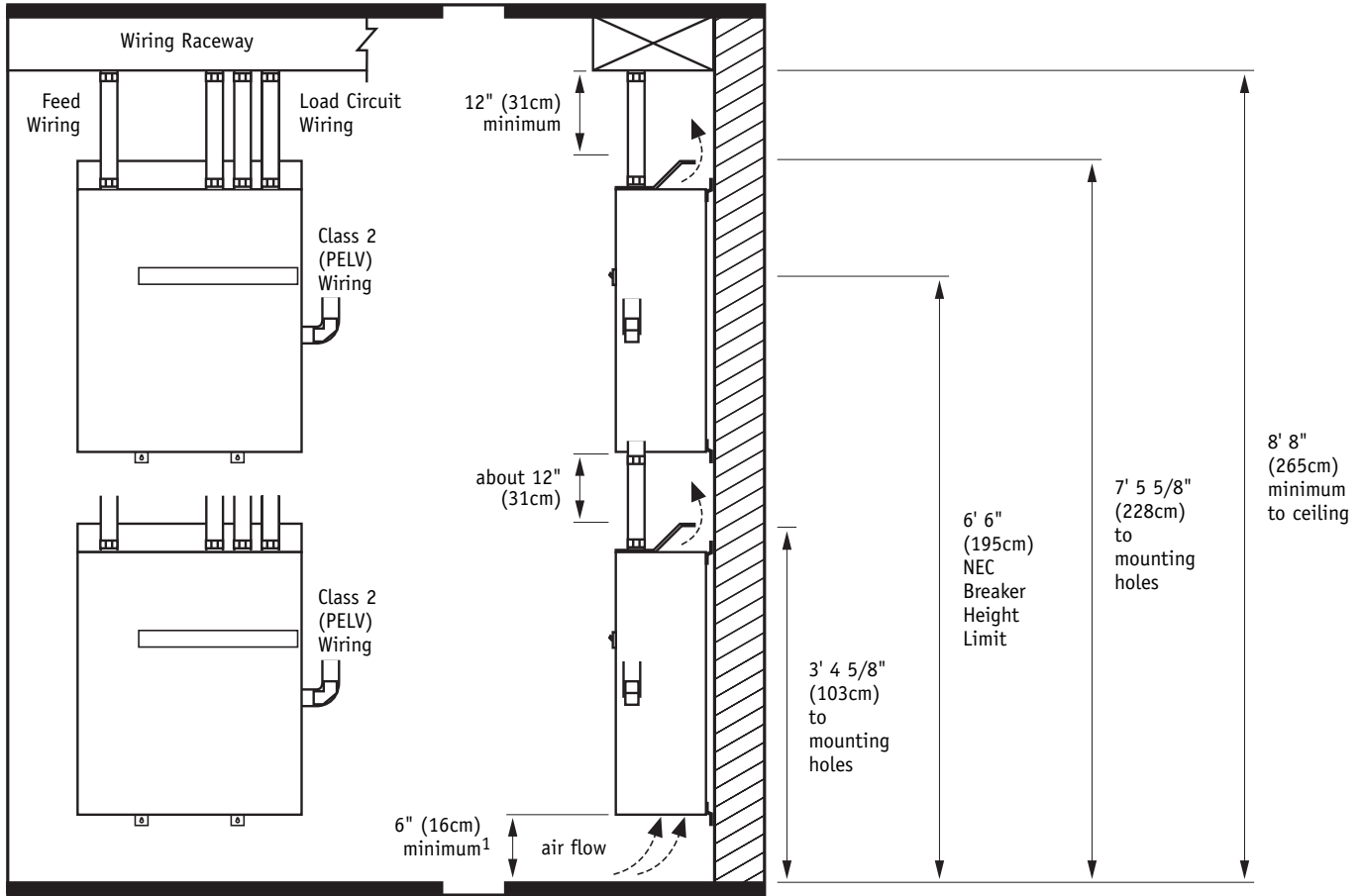
JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

MOUNTING ONE PANEL ABOVE ANOTHER

You need at least 8' 8" (265cm) between the floor and the suspended ceiling for this layout.

GPF 8-24 Front View

GPF 8-24 Side View



¹ 6" (16cm) approved for this layout only.



Water damages Panels!
Install Panels in a location where they will not get wet.

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JOB NUMBER:	

GPF 8-24 WIRING OVERVIEW

Wiring Tips!

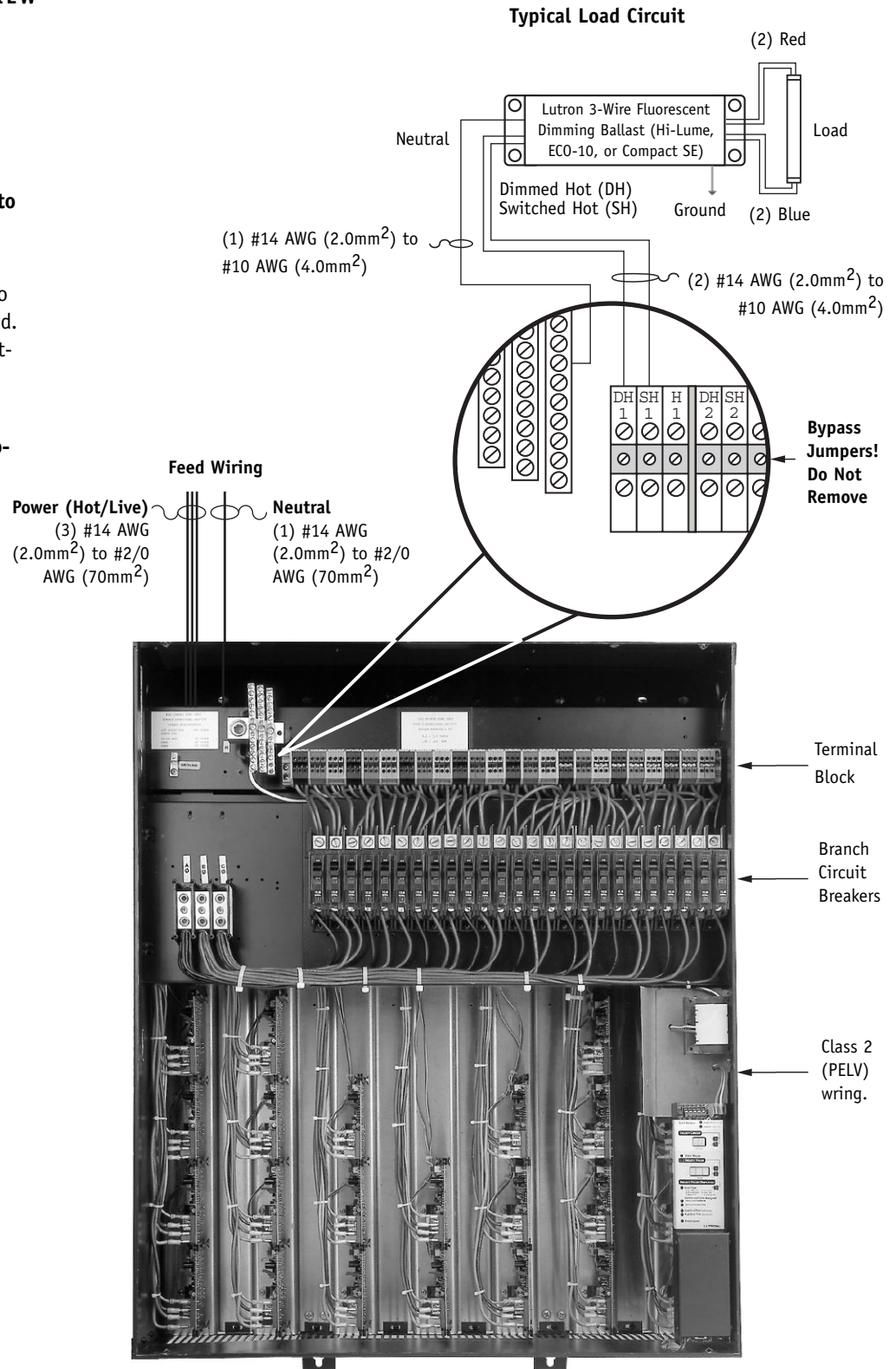
You wire the GPF 8-24 similar to wiring a lighting distribution panel.

You run feed and load wiring. No other wiring or assembly required.

- Common Neutrals are not permitted. Run separate Neutrals for each load circuit.

You can use the GPF 8-24 to provide temporary lighting.

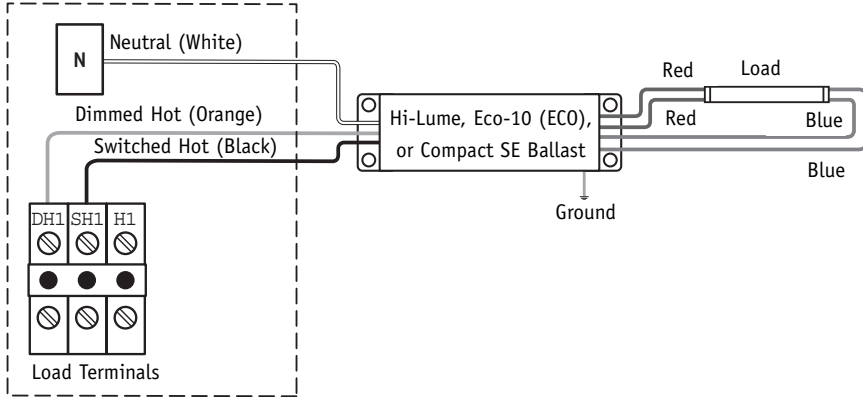
- Wire all loads.
- Do not remove the bypass jumpers that protect the Dimming Modules.
- Use Branch Circuit Breakers to switch lights on and off.



JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

120V AND 277V LOAD CIRCUITS (GPF 8-24)

Lutron 3-Wire Fluorescent Dimming Ballasts (Hi-Lume, ECO-10, and Compact SE)

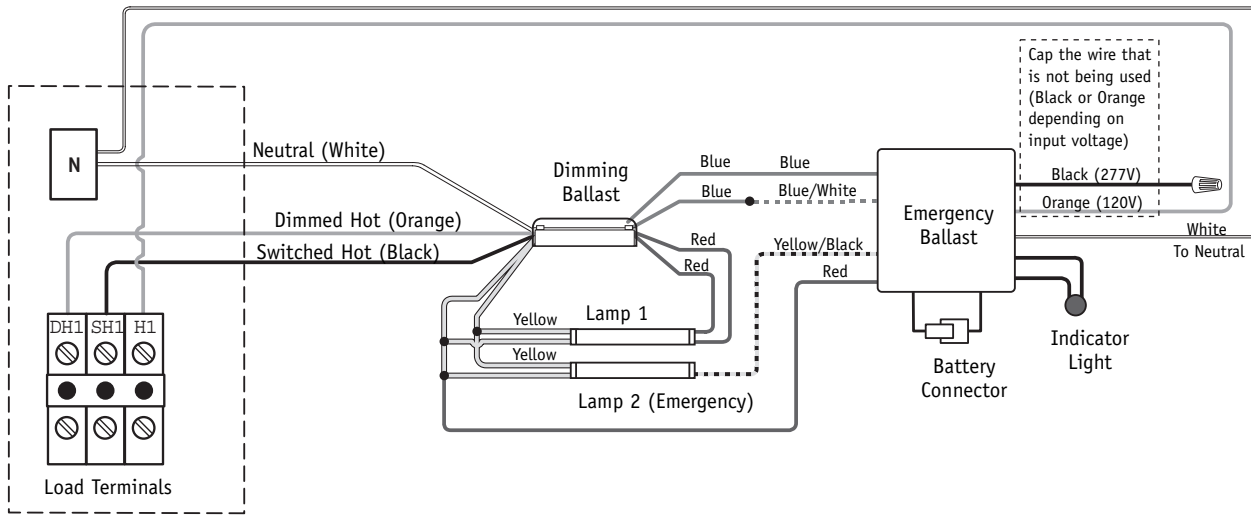


GPF Dimming Panel

All Load Circuit Wiring
 #14 AWG (2.0mm²) to #10 AWG (4.0mm²)

Where Neutral is Located
 Consult Wiring Overview page for the type of panel your working on.

Load Circuits with Emergency Battery Pack Wiring



GPF Dimming Panel

- Consult Lutron for approved manufacturers of emergency ballasts.
- Lutron Hi-lume® 2-lamp, 120VAC Dimming Ballast shown.
- Wire colors may vary depending on emergency ballast manufacturer.

JOB NAME:	MODEL NUMBERS:
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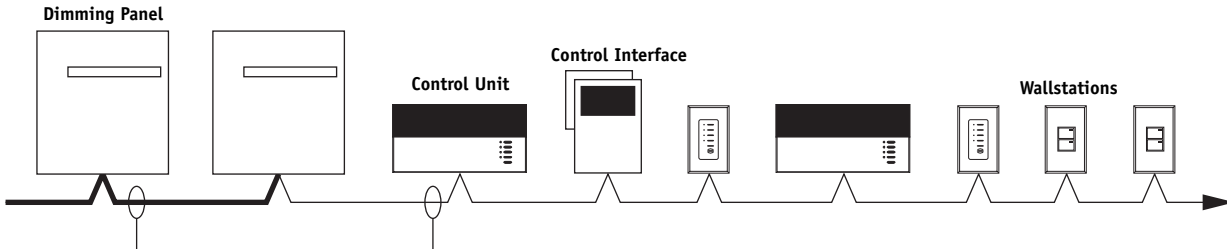
LOW-VOLTAGE CLASS 2 (PELV) WIRING (ALL MODELS)

Pull low-voltage type Class 2 wiring¹ for system communications.

- Must be daisy-chained!
- Must run separately from line (mains) voltage.

Series 4000 GRAFIK Eye

Total length of Control Link may be no more than 2,000 ft. (610m).



Panel-to-Panel wiring¹
 Include one extra #18AWG (1.0mm²). Used as a “sense line” for emergency (essential) lighting.

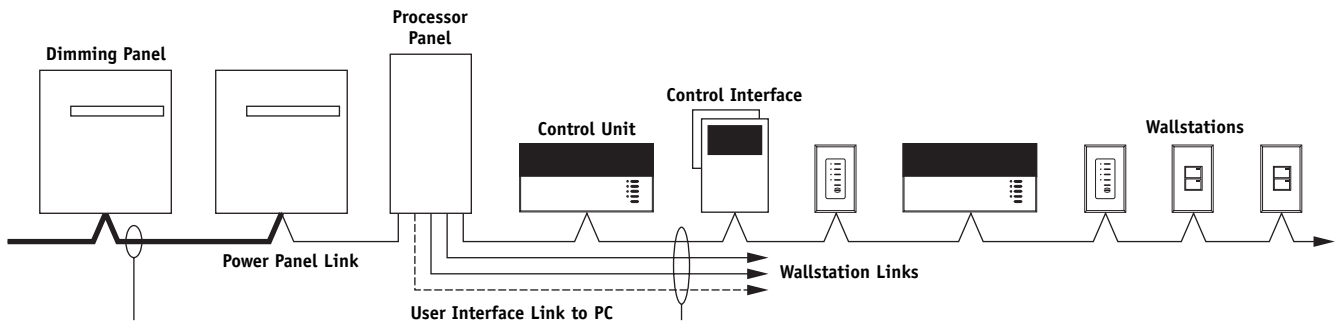
Class 2 (PELV) wiring link has:

- Two #12 AWG (2.5mm²) conductors for control wiring.
- One shielded, twisted pair #18 AWG (1.0mm²) for data link.

GRAFIK 5000/6000 Systems

Class 2 (PELV) wiring links for system communications can be up to 4000 feet (1220m):

- Use the MUX-RPTR Interface and GRX-CBL-46L cable for links between 2000 feet (610m) and 4000 feet (1220m).
- Wire as shown for links 2000 feet (610m) and less.



Panel-to-Panel wiring¹
 Include one extra #18AWG (1.0mm²). Used as a “sense line” for emergency (essential) lighting.

Each Class 2 (PELV) has:

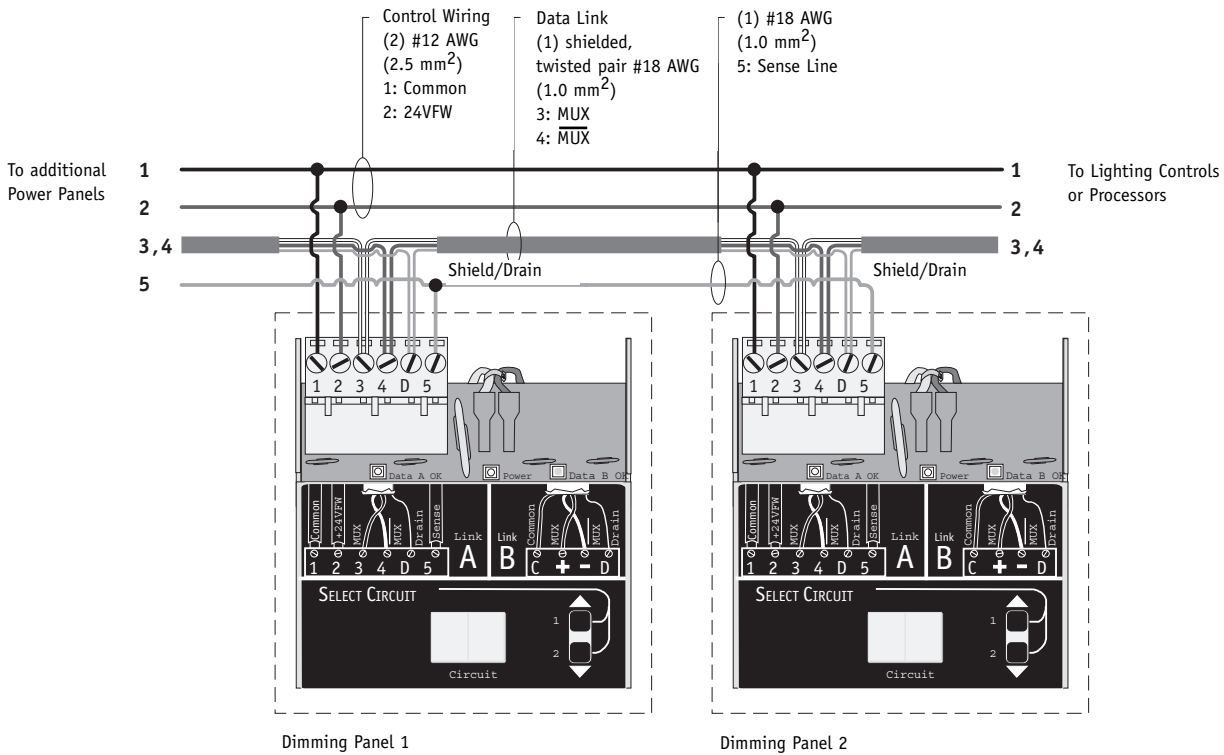
- Two #12 AWG (2.5mm²) conductors for control wiring.
- One shielded, twisted pair #18 AWG (1.0mm²) for data link.

¹ If you use Lutron cable, you can use smaller-gauge wires.

- If a Class 2 (PELV) wiring link is less than 500 feet (152m), you can use GRX-CBL-346S:
 - Two #18AWG (1.0mm²) for control wiring.
 - One twisted, shielded pair #22AWG (.625mm²) for data link.
 - No “sense line” included - add your own #18AWG (1.0mm²).
- If a Class 2 (PELV) wiring link is 500 to 2000 feet (152 to 610m), you can use GRX-CBL-46L:
 - Two #12AWG (2.5mm²) for control wiring.
 - One twisted, shielded pair #22AWG (.625mm²) for data link.
 - One #18AWG (1.0mm²) for sense line between Panels.
- Lutron has also approved smaller-gauge cable from Belden, Liberty, Alpha, and Signature. Ask for Lutron GRAFIK Eye® Cable.

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

CLASS 2 (PELV) PANEL-TO-PANEL WIRING (ALL MODELS)

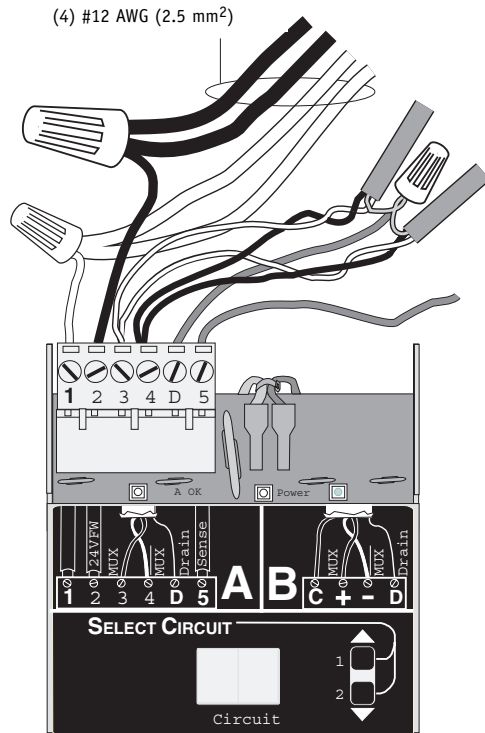


Notes:

1. **Emergency Power:** The additional #18 AWG (1.0mm²) wire is a "sense" line from terminal 5 of another Panel. This sense line allows an Emergency (Essential) Lighting Panel to "sense" when Normal (Non-Essential) power is lost. If more than one Emergency Lighting Panel needs to sense off a specific Normal Panel. You may have to run a dedicated wire between each pair of Normal (Non-Essential) and Emergency (Essential) panels.
2. **Shield/Drain:** Connect shielding as shown.
 - Do not connect to Ground (Earth) or Circuit Selector.
 - Connect the bare drain wires and cut off the outside shield.

CLASS 2 (PELV) TERMINAL CONNECTIONS

Each low-voltage Class2 (PELV) terminal can accept only two #18 AWG (1.0mm²) wires. Two #12 AWG (2.5mm²) conductors won't fit. Connect as shown.



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