

GP Dimming Panels



GP3/4
Mini Panels



GP8-24
Standard-Size Panels



GP36
Large-Size Panels



GP48-144
Large-Size Panels

DESCRIPTION

- Provide power and dimming for up to 144 load circuits.
- Control any light source, including full-conduction non-dim.

Models available for:

- 100-127V, 220-240V (non CE), 230V (CE), and 277V.
- 3 to 144 circuits.
- Different feed types and breakers.

GP Dimming Panels work with:

- GRX-4000 Control Units
- GRAFIK 5000 and 6000 Systems
- LP Dimming Panels
- XP Softswitch™ Panels
- DMX512 dimming systems via the 2LINK™ option.

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

Standards

- UL Listed (Reference: UL File 42071).
- Complies with ISO-9000, CSA, NOM, or CE (where appropriate).

Power

- Input power: 100-127V, 220-240V (non CE), 230V (CE), and 277V. All voltages 50/60Hz, phase-to-neutral.
- Branch Circuit Breakers: UL-rated thermal magnetic. Protected by bypass jumpers. AIC ratings:
100-127V – 10,000
220-240V – 6000
230V (CE) – 5,000
277V – 14,000
- Lighting 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 these sources with a smooth continuous Square Law dimming curve or on a full conduction non-dim basis:

- Incandescent (Halogen)/Tungsten
- Magnetic Low Voltage Transformer
- Electronic Low Voltage Transformer¹
- Lutron Electronic Fluorescent Dimming Ballasts
- Magnetic Fluorescent Lamp Ballasts

Operates HID sources on a full conduction non-dim basis.

¹ Reverse-phase control transformers require an ELVI Power Interface. Check phase with transformer manufacturer.

Dimming Cards

- 16A continuous rating. UL-listed specifically for each light source.
- 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.
- Arcless-relay air gap-off switches (one per load circuit):
 - Ensure open load circuits when off function selected from Wallstations or Control Units.
 - Eliminate arcing at mechanical contacts when loads are switched.

Filter chokes

Provide a rise time of at least:

- 350µSec as measured 10-90% of load current waveform at 50% dimmer capacity
- 525µSec as measured 0-100% of load current waveform at 50% dimmer capacity
- 400µSec as measured 10-90% of load current waveform at 100% dimmer capacity
- 600µSec as measured 0-100% of load current waveform at 100% dimmer capacity
- All measurements are recorded at a 90 degree conduction angle.
- At no point in the waveform can the rise time slope exceed a rate of 300mA per µSec.

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.

Setup

Circuit selector electronically assigns circuits to zones and sources. Permits reassignment of zones and sources without rewiring.

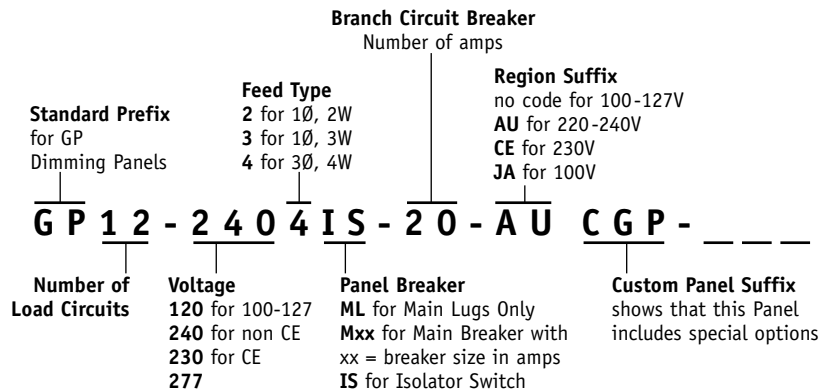
Physical Design

- Enclosure: NEMA-Type 1, IP-20 protection; #16 U.S. Gauge Steel. Indoors only.
- Weight: 30-1300 pounds (14-590kg).
- 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:	

GP3/4 MINI MODELS

Only standard Panels listed. Consult Lutron for options.

100-127V Power

NUMBER OF CIRCUITS	MODELS AVAILABLE FOR . . .		
	FEED TYPE	MAXIMUM FEED	PANEL FEED/BRANCH ¹ CIRCUIT BREAKERS
GP 3	1Ø, 2W	45A	15A
		60A	20A
	1Ø, 3W	30A	15A
		40A	20A
GP 4	3Ø, 4W	15A	15A
		20A	20A
	Feed	20A	15A ²
		Through	20A

230V (CE) Power

NUMBER OF CIRCUITS	MODELS AVAILABLE FOR . . .		
	FEED TYPE	MAXIMUM FEED	PANEL FEED/BRANCH CIRCUIT BREAKERS
GP 3	1Ø, 2W	30A	10A
	3Ø, 4W	10A	
GP 4	Feed	10A	10A ²
	Through		

277V Power

NUMBER OF CIRCUITS	MODELS AVAILABLE FOR . . .		
	FEED TYPE	MAXIMUM FEED	PANEL FEED/BRANCH ¹ CIRCUIT BREAKERS
GP 3	1Ø, 2W	60A	20A
	3Ø, 4W	20A	
GP 4	Feed	20A	20A ²
	Through		

220-240V (non CE) Power

NUMBER OF CIRCUITS	MODELS AVAILABLE FOR . . .		
	FEED TYPE	MAXIMUM FEED	PANEL FEED/BRANCH CIRCUIT BREAKERS
GP 3	1Ø, 2W	48A	16A
	3Ø, 4W	16A	
GP 4	Feed	16A	16A ²
	Through		

¹ 20/16A, 15/12A continuous load rating.

² Breakers located in distribution panel supplied by others.

WIRE SIZES

GP 3 Feed Wiring

- Power (Hot/Live) wires connect directly to Branch Circuit Breakers:

100-127V 277V #14 AWG (2.0mm²) to #10 AWG (4.0mm²)

220-240V 230V (CE) #18 AWG (1.0mm²) to #4 AWG (25mm²)

- Neutral wire connects to Neutral Lug:
#14 AWG (2.0mm²) to #8 AWG (6.0mm²)

GP 4 Feed Through Wiring

Power (Hot/Live) and Neutral connect to Terminal Blocks
#14 AWG (2.0mm²) to #10 AWG (4.0mm²)

GP 3/4 Load Circuit Wiring

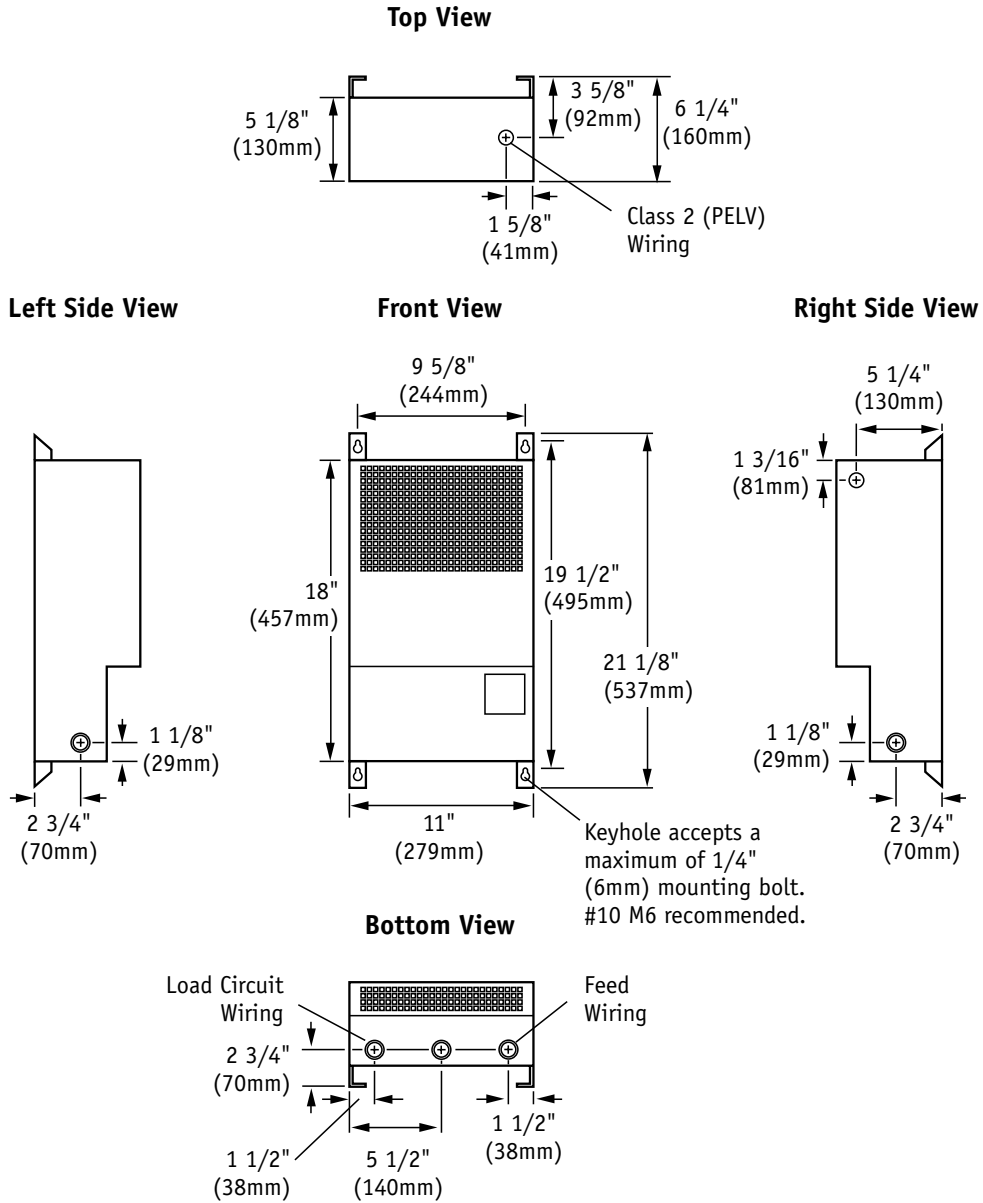
Connect to Terminal Blocks #14 AWG (2.0mm²) to #10 AWG (4.0mm²)

230V (CE) MAINS

CE Panels are listed as appliances. Distribution Panel must provide a main circuit breaker that does not exceed Panel Rating.

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

DIMENSIONS FOR GP3/4 MINI PANELS



JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

MOUNTING FOR GP3/4 MINI PANELS

Surface mount indoors.

- Panel generates heat! Mount only where ambient temperature is 32-104°F (0-40°C).
- This equipment is air-cooled. **Do not block vents 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)
GP3/4	685	30 lbs (14kg)

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

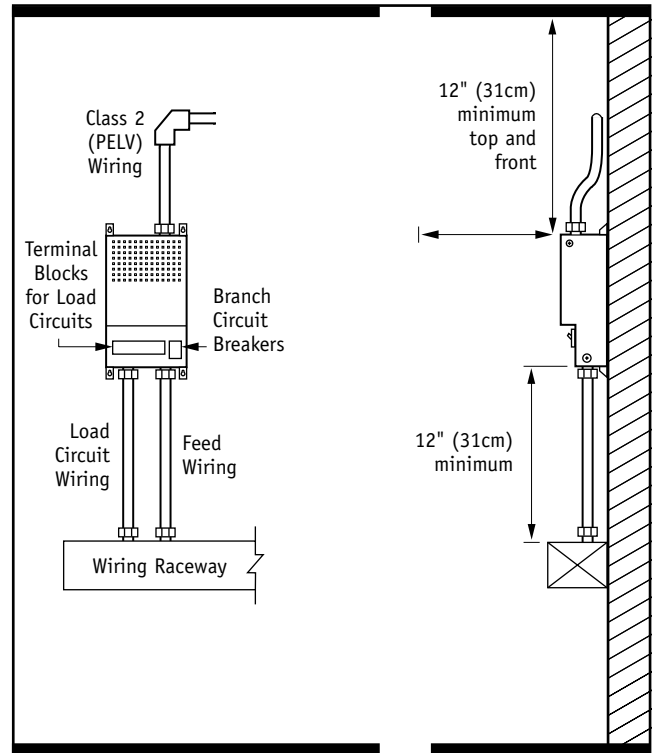
Maximum Feed and Wire Sizes
Consult Wiring Overview page.



Water damages Panels!
Install Panels in a location where they won't get wet.

GP3/4 Front View

GP3/4 Side View

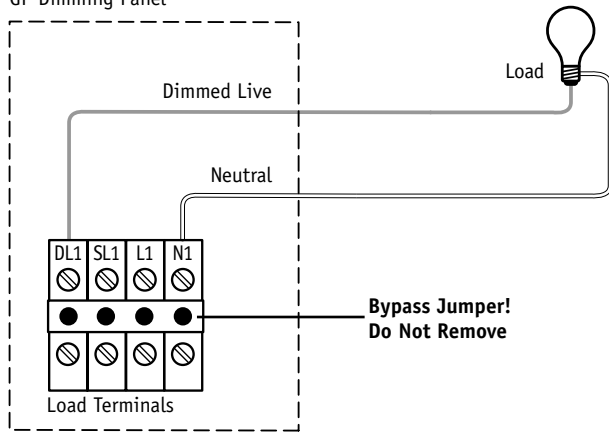


JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

230V (CE) LOAD CIRCUITS (GP3-144)

All Load Types except Fluorescent Dimming Ballasts

GP Dimming Panel



- Use Dimmed Live (DL) for all loads including Non-Dim.

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.

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

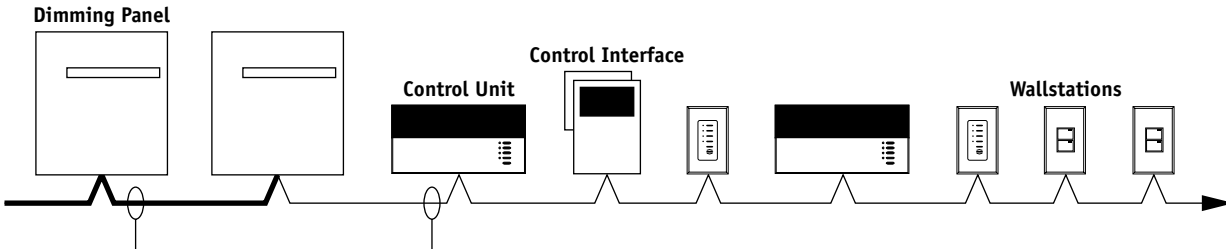
LOW-VOLTAGE CLASS 2 (PELV) WIRING (ALL MODELS)

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

The Class 2 (PELV) wiring link for system communications must be less than 2000 feet (600m).



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

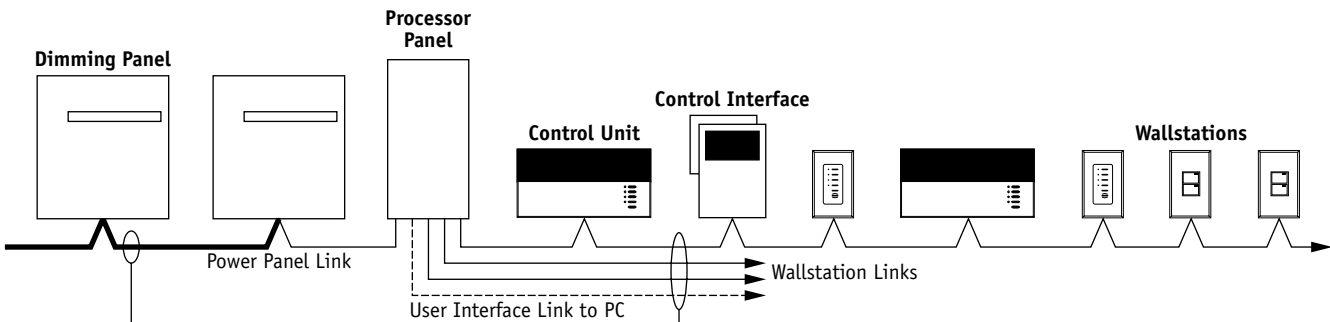
Class 2 (PELV) wiring link has:

- 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 (1200m):

- Use the MUX-RPTR Interface and GRX-CBL-46L cable for links between 2000 feet (600m) and 4000 feet (1200m).
- Wire as shown for links 2000 feet (600m) 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:

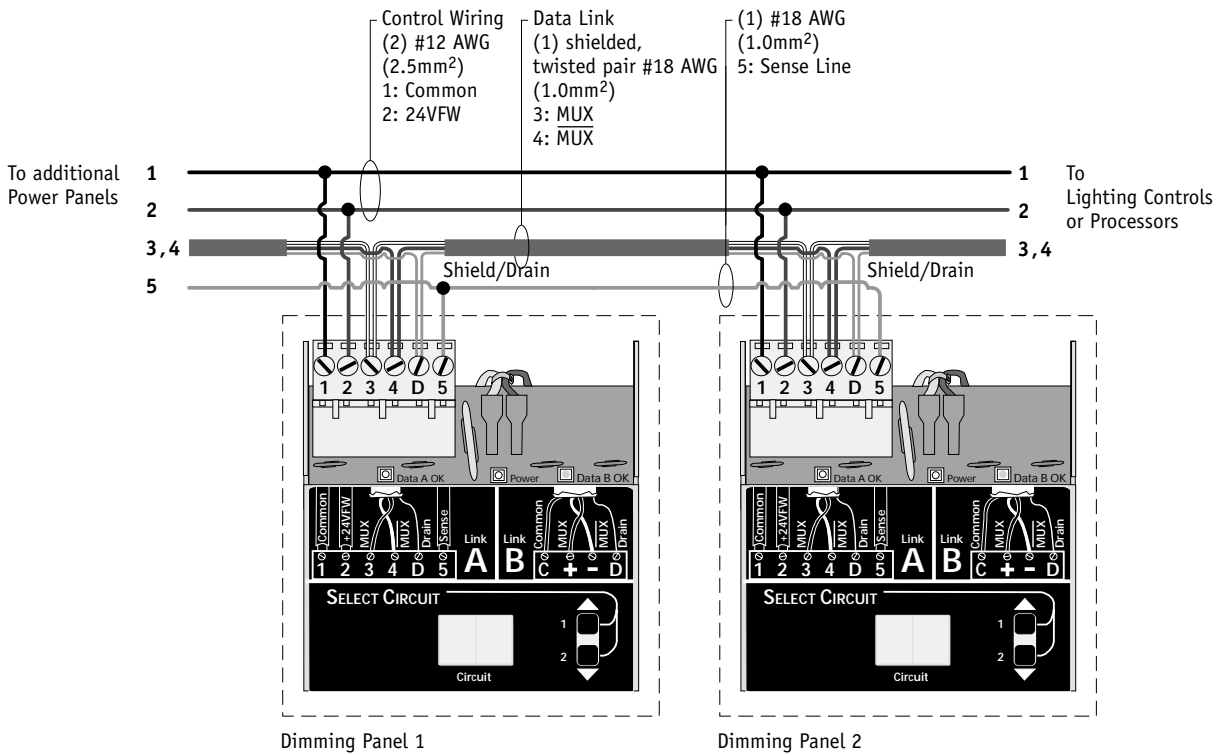
- Two #12 AWG (2.5mm²) conductors for control wiring.
- One shielded, twisted pair #18 AWG (1.0mm²) for data link.

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

- If a Class 2 (PELV) wiring link is less than 500 feet (150m), 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 (150 to 600m), 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.

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

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

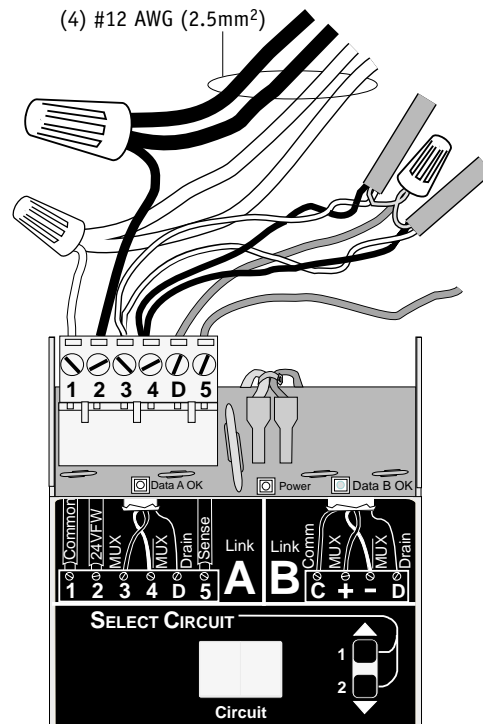


Notes:

- 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.
- 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.



JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	

OPTIONS

Consult Lutron for ordering information, model numbers, and ship times. Dimensions and wiring may change based on options chosen.

OPTION	DESCRIPTION	APPLICATION
Custom Main Breakers	Lutron custom sizes Panels' main breakers to meet job's load requirements.	Jobs with special load requirements.
Double Lug Sets	Allows Panels to handle up to 225A feeds.	You want a single feed but need multiple GP Dimming Panels.
Delta Power	Allows Panels to accept Delta power feeds (phase-to-phase). Available for 240V only. Limited to 10A, 2-pole circuits.	Areas that have Delta Power.
Branch Circuit Protection	Branch Circuit Breakers have higher AIC ratings than those on standard Panels. Panels can also have circuit breakers with special ratings such as: <ul style="list-style-type: none"> • GFI (Ground Fault Interrupt) • ELB (Earth Leakage Breaker) • RCD (Residual Circuit Device). 	
Lutron Ten Volt Module (TVM)	Allows Panels to operate fluorescent ballasts that meet IEC 929 standards for 0-10V control including: <ul style="list-style-type: none"> • Lutron's TVE ballasts • 0-10V neon • PWM fluorescent • Tridonic DSI (Digital Serial Interface). The TVM can sink or source 50mA (typically 25-50 ballasts) on each circuit.	Jobs with fluorescent ballasts that require 0-10V, PWM, or DSI control.
MRI	Allows Panels to dim DC (direct current) lighting in Magnetic Resonance Imaging (MRI) facilities.	MRI facilities or sound studios where standard lighting control equipment won't work because of RFI and EMI.
Locking Covers	Prevents accidental tripping of circuit breakers. Adds an additional 2.25"(57.2mm) to the front of Panel. Available for GP8-GP24 only	Ideal for service corridors and public areas.
2Link™	<ul style="list-style-type: none"> • Allows a DMX512 theatrical console to operate Dimming Panels' load circuits. • Allows a GRAFIK Eye 4000 System to handle 128 zone (two links of 64 zones). • Allows two GRAFIK Eye 4000 Systems to share the same Dimming Panel. 	<ul style="list-style-type: none"> • When you need to control architectural lighting from a DMX512 theatrical console. • When you need to mix architectural and theatrical lighting. • When you have multiple systems but not enough space to hang Panels.

JOB NAME:	MODEL NUMBERS:
JOB NUMBER:	