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XP Switching Panels

Feed-Through XP
Without Branch Circuit Breakers

Mini XP
- All voltages
  4 to 16 switch legs

Standard Size XP
- All voltages
- 20 to 48 switch legs

XP With Branch Circuit Breakers

Mini XP
- 220 to 240 V~
  4 to 8 switch legs
- 230 V~
  4 to 8 switch legs

Standard Size XP
- 100 to127 V~,
  4 to 28 switch legs
- 220 to 240 V~
  (non-CE),
  12 to 24 switch legs
- 230 V~ (CE),
  12 to 24 switch legs

Large XP
- 277 V~ and 347 V~
  4 to 28 switch legs

Extra-Large XP *(not shown)*
- 277 V~ and 347 V~
  32 to 42 switch legs

XP Switching Panels provide power and switching for up to 48 switch legs. Panels control any light source as well as AC general use motors.

Models available with:
- 100 to 127 V~, 220 to 240 V~ (non-CE), 230 V~ (CE), 277 V~, and 347 V~ input power
- With or without branch circuit breakers
- 4 to 48 switch legs (feed-through)
- 4 to 42 switch legs (with branch circuit breakers)

XP Switching Panels work with:
- GRX-4000 Control Units
- GRAFIK 5000™, GRAFIK 6000®, and GRAFIK 7000™ Systems
- GP and LP Dimming Panels
- DMX512 dimming systems via the 2Link™ option
- Quantum® systems

LUTRON® SPECIFICATION SUBMITTAL Page 1

Job Name:	Model Numbers:	
Job Number:		

Specifications

Regulatory Approvals

- UL® Listed (Reference: UL® File 42071)
- Complies with ISO-9000
- CSA, NOM
- Seismic Certified (Test Method AC156. Reference OSHPD Preapproval OSP-0215-10).

Power

- Input power: 100 to 127 V~, 220 to 240 V~ (non-CE), 230 V~ (CE), 277 V~, and 347 V~. All voltages 50/60 Hz, phase-to-neutral.
- Control circuit (Feed-Through XP Panels only): Dedicated feed, same voltage and phase as Panel.
- Branch Circuit Breakers: UL® rated thermal magnetic. AIC ratings:
  120 V~ 10,000 A
  220 to 240 V~ 6000 A
  277 V~ 18,000 A
  347 V~ 14,000 A
- Lightning strike protection: Meets ANSI/IEEE standard 62.41-1980. Can withstand voltage surges of up to 6000 V~ and current surges of up to 3000 A.
- 10-year power failure memory: Automatically restores lighting to levels prior to power interruption.

Load Types (relay ratings)

Load Type	Relay Rating				
	120 V~	230 V~ (CE)	220-240 V~	277 V~	347 V~
Tungsten	20 A	16 A	16 A	20 A	16 A
AC General Use	20 A	16 A	16 A	20 A	16 A
Electric Discharge Lamp	16 A	16 A	16 A	16 A	16 A
Electronic Ballast NEMA 410	16 A	N/A	N/A	16 A	N/A
Resistive	20 A	16 A	16 A	20 A	16 A
Inductive	20 A	16 A	16 A	20 A	16 A
Motor	1.0 HP	N/A	N/A	2.0 HP	N/A

Load

- When using the Switching Module to control receptacles, it may be used with, but is not limited to, the following:
  – Monitors – Fans
  – Humidifiers – Printers
  Note: Refer to the manufacturer's guidelines for acceptable switching methods.
- When using the Switching Module to control receptacles, it may NOT be suitable for use with devices that require any of the following:
  – Shut-down process before power is interrupted, such as computers.
  – Cool-down process before power is interrupted, such as projectors.
  – Programming, such as clocks or DVRs.
  – Long warm-up cycle.
- **Not for use with loads that present a hazard if automatically energized, for example heaters.**
- **Any receptacles that are controlled by an automatic control device must be marked with "⏻"located on the controlled receptacle outlet where visible after installation as stated in 2014 NEC® Article 406.3(E).**

Short Circuit Current Ratings (other ratings available)

Panel Type	Voltage	Std. SCCR Rating
XP Feed-through (all sizes)	120/277 V~	25,000 A
XP Main Lug Panels (all sizes)	120/277 V~	25,000 A

Switching Modules (120, 277, 347 V~)

- Able to control 20 A receptacles.
- Switch legs rated at 20 A.
- Patented Softswitch® circuit eliminates arcing at mechanical contacts when loads are switched, which prolongs relay life to an average of 1,000,000 cycles at 16 A.
- 10 BTU/hour per module.

Job Name:	Model Numbers:	
Job Number:		

Specifications *(continued)*

Wiring

- Internal: Prewired by Lutron.
- System communications: Low-Voltage IEC PELV/NEC® Class 2 wiring connects XP Panels to other components.
- Line (mains) voltage: Feed and load wiring only. (Feed-Through XP Panels also have control circuit wiring.) No other wiring or assembly required.

Physical Design

- Enclosure: NEMA-Type 1, IP-20 protection; 16 U.S. gauge steel. Indoor use only.
- Weight: 27 lb (13 kg) for Mini XP, 80 lb (37 kg) for Standard Size XP, 135 lb (61.3 kg) for Large XP, 225 lb (102 kg) for Extra Large XP.
- Seismic Certification Limits: S_{DS} = 2.5 g, z/h = 1.0, I_p = 1.5. Contact Lutron® for details.

Mounting

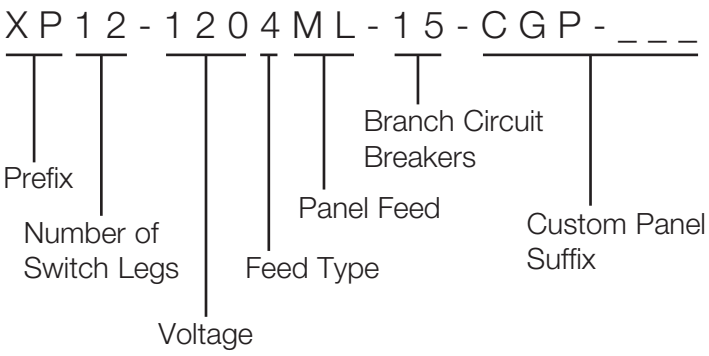
- Mini XP and Standard Size XP: Surface mount or recess mount between 16 in (40 cm) studs.
- Large XP: Surface mount only.
- Extra Large XP: Surface mount only.

Environment

- 32 to 104 °F (0 to 40 °C). Relative humidity less than 90% non-condensing.

Job Name:	Model Numbers:	
Job Number:		

How to Build an XP Model Number



Prefix:

XP Switching Panel

Number of Switch Legs:

Indicates number of load circuits in the panel

Voltage:

Omit for feed-through

120 (100 to 127 V~)

230 (230 V~) CE[1]

240 (220 to 240 V~) non-CE[1]

277 (277 V~)

347 (347 V~)

Feed Type:

FT (Feed-Through – no branch circuit breakers)

4 (3 phase 4 wire)

Panel Feed:

ML (Main Lugs only)

IS (Isolation Switch)

Branch Circuit Breakers:

20 (20 A branch circuit breakers)

15 (15 A branch circuit breakers)

16 (16 A branch circuit breakers)

Custom Panel Suffix:

Indicates panel with special options.

Contact Lutron for specific options.

[1] 230 V~ (CE) and 220 to 240 V~ (non-CE) models with branch circuit breakers are custom panels. Contact Lutron for more information.

Job Name:	Model Numbers:	
Job Number:		

Feed-Through XP Models (Without Branch Circuit Breakers)

Only standard Panels listed. Consult Lutron for options.

Mini XP Feed-Through Models 120/277 V~, 230 V~ (CE), 220 to 240 V~ (non-CE), or 347 V~ Power

Model Prefix	Switch Legs	Feed Type	Maximum Feed
XP4	4	Feed-Through	120/277 V~ 20 A 220 to 240 V~ 16 A 230 V~ (CE) 16 A 347 V~ 20 A
XP8	8		
XP12	12		
XP16	16		

Mini XP

Standard Size XP Feed-Through Models 120/277 V~, 230 V~ (CE), 220 to 240 V~ (non-CE), or 347 V~ Power

Model Prefix	Switch Legs	Feed Type	Maximum Feed
XP20	20	Feed-Through	120/277 V~ 20 A 220 to 240 V~ 16 A 230 V~ (CE) 16 A 347 V~ 20 A
XP24	24		
XP28	28		
XP32	32		
XP36	36		
XP40	40		
XP44	44		
XP48	48		

Standard Size XP

Wire Sizes

- 14 AWG to 10 AWG (2.5 mm^2 to 4.0 mm^2) for Feed Wiring and Switch Legs (to loads)
- Power (Line/Hot) and Switched Line/Hot connect directly to Terminal Block for Switch Legs

Job Name:	Model Numbers:	
Job Number:		

XP Models With Branch Circuit Breakers

Only standard Panels listed. Consult Lutron for options.

100 to 127 V~ Standard Size XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP4	4	3Ø 4 W Main Lugs Only Main Lugs accept 4 AWG (25 mm²) to 250 kcmil (mcm) (120 mm²)	200 A	15 A or 20 A
XP8	8			
XP12	12			
XP16	16			
XP20	20			
XP24	24			
XP28	28			

Mini XP

220 to 240 V~ (non CE) Mini Size XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP4	4	3Ø 4 W 125 A Isolator Switch Isolator Switch accepts 14 AWG to 2 AWG (2.5 mm² to 35 mm²) Feed Wiring	125 A	16 A
XP8	8			

220 to 240 V~ (non CE) Standard Size XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP12	12	3Ø 4 W 125 A Isolator Switch Isolator Switch accepts 14 AWG to 2 AWG (2.5 mm² to 35 mm²) Feed Wiring	125 A	16 A
XP16	16			
XP20	20			
XP24	24			

230 V~ (CE) Mini Size XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP4	4	3Ø 4 W 125 A Isolator Switch Isolator Switch accepts 14 AWG to 2 AWG (2.5 mm² to 35 mm²) Feed Wiring	125 A	16 A
XP8	8			

230 V~ (CE) Standard Size XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP12	12	3Ø 4 W 125 A Isolator Switch Ilsolator Switch accepts 14 AWG to 2 AWG (2.5 mm² to 35 mm²) Feed Wiring	125 A	16 A
XP16	16			
XP20	20			
XP24	24			

Standard Size XP

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

Job Name:	Model Numbers:	
Job Number:		

XP Models With Branch Circuit Breakers

Only standard Panels listed. Consult Lutron for options.

120 V~ Large XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP32	32	3Ø 4 W or 1Ø 3 W Main Lugs Only Main Lugs accept 4 AWG (25 mm²) to 300 kcmil (mcm) (150 mm²)	225 A	20 A
XP36	36			
XP40	40			
XP42	42			

277/347 V~ Large XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP4	4	3Ø 4 W Main Lugs Only Main Lugs accept 4 AWG (25 mm²) to 300 kcmil (mcm) (150 mm²)	250 A	20 A
XP8	8			
XP12	12			
XP16	16			
XP20	20			
XP24	24			
XP28	28			

Large XP

277/347 V~ Extra-Large XP with Branch Circuit Breakers

Model Prefix	Switch Legs	Feed Type and Wire Size	Maximum Feed	Branch Circuit Breakers[1]
XP32	32	3Ø 4 W Main Lugs Only Main Lugs accept 4 AWG (25 mm²) to 350 kcmil (mcm) (185 mm²)	300 A	20 A
XP36	36			
XP40	40			
XP42	42			

Extra-Large XP

Wire Sizes For Switch Legs (To Loads)

14 AWG to 10 AWG (2.5 mm² to 4.0 mm²)

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

Job Name:	Model Numbers:	
Job Number:		

General Use Breakers

120 V~ and 277 V~ XP Panels with branch circuit breakers may be ordered with general use breakers populated in the positions available after the switching modules have been pre-wired. Circuit breakers for switched circuits may also be selected; the options are 10, 15, and 20 A single-pole circuit breakers. The following tables list available options.

120 V~ Breaker Options

Type		Standard								GFI			EPD		AFI	K	HID			SWN	
AIC Rating (kAIC)		10			22	42	65			10		22	10		10	10	10			10	
Number of Poles		1	2	3	1	2	1	2	3	1	2	1	1	2	1	1	1	2	3	1[1]	2[2]
Ampere Rating	10 A	X	X	X												X				X	X
	15 A	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	20 A	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	25 A	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X
	30 A	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X
	35 A	X	X	X																	
	40 A	X	X	X		X				X				X			X	X		X	X
	45 A	X	X	X		X															
	50 A	X	X	X		X				X				X			X	X		X	X
	60 A	X	X	X		X				X				X							
	70 A	X	X	X		X															
	80 A		X	X		X															
	90 A		X	X		X															
	100 A		X	X		X															
	110 A		X			X															
	125 A		X			X															

277 V~ Breaker Options

Type		Standard								
AIC Rating (kAIC)		18			35			65		
Number of Poles		1	2	3	1	2	3	1	2	3
Ampere Rating	15	X	X	X	X	X	X	X	X	X
	20	X	X	X	X	X	X	X	X	X
	25	X	X	X	X	X	X	X	X	X
	30	X	X	X	X	X	X	X	X	X
	35	X	X	X	X	X	X	X	X	X
	40	X	X	X	X	X	X	X	X	X
	45	X	X	X	X	X	X	X	X	X
	50	X	X	X	X	X	X	X	X	X
	60	X	X	X	X	X	X	X	X	X
	70	X	X	X	X	X	X	X	X	X
	80		X	X		X	X		X	X
	90		X	X		X	X		X	X
	100		X	X		X	X		X	X
	110		X	X		X	X		X	X
	125		X	X		X	X			

Legend

GFI – Ground Fault Circuit Interrupter (6 mA)
EPD – Equipment Ground Fault Protection (30 mA)
AFI – Arc Fault Interrupter
K – Key Operated
HID – For High Intensity Discharge Lighting
SWN – Switch Neutral Breaker

Contact Lutron® Integrated Systems for detailed ordering information.

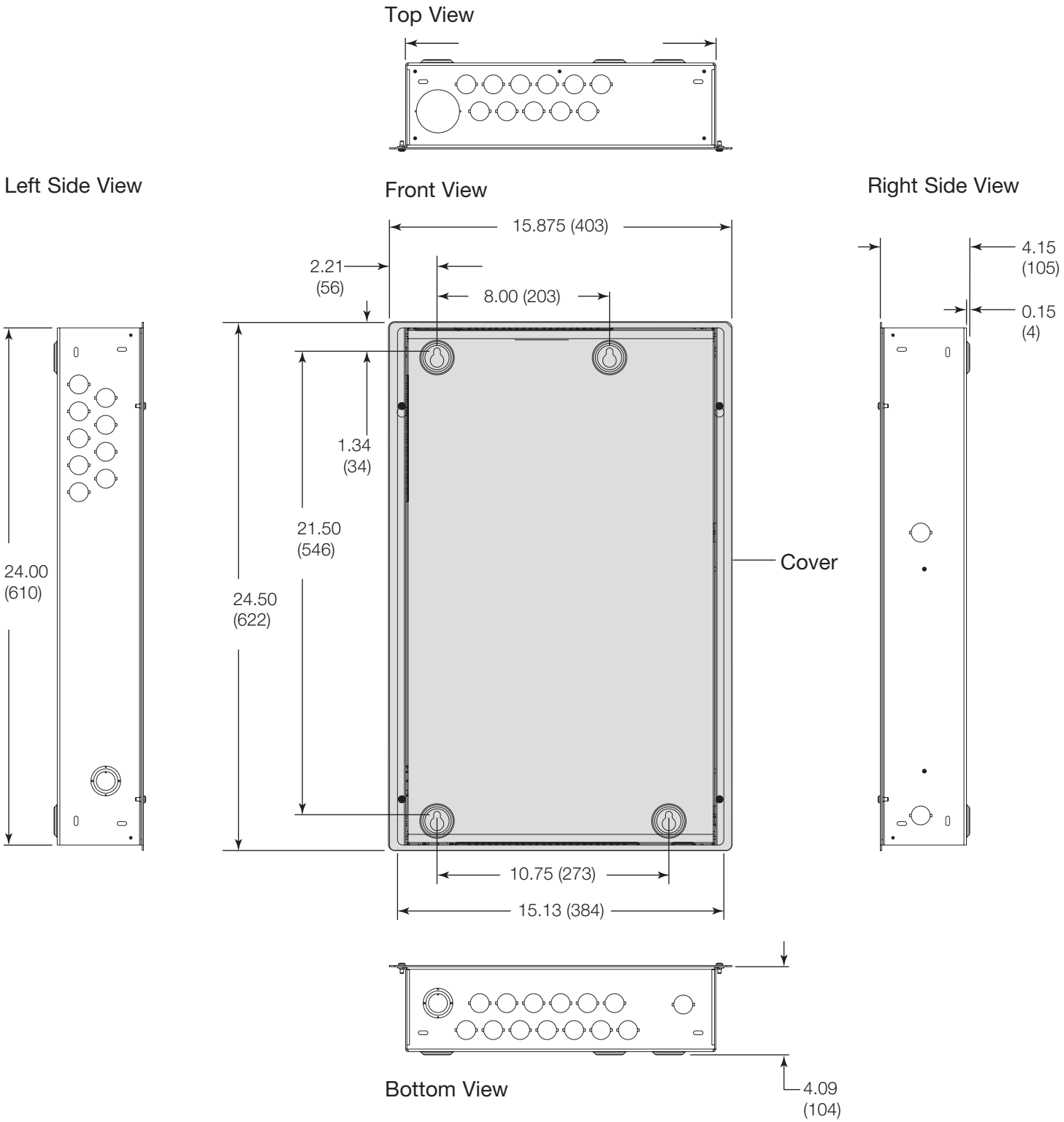
[1] 1 Pole SWN Breaker occupies 2 spaces

[2] 2 Pole SWN Breaker occupies 3 spaces

Job Name:	Model Numbers:	
Job Number:		

Mini XP Dimensions

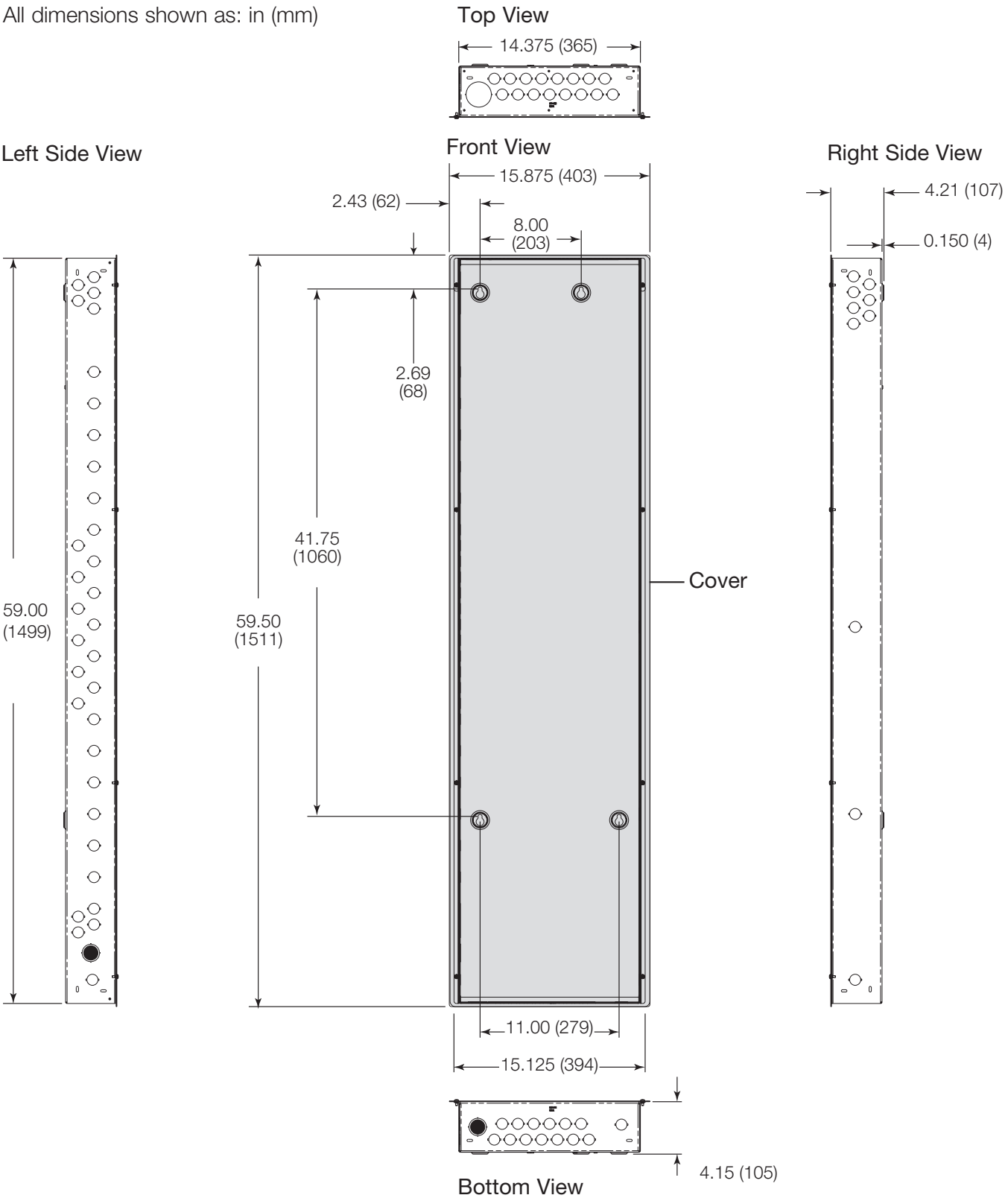
All dimensions shown as: in (mm)



Job Name:	Model Numbers:	
Job Number:		

Standard Size XP Dimensions

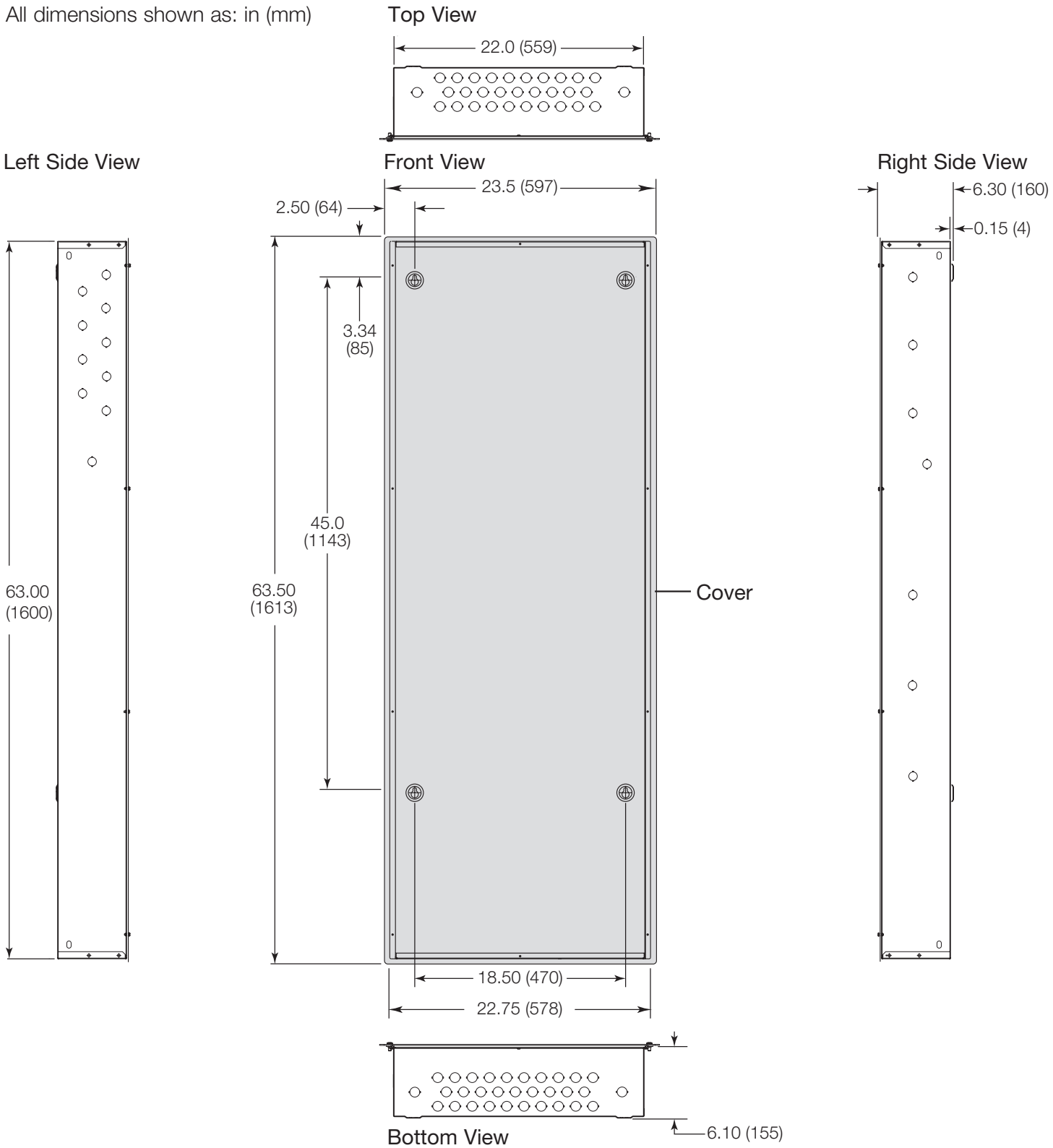
All dimensions shown as: in (mm)



Job Name:	Model Numbers:	
Job Number:		

Large XP Dimensions

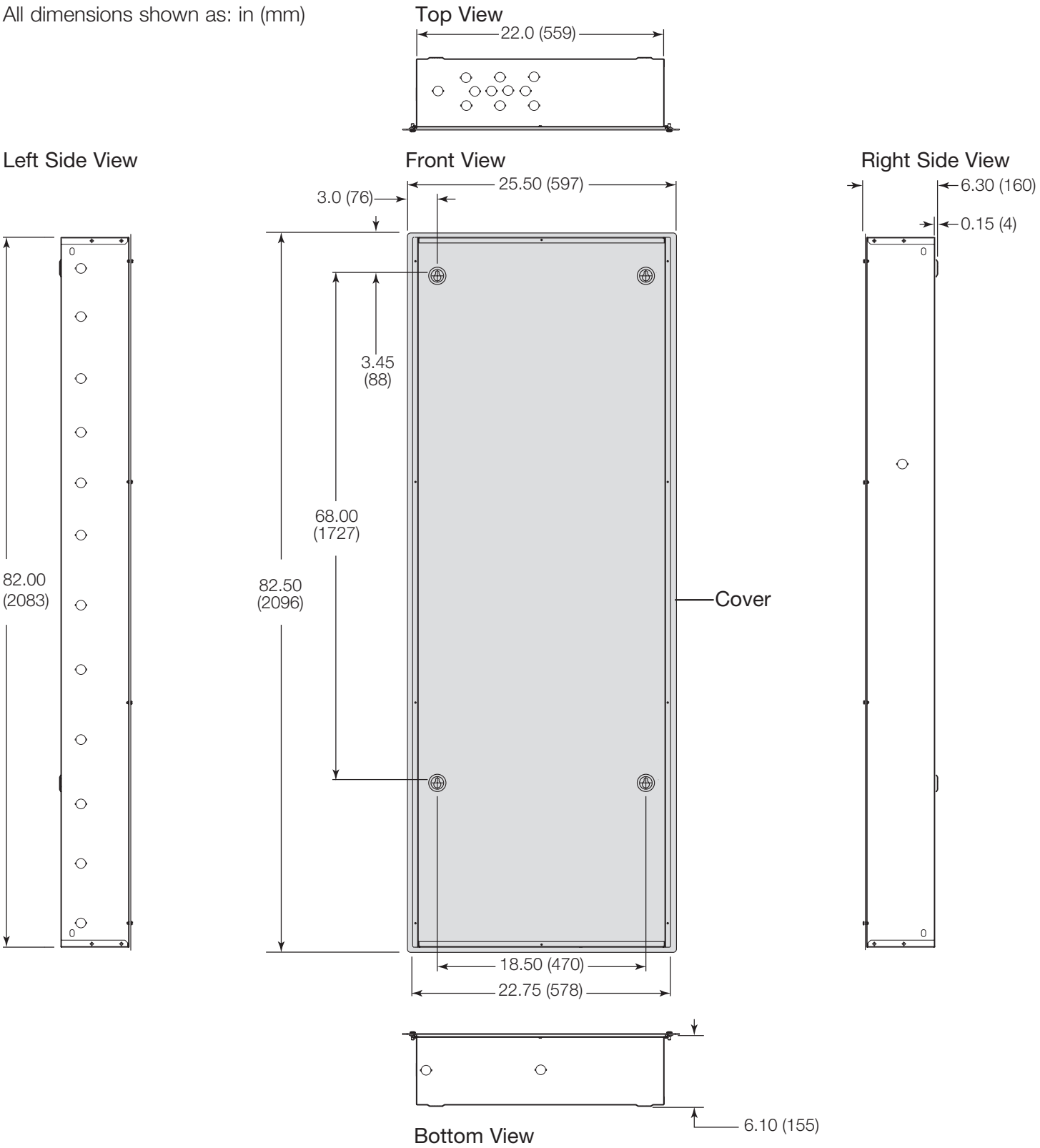
All dimensions shown as: in (mm)



Job Name:	Model Numbers:	
Job Number:		

Extra Large XP Dimensions

All dimensions shown as: in (mm)



Job Name:	Model Numbers:	
Job Number:		

Mounting for Mini XP

- Surface- or recess-mount indoors.
- Consult Dimensions page for dimensions, conduit knockouts, and mounting holes and hardware.
- Mount only where ambient temperature is 32 °F to 104 °F (0 °C to 40 °C).
- Mount Panel where audible noise is acceptable. (Internal relays click.)
- Mount Panel so line (mains) voltage wiring is at least 6 ft (1.8 m) from sound or electronic equipment and wiring.
- Mount Panel within 7° of true vertical.

Surface-Mounting

- Surface-mounting keyholes accept 1/4 in (6 mm) mounting bolts. This size is recommended.

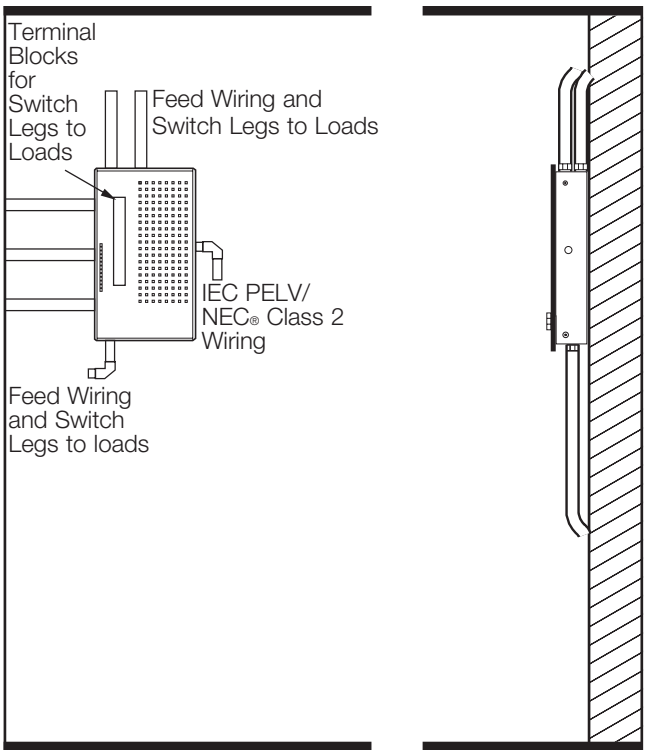
Recess-Mounting

- Mount to wall stud by screwing through slots in corners of panel.
- Mount panel between flush and 1/8 in (3 mm) below finished wall surface.

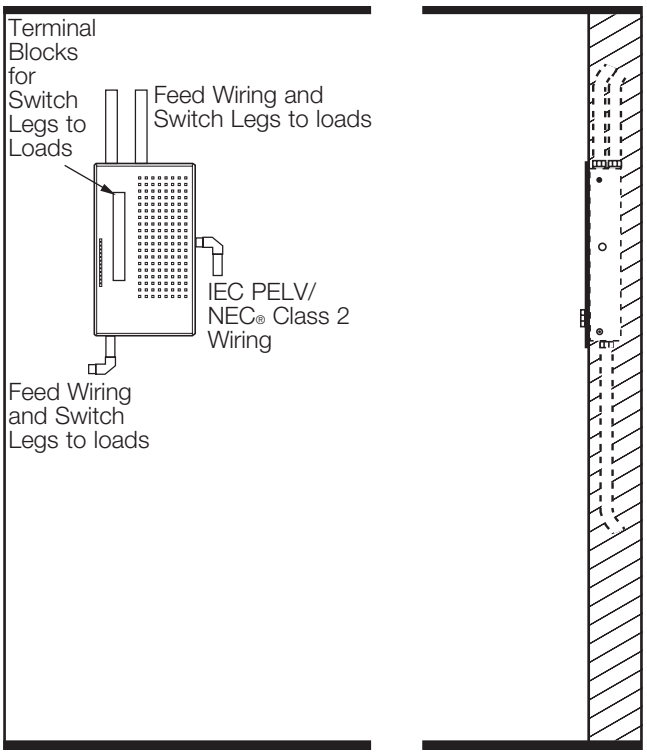
Maximum Feed and Wire Sizes

Consult Wiring Overview pages

Front View **Side View**



Front View **Side View**



Mounting for Standard Size Feed-Through XP

- Surface- or recess-mount indoors.
- Consult Dimensions page for dimensions, conduit knockouts, and mounting holes and hardware.
- Mount only where ambient temperature is 32 °F to 104 °F (0 °C to 40 °C).
- Standard Size XP weighs 80 lb (37 kg). Reinforce wall structure for weight and local codes.
- Mount Panel where audible noise is acceptable. (Internal relays click.)
- Mount Panel so line (mains) voltage wiring is at least 6 ft (1.8 m) from sound or electronic equipment and wiring.
- Mount Panel within 7° of true vertical.

Surface-Mounting

- Surface-mounting keyholes accept 1/4 in (6 mm) mounting bolts. This size is recommended.

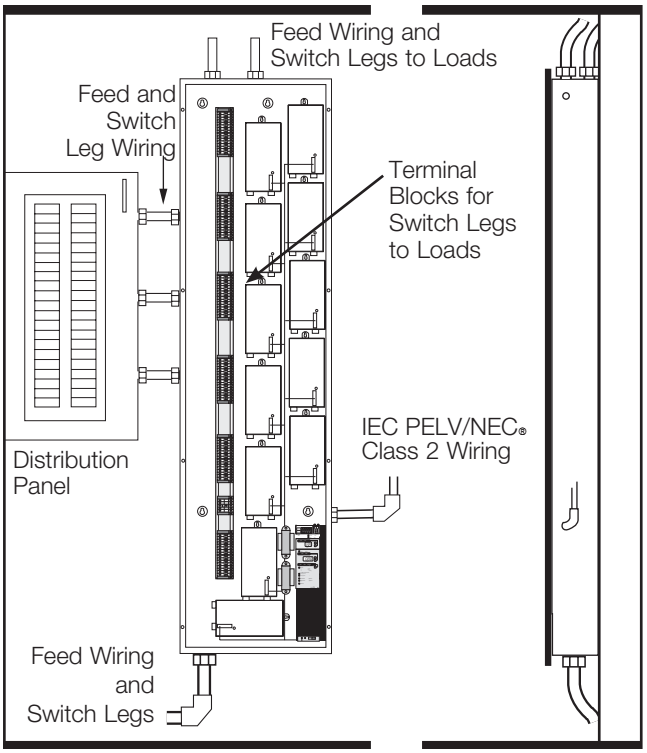
Recess-Mounting

- Mount to wall stud by screwing through slots in corners of panel.
- Mount panel between flush and 1/8 in (3 mm) below finished wall surface.

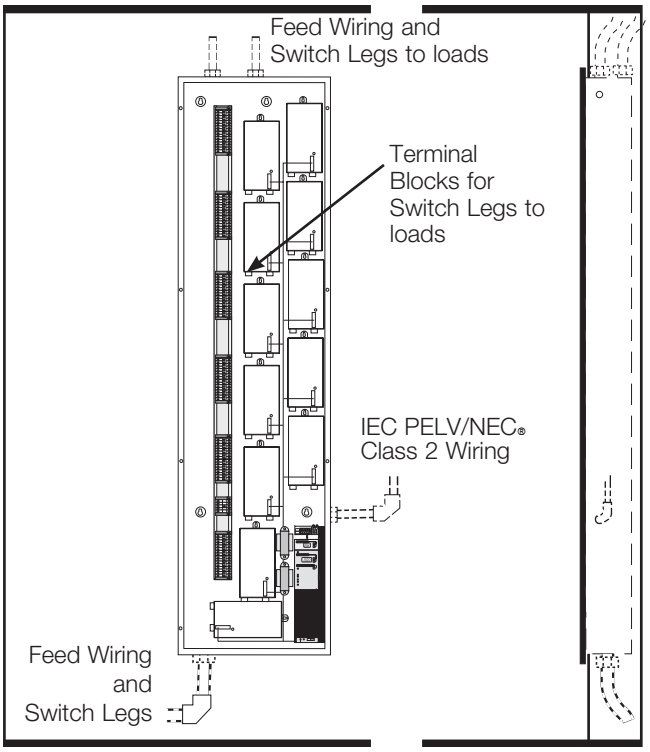
Maximum Feed and Wire Sizes

Consult Wiring Overview pages

Front View **Side View**



Front View **Side View**



Job Name:	Model Numbers:	
Job Number:		

Mounting for Standard Size XP with Branch Circuit Breakers

- Surface- or recess-mount indoors.
- Consult Dimensions page for dimensions, conduit knockouts, and mounting holes and hardware.
- Mount only where ambient temperature is 32 °F to 104 °F (0 °C to 40 °C).
- Standard Size XP weighs 80 lb (37 kg). Reinforce wall structure for weight and local codes.
- Mount Panel where audible noise is acceptable. (Internal relays click.)
- Mount Panel so line (mains) voltage wiring is at least 6 ft (1.8 m) from sound or electronic equipment and wiring.
- Mount Panel within 7° of true vertical.

Surface-Mounting

- Surface-mounting keyholes accept 1/4 in (6 mm) mounting bolts. This size is recommended.

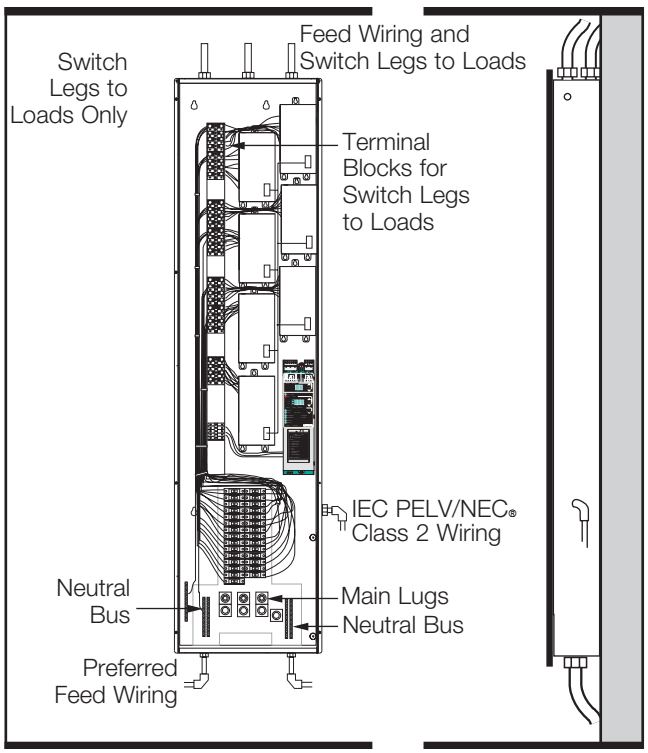
Recess-Mounting

- Mount to wall stud by screwing through slots in corners of panel.
- Mount panel between flush and 1/8 in (3 mm) below finished wall surface.

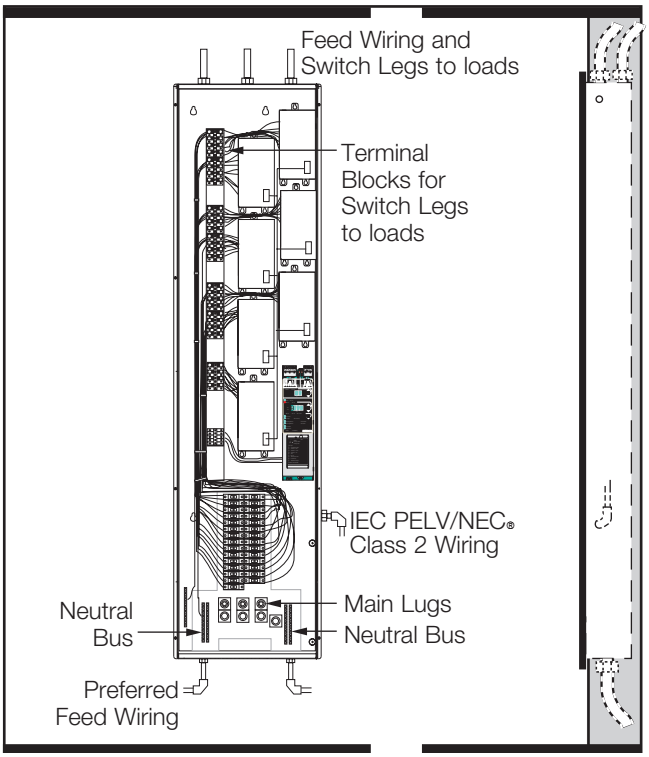
Maximum Feed and Wire Sizes

Consult Wiring Overview pages

Front View **Side View**



Front View **Side View**



Job Name:	Model Numbers:	
Job Number:		

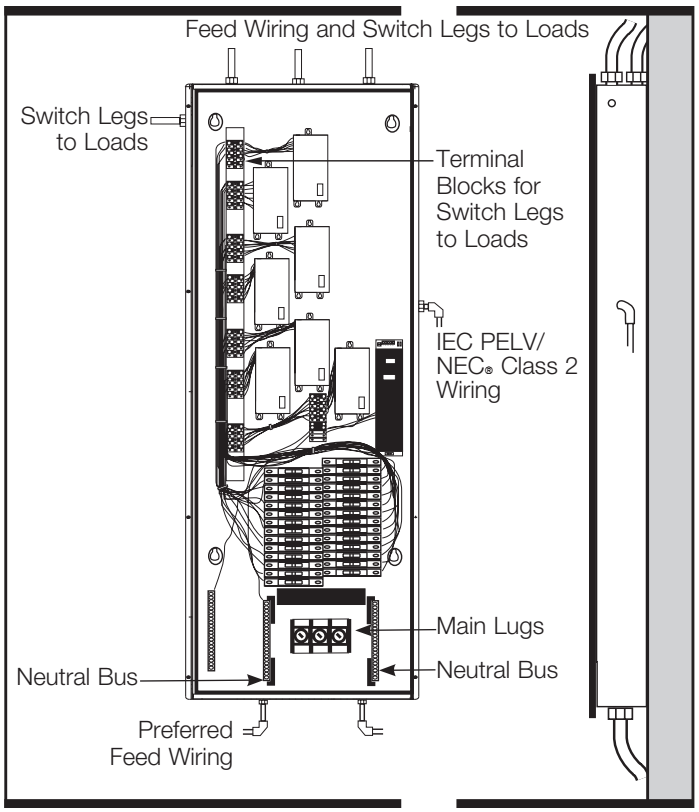
Mounting for Large and Extra-Large XP

- Surface-mount indoors.
- Mount only where ambient temperature is 32 °F to 104 °F (0 °C to 40 °C).
- Large XP Panel weighs 135 lb (61.3 kg). Extra-Large XP Panel weighs 200 lb (90.7 kg). Reinforce wall structure for weight and local codes.
- Mount Panel where audible noise is acceptable. (Internal relays click.)
- Mount Panel so line (mains) voltage wiring is at least 6 ft (1.8 m) from sound or electronic equipment and wiring.
- Mount Panel within 7° of true vertical.
- Lutron recommends 1/4 in (6 mm) mounting bolts.

Maximum Feed and Wire Sizes

Consult Wiring Overview pages

Front View **Side View**



Job Name:	Model Numbers:	
Job Number:		

Wiring Overview — Feed-Through XP Models

- Use a trough when the XP Panel is far away from the Distribution Panel. Splice Neutrals in trough.
- Wire the XP similar to a lighting distribution panel. Run feed and load wiring.
- Use the XP to provide temporary lighting by leaving the bypass jumpers in place and using branch circuit breakers to switch lights on and off.

Wire Sizes

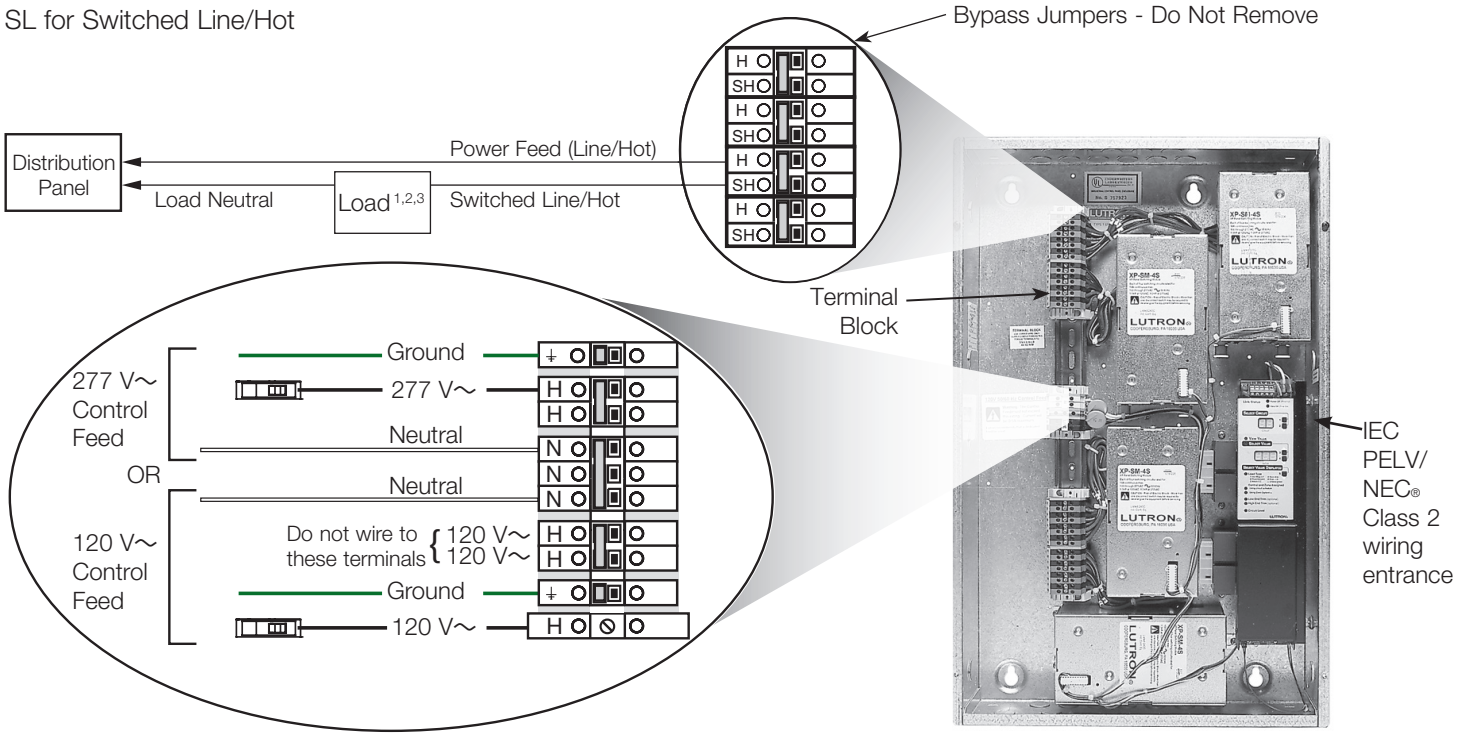
- **Power Feed (Line/Hot):** 14 AWG to 10 AWG (2.5 mm^2 to 4.0 mm^2)
- **Switched Line Hot:** 14 AWG to 10 AWG (2.5 mm^2 to 4.0 mm^2)

Control Circuit

- Supplies power for internal operation.
- Lutron recommends a dedicated 120 or 277 V~, 20 A, 1 phase, 2 wire feed to power the control circuit in the panel.
- If control circuit is tapped from a circuit that powers a relay in the panel, it draws a maximum of 1.5 A toward the total load for that circuit.

Typical Load Circuit

Note: 220 to 240 V~ (non-CE) and 230 V~ (CE) terminals are marked:
- L for Line/Hot
- SL for Switched Line/Hot



1 Load can be either lighting or 20 A receptacle

2 Any receptacles that are controlled by an automatic control device must be marked with "⏻"located on the controlled receptacle outlet where visible after installation as stated in 2014 NEC® Article 406.3(E).

3 To avoid the risk of entrapment, serious injury, or death, these controls must not be used to control equipment which is not visible from every control location or which could create hazardous situations such as entrapment if operated accidentally. Examples of such equipment which must not be operated by these controls include (but are not limited to) motorized gates, industrial doors, space heaters, etc. It is the installer's responsibility to ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls. Failure to do so could result in serious injury or death.

Job Name:	Model Numbers:	
Job Number:		

Wiring Overview — XP with Branch Circuit Breakers

- Wire the XP similar to a lighting distribution panel. Run feed and load wiring.
- Use the XP to provide temporary lighting by leaving the bypass jumpers in place and using branch circuit breakers to switch lights on and off.

Wire Sizes

- **Power Feed (Line/Hot):**

100 to 127 V~	4 AWG (25 mm²) to 250 kcmil (mcm) (120 mm²)
220 to 240 V~	14 to 2 AWG (2.5 to 35 mm²)
230 V~ (CE)	14 to 2 AWG (2.5 to 35 mm²)
277/347 V~	4 AWG (25 mm²) to 300 kcmil (mcm) (150 mm²)

- **Switched Line/Hot:**

  14 AWG to 10 AWG (2.5 mm² to 4.0 mm²)

- **Load Neutral:**

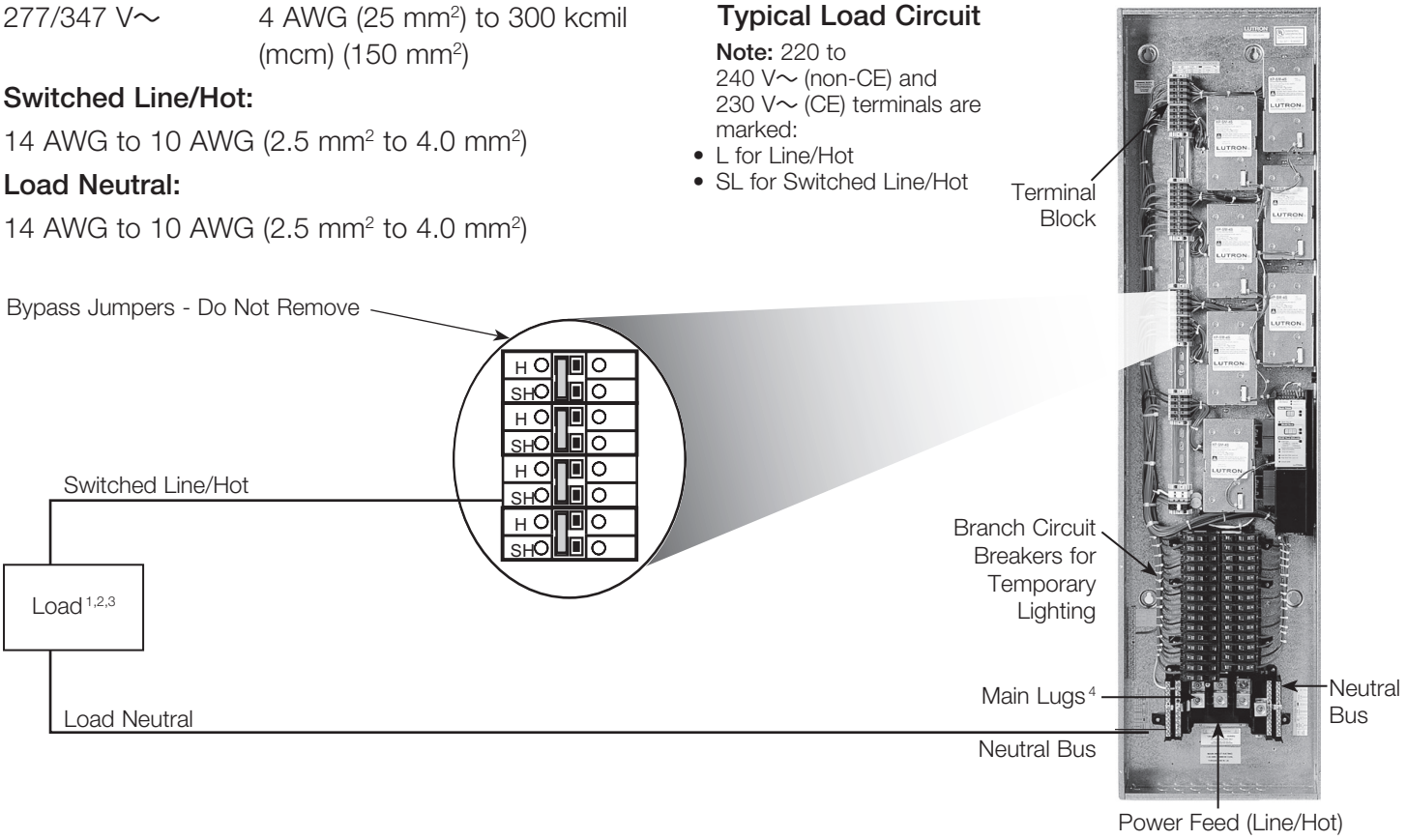
  14 AWG to 10 AWG (2.5 mm² to 4.0 mm²)

Note

- For 120 V~ and 277 V~ panels that have 28 or less switch legs, a dedicated 20 A breaker is provided to power the control circuit.
- For 120 V~ and 277 V~ panels that have 32 or greater switch legs, the control circuit is powered from circuit breaker #1 which also powers relay #1. The control circuit could draw a maximum of 1.5 A toward the total load capacity for that circuit.

Typical Load Circuit

Note: 220 to 240 V~ (non-CE) and 230 V~ (CE) terminals are marked:
- L for Line/Hot
- SL for Switched Line/Hot



1 Load can be either lighting or 20 A receptacle

2 Any receptacles that are controlled by an automatic control device must be marked with "⏻"located on the controlled receptacle outlet where visible after installation as stated in 2014 NEC® Article 406.3(E).

3 To avoid the risk of entrapment, serious injury, or death, these controls must not be used to control equipment which is not visible from every control location or which could create hazardous situations such as entrapment if operated accidentally. Examples of such equipment which must not be operated by these controls include (but are not limited to) motorized gates, industrial doors, space heaters, etc. It is the installer's responsibility to ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls. Failure to do so could result in serious injury or death.

4 Isolator Switch for 220 to 240 V~ and 230 V~ Panels

Job Name:	Model Numbers:	
Job Number:		

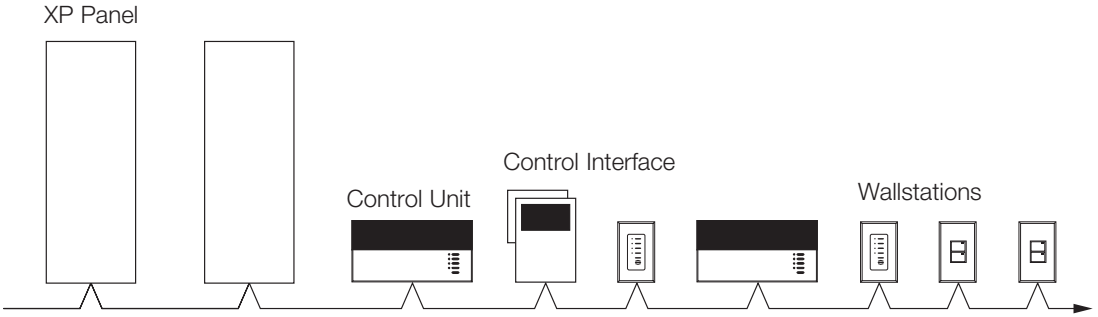
Low-Voltage IEC PELV/NEC® Class 2 Wiring (All Models)

- System communications use Low-Voltage IEC PELV/NEC® Class 2 wiring.
- Wiring must be daisy-chained.
- Wiring must run separately from line (mains) voltage.

GRAFIK Eye® 4000 System

IEC PELV/NEC® Class 2 wiring link requires:

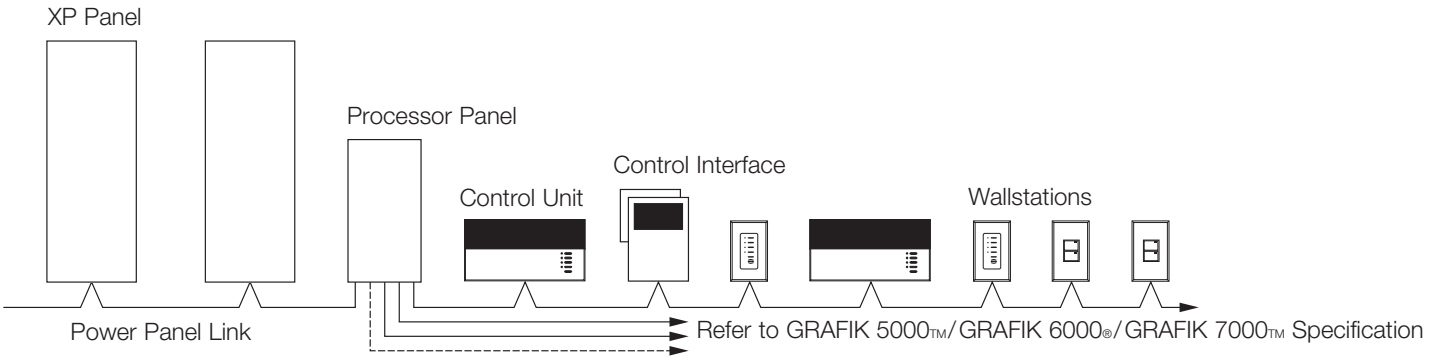
- Two 12 AWG (4.0 mm^2) conductors for control power.
- One twisted, shielded pair of 18 AWG (0.75 mm^2) for data link.
- One 18 AWG (0.75 mm^2) conductor for Emergency (Essential) sense line, from panel to panel.
- Total length of Control Link may be no more than 2000 ft (610 m).
- Approved low-voltage cable is available from Lutron[1], Belden, and Liberty.
- These are approved with 22 AWG (0.34 mm^2) data link wires.



GRAFIK 5000™/GRAFIK 6000®/GRAFIK 7000™ System

IEC PELV/NEC® Class 2 wiring link requires:

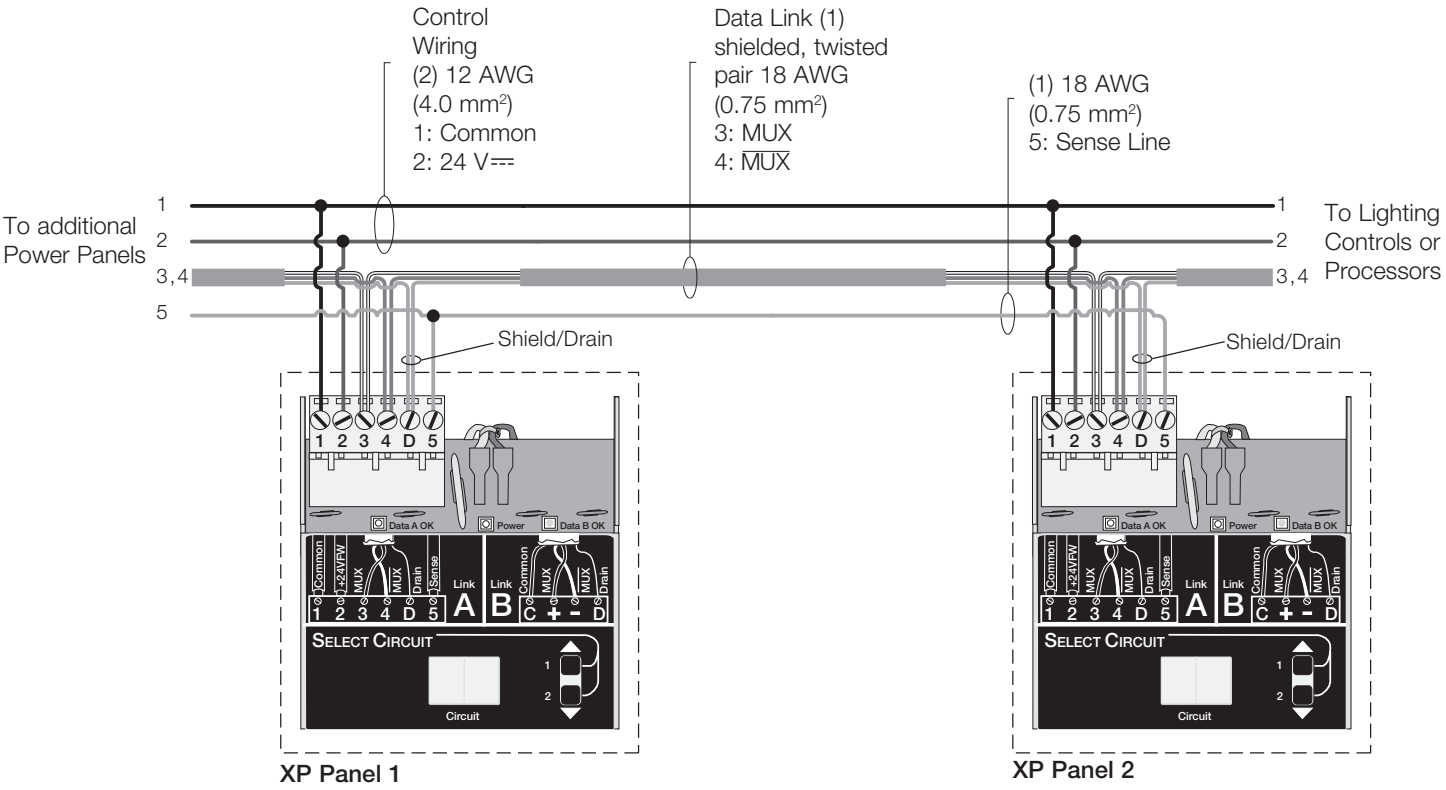
- Two 12 AWG (4.0 mm^2) conductors for control power.
- One twisted, shielded pair of 18 AWG (0.75 mm^2) for data link.
- One 18 AWG (0.75 mm^2) conductor for emergency (essential) sense line, from panel to panel.
- Total length of Control Link may be no more than 2000 ft (600 m).
- If MUX-RPTR interface and GRX-CBL-46L cable[1] is used, length may be up to 4000 ft (1200 m).



[1] GRX-CBL-46L–IEC PELV/NEC® Class 2 wiring cable is available from Lutron and contains:
Two 12 AWG (4.0 mm^2) conductors for control power.
One twisted, shielded pair of 22 AWG (0.34 mm^2) for data link.
One 18 AWG (0.75 mm^2) conductor for emergency (essential) sense line.

Job Name:	Model Numbers:	
Job Number:		

IEC PELV/NEC® Class 2 Panel-to-Panel Wiring (All Models)

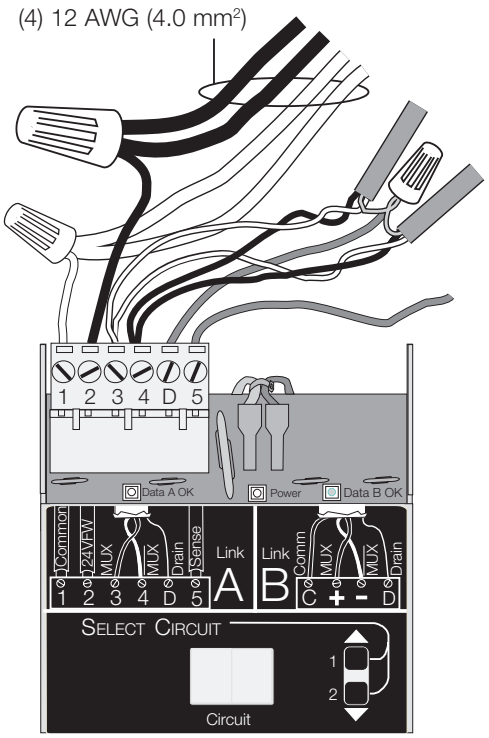


NOTE

- **Emergency Power:** The additional 18 AWG (0.75 mm²) 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 from a specific Normal Panel, a dedicated wire between each pair of Normal (Non-Essential) and Emergency (Essential) panels may be required.
- **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.

IEC PELV/NEC® Class 2 Terminal Connections

Each Low-Voltage IEC PELV/NEC® Class 2 terminal can accept only two 18 AWG (0.75 mm²) wires. Two 12 AWG (4.0 mm²) conductors will not 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.

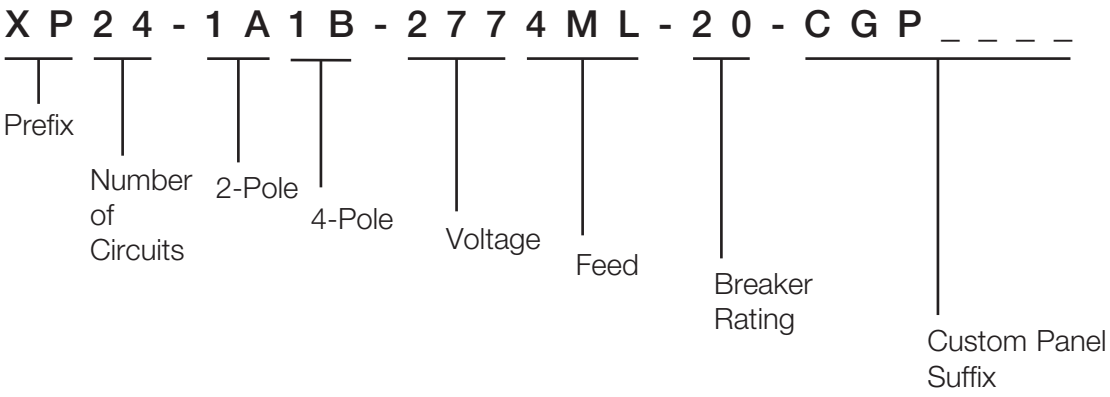
Option	Description	Application
Branch Circuit Protection	Branch Circuit Breakers with higher AIC ratings than those on standard Panels. Panels can also have Branch Circuit Breakers with special ratings such as: • GFI (Ground Fault Interrupt) • ELB (Earth Leakage Breaker) • RCD (Residual Circuit Device)	
Lutron® Ten Volt Module (TVM)	Allows Panels to operate fluorescent ballasts that meet IEC 929 standards for 0-10 V⎓ control including: • Lutron® TVE ballasts • 0-10 V⎓ neon • Pulse Width Modulation (PWM) fluorescent • Tridonic® DSI (Digital Serial Interface) The TVM can sink or source 50 mA (typically 25-50 ballasts) on each circuit.	Jobs with fluorescent ballasts that require 0-10 V⎓, PWM, or DSI control.
2Link™	• Allows a DMX512 theatrical console to operate Dimming Panels' load circuits. • Allows a GRAFIK Eye® 4000 Series to handle 128 zones (two links of 64 zones). The two links are independent and do not communicate. • Allows two GRAFIK Eye® 4000 Series to share the same Dimming Panel.	• Control of architectural lighting from a DMX512 theatrical console is required. • A mix of architectural and theatrical lighting is present. • Multiple systems without space to hang panels.

Job Name:	Model Numbers:	
Job Number:		

XP Panels with 480 V~ Contactors

- Available in large enclosure size only.
- Branch circuit breaker and feed-through models are available.
- Contactors provided in 2 pole and 4 pole, 30 A maximum.

How to Build a Model Number with 480 V~ Contactors



Prefix:

XP Switching panels.

Number of Circuits:

Total number of circuits (switch legs) in the panel not including 480 V~.

2-Pole (A):

Total number of 2-pole 30 A contactors in the panel.

4-Pole (B):

Total number of 4-pole 30 A contactors in the panel.

Voltage:

Omit for feed-through.
277 (277 V~)

Feed:

FT (feed-through panels)

4ML (3 phase 4 wire feeders)

Breaker Rating:

Omit for feed-through panels.

20 (20 A branch circuit breakers; 20 A branch circuit breakers have a 16 A continuous load rating).

Custom Panel Suffix:

Indicates panel with special options.
Contact Lutron for specific options.

Job Name:	Model Numbers:	
Job Number:		

Feed-Through XP Panels with 480 V~ Contactors

(without branch circuit breakers)

Large XP Switching Panels Feed-Through Models for 277 V~ and 480 V~ Contactors[1]

Model Prefix	Switch Legs	2-Pole	4-Pole	Feed Type	Maximum Feed
XP4	4	8 Contactors Maximum		Feed-Through	277 V~ 20 A
XP8	8				
XP12	12				
XP16	16				
XP20	20				
XP24	24				
XP28	28				
XP32	32				
XP36	36				
XP40	40				
XP44	44				
XP48	48				

Wire Sizes

- 14 AWG to 10 AWG (2.5 mm^2 to 4.0 mm^2) for Feed Wiring and Switch Legs (to loads).
- Power (Line/Hot) and Switched Line/Hot connect directly to Terminal Block for Switch Legs.

[1] Contact Lutron for lead time.

Job Name:	Model Numbers:	
Job Number:		

Branch Circuit Breaker XP Panels with 480 V~ Contactors

Large XP Panels with Circuit Breakers for 277 V~ (max feed is 250 A) and 480 V~ Contactors[1]

Model Prefix	Switch Legs	2-Pole	4-Pole	Feed Type
XP4	4	5 Contactor Maximum		3Ø 4W Main Lug Accepts 4 AWG (25 mm²) to 250 kcmil (mcm) (120 mm²)
XP8	8	5 Contactor Maximum		
XP12	12	5 Contactor Maximum		
XP16	16	5 Contactor Maximum		
XP20	20	5 Contactor Maximum		
XP24	24	1 Contactor Maximum		
XP28	28	1 Contactor Maximum		

Large Softswitch128® Panels with Circuit Breakers for 277 V~ (max feed is 250 A) and 480 V~ Contactors with 2-Pole Breakers[2] to Power the 480 V~ load[1]

Model Prefix	Switch Legs	2-Pole	4-Pole	Feed Type
XP4	4	5 Contactor Maximum (20 Pole Maximum)		3Ø 4W Main Lug Accepts 4 AWG (25 mm²) to 250 kcmil (mcm) (120 mm²)
XP8	8	5 Contactor Maximum (20 Pole Maximum)		
XP12	12	5 Contactor Maximum (8 Pole Maximum)		
XP16	16	5 Contactor Maximum (6 Pole Maximum)		
XP20	20	5 Contactor Maximum (4 Pole Maximum)		
XP24	24	1 Contactor Maximum (2 Pole Maximum)		
XP28	28	1 Contactor Maximum (1 Pole Maximum)		

Wire Sizes

- 14 AWG to 10 AWG (2.5 mm² to 4.0 mm²)

[1] Contact Lutron for lead time.

[2] Each 480 V~ pole requires a 2 pole breaker. The Softswitch® panel has a 30 position load center.

Job Name:	Model Numbers:	
Job Number:		

480 V~ Contactor XP Panels, Feed-Through Wiring Overview

(without branch circuit breakers)

Wire the XP panel as shown. Use a trough when the XP Panel is not adjacent to a distribution panel. Splice Neutrals in trough.

480 V~ Contactor Load Wiring

Each contactor circuit requires a dedicated 2-pole 277 V~ 30 A max circuit breaker.

480 V~ Control Wiring

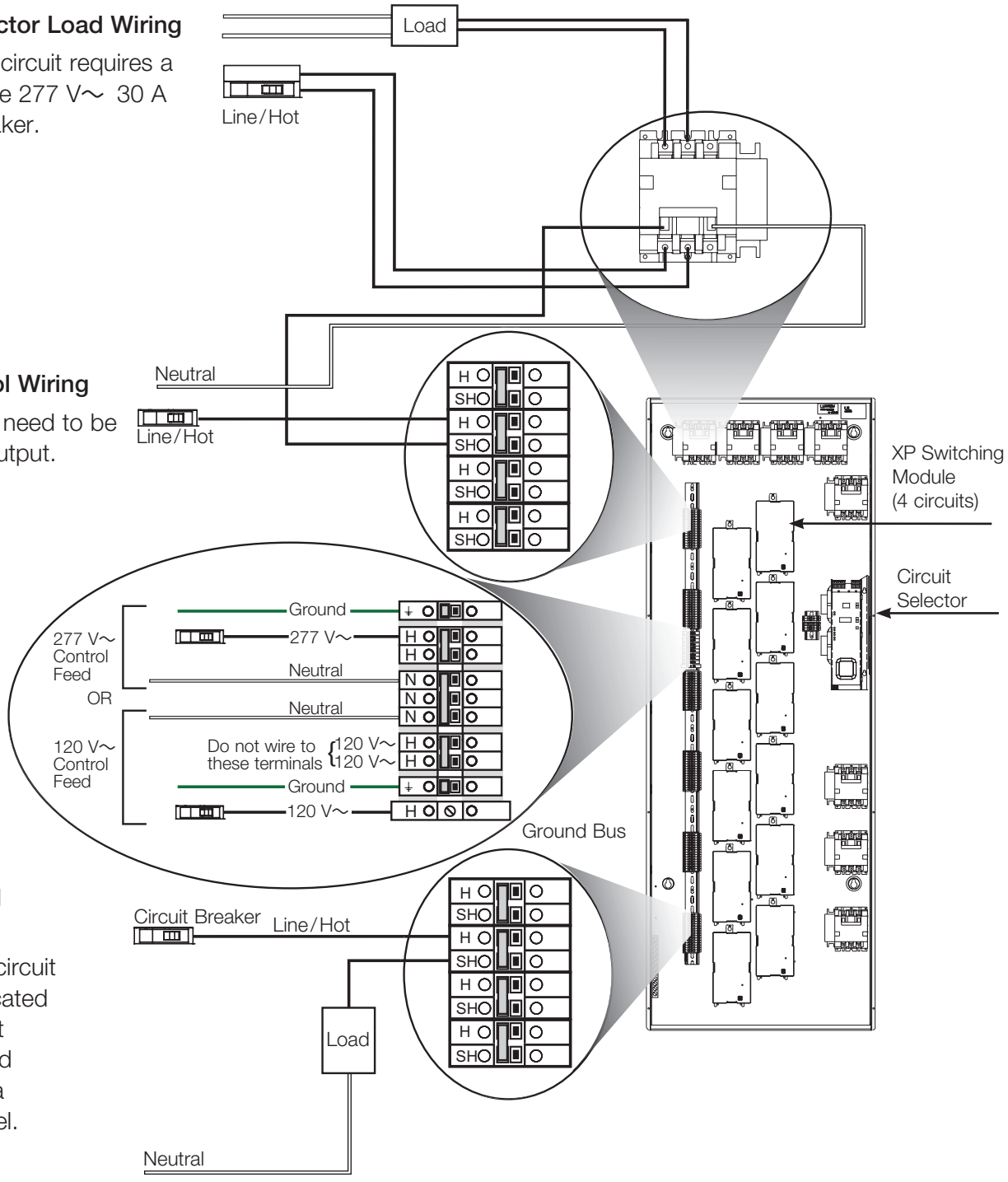
The Contactors need to be wired to a XP output.

Control Wiring

Control wiring requires a dedicated feed and circuit breaker.

Switched Load Wiring

Each switched circuit requires a dedicated 20 A max circuit breaker and feed wiring to/from a distribution panel.



Job Name:	Model Numbers:	
Job Number:		

480 V~ Contactor XP Panels with Branch Circuit Breakers

Load Wiring Overview

Wire the XP panel as shown.

480 V~ Contactor Load Wiring

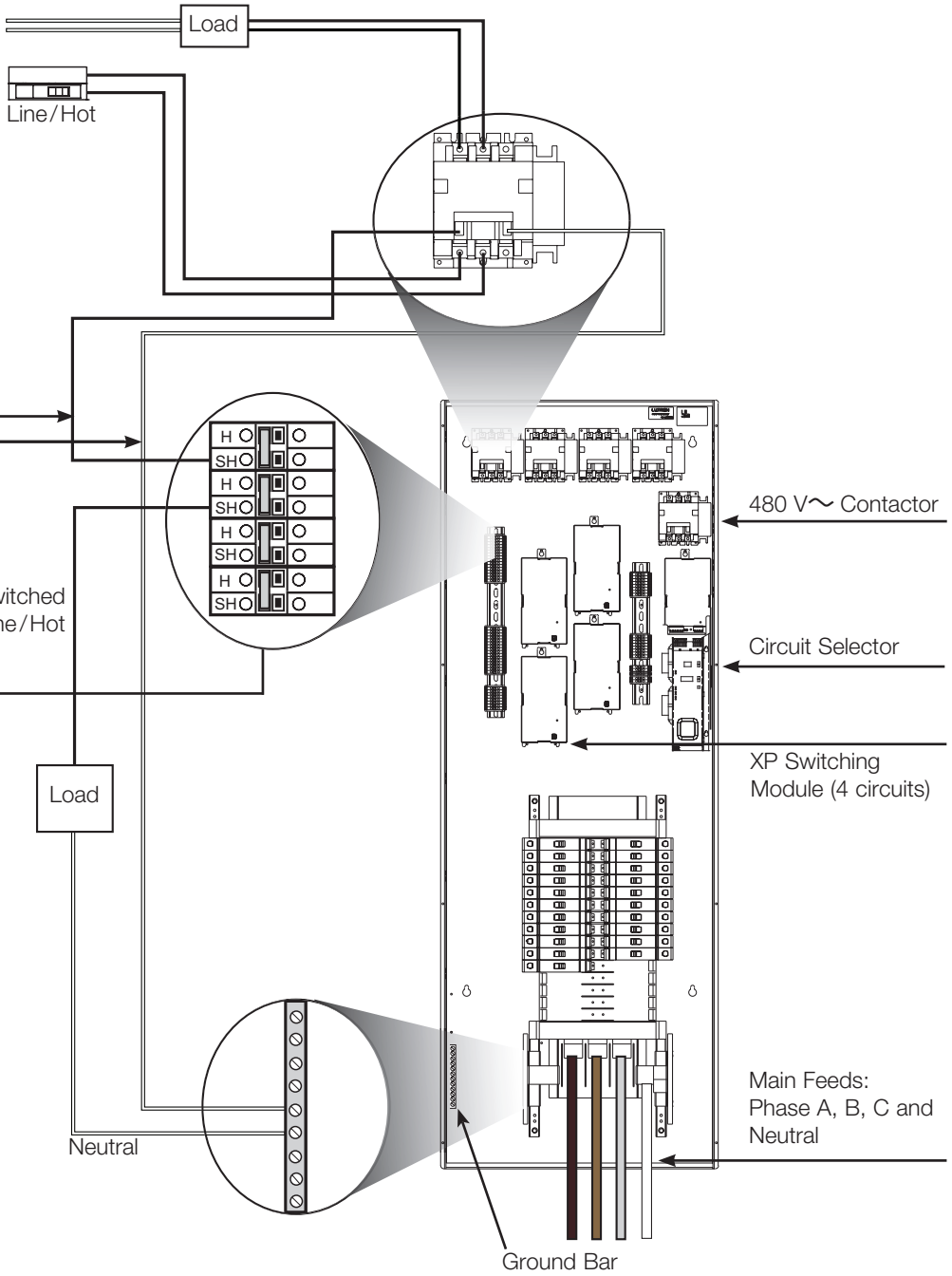
Each contactor circuit requires a dedicated 2-pole 277 V~ 30 A circuit breaker. The 2-pole breaker could be installed in the XP panel or in a distribution panel by others.

480 V~ Control Wiring

The Contactors need to be wired to a XP output.

Do Not Remove bypass jumpers until load wiring is verified

Leaving bypass jumpers installed allows XP panels to be used to provide temporary lighting until load wiring is verified.



Job Name:	Model Numbers:	
Job Number:		