

Rania Tape Light Solutions

PRODUCT DESCRIPTION

The Rania tape light solution takes scene control to the next level, offering a simple and seamless way to add accent lighting to Lutron connected home projects.

A complete Rania tape light solution consists of field-cutable LED tape, a wireless controller with integrated LED drivers, high-reliability punch connectors, dedicated wiring, and a power supply or interface. For an added level of quality, install the tape light inside the Lutron LED tape extrusions.

FEATURES

Lighting System

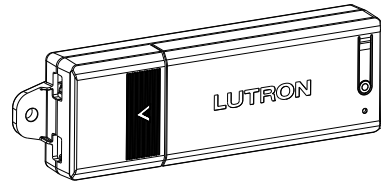
- HomeWorks QSX seamless integration
- User-programmable intensity and color temperature presets
- Warm dim to mimic the dimming curve of an incandescent lamp
- Automatically changes color temperature based on time of day
- Manual adjustments via the app or integration

Multi-Channel Wireless Controller

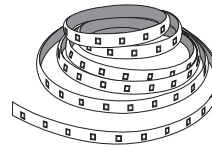
- Dimming Range 0.1%-100%
- 96 W rated load
- 50,000 hours rated lifetime
- Uses Clear Connect–Type X wireless communication
- Compact, easy to hide

Power Interface

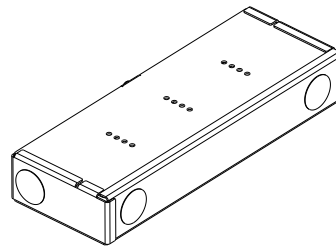
- Powers up to three Multi-Channel Wireless Controllers and 96 W of LED tape
- Class 2 separation
 - LU-PH3-A: Barrier provided in the wiring compartment
 - LU-PH3-B: Barrier pre-installed



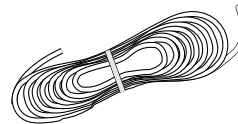
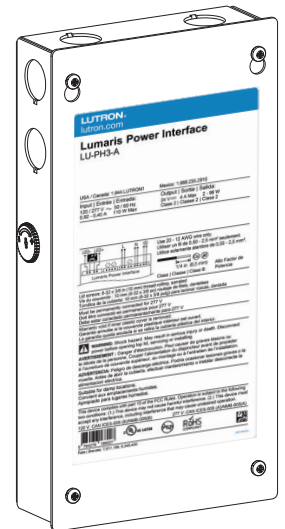
Multi-channel Wireless Controller



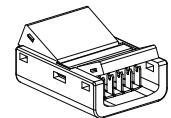
LED Tape



Power Interfaces



Cable



Connectors



SPECIFICATIONS

MULTICHANNEL WIRELESS CONTROLLER

Regulatory Approvals

Certifications	cULus Listed for USA and Canada FCC Part 15 Class B compliant ICES-005 compliant
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Electrical

Input	24 V $\overline{=}$ 4.0 A
Output	24 V $\overline{=}$ 96 W max

Electrical Protection	Output short-circuit and overload protection
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Environmental

Ambient Temperature	32 °F to 104 °F (0 °C to 40 °C)
Humidity	0% to 95%, Non-condensing
Location	Indoor use only
Warranty	For warranty information, please visit https://assets.lutron.com/a/documents/043492.pdf The warranty will not cover issues caused by use of incompatible devices (including non-Lutron LED tape and/or power supplies).

POWER INTERFACE

Regulatory Approvals

Certifications	cULus Listed for USA and Canada FCC Part 15 – Class A compliant (277 V \sim) – Class B compliant (120 V \sim) Meets UL® 8750/CSA C22.2 No. 250.13-14, "Light Emitting Diode (LED) Equipment For Use in Lighting Products" Class 2 output; meets UL® 1310/CSA C22.2 No. 223-M91
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Electrical

Operating Voltage	120 V \sim / 277 V \sim 50/60 Hz
Output	24 V $\overline{=}$ constant voltage at high-end
Output Load Range	2 W to 96 W at high-end
Electrical Protection	Output open-circuit, short-circuit and overload protection

Environmental

Ambient Temperature	32 °F to 104 °F (0 °C to 40 °C)
Humidity	LU-PH3-A – 0% to 95%, Non-condensing LU-PH3-A – 5% to 95%, Non-condensing
Location	Indoor use only
Warranty	For warranty information, please visit https://assets.lutron.com/a/documents/043492.pdf The warranty will not cover issues caused by use of incompatible devices (including non-Lutron LED tape and/or power supplies).

ACCESSORIES AND CONNECTORS

Wiring

LU-WK1-4W	4 × 22 AWG (0.5 mm ²) cable 50 ft (15.2 m)
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Connectors

LU-CK1-4W	4-pin wire-to-tape connectors (qty: 10)
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Extrusions

Compatible with the full list of extrusions. Refer to Specification Submittal PN 3691292 at www.lutron.com for further details



TAPE LIGHT SOLUTIONS

P/N 3663141 Rev A

Specifications are subject to change without notice

CONTROLLER ORDERING GUIDE

Please download this PDF to use the interactive drop down features of the ordering guide.

HWL-

Product Line

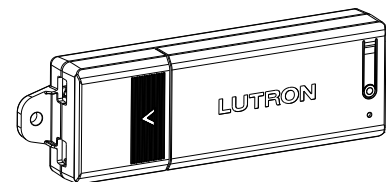
MWCL-

Model

WH

Finish

Order code: **HWL-MWCL-WH**



Multi-channel Wireless Controller

Product Line	Code	Finish	Code
Residential (HomeWorks compatible)	HWL-	White	WH
Model			
Multi-channel Wireless Controller	MWCL-		



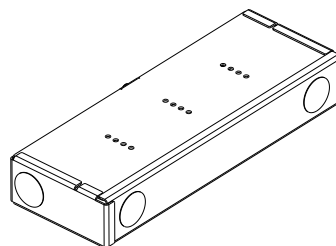
TAPE LIGHT SOLUTIONS

P/N 3663141 Rev A

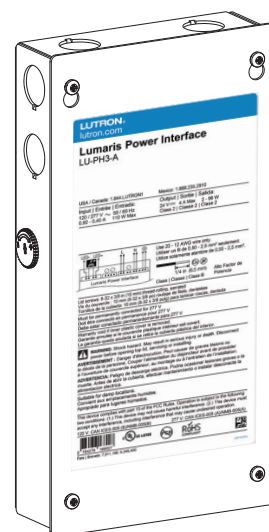
Specifications are subject to change without notice

POWER INTERFACE ORDERING GUIDE

Lutron 96 W Tape Light Power Interface	LU-PH3-B
Lumaris Power Interface	LU-PH3-A



LU-PH3-B

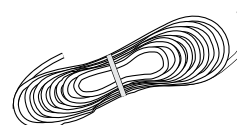


LU-PH3-A

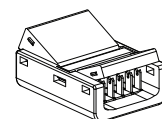
CABLE AND CONNECTOR ORDERING GUIDE

4×22 AWG (0.5 mm ²) cable 50 ft (15.2 m)	LU-WK1-4W
4-pin wire-to-tape connectors (qty. 10)	LU-CK1-4W

NOTE: LU-CK1-4W MUST be used to connect the wire to the cut tape segments. Use LU-WK1-4W to guarantee proper electrical connection with LU-CK1-4W.



Cable



Connectors



TAPE LIGHT SOLUTIONS

P/N 3663141 Rev A
Specifications are subject to change without notice

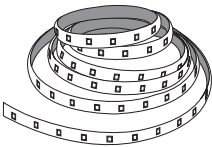
TAPE ORDERING GUIDE

LU-
Product

Tape Length

RANIA-
Product Line

IN
Location



LED Tape

Order code: _____

Product	Code	Product Line	Code	Location	Code
Lutron	LU-	Rania	RANIA-	Indoors	IN
Tape Length					
16.4 ft (5 m)	T05-				
98.4 ft (30 m)	T30-				

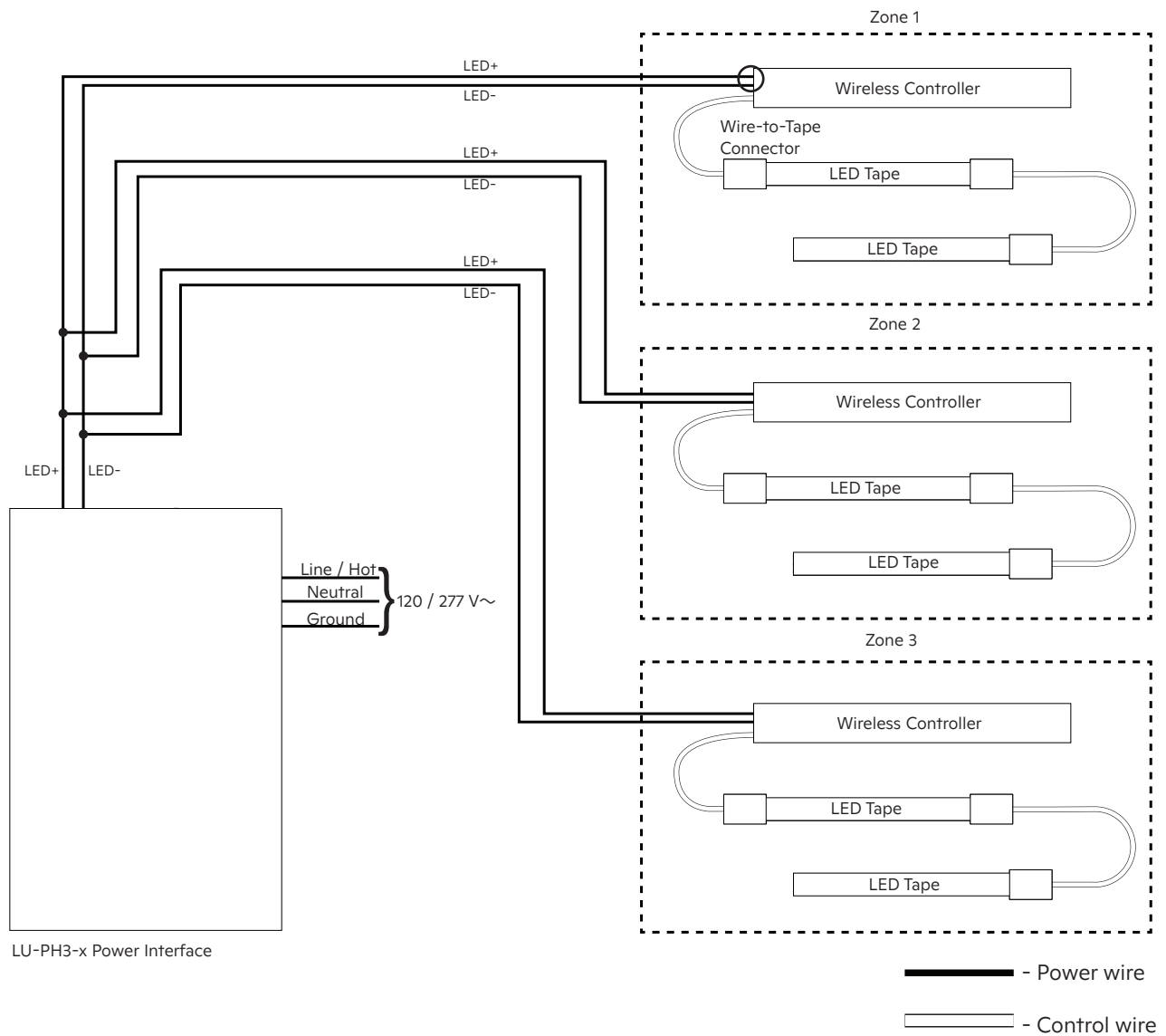
Wiring

Power Interfaces (LU-PH3-A; LU-PH3-B)

- Power up to three wireless controllers and 96 W of LED tape.
- LU-PH3-A is grounded by a terminal connection. LU-PH3-B is grounded by a grounding screw.
- If wireless controllers are programmed in separate zones, certain wiring configurations are better at minimizing any interactions between zones:
 - **GOOD:** LED +/- wires are in a T-tap configuration to one power interface (**Wiring Diagram B**)
 - **BETTER:** LED +/- wires are in a homerun configuration to one power interface (**Wiring Diagram A**)
 - **BEST:** Each controller is powered by its own dedicated power interface
- If wireless controllers are programmed in a single zone, LED+ and LED- wires can be wired either in a homerun or T-tap configuration (**Wiring Diagram A or Wiring Diagram B**) without concern of interaction between controllers
- LU-PH3-A: Terminals on the power interface accept 12 AWG to 20 AWG (4.0 mm² to 0.75 mm²).
 - Each screw terminal may only accept one wire.
 - Barrel-to-terminal adapter terminals accept 16 AWG to 20 AWG (1.5 mm² to 0.75 mm²). Torque to 5 in-lbs (0.5 N•m).
 - If using 14 AWG (2.5 mm²) or 12 AWG (4.0 mm²) wire for LED+ and LED- wires from the power interface to the barrel-to-terminal adapter, splice a small piece of 16 AWG (1.5 mm²) wire onto a 12 AWG (4.0 mm²) or 14 AWG (2.5 mm²) wire to insert into the barrel-to-terminal adapter.
- LU-PH3-B: Use provided wire connectors to connect flying leads to wire per instructions printed on the connector bag.
- Please see Application Note #830 (P/N 048830) at www.lutron.com for more guidance on wiring.

Wiring (cont.)

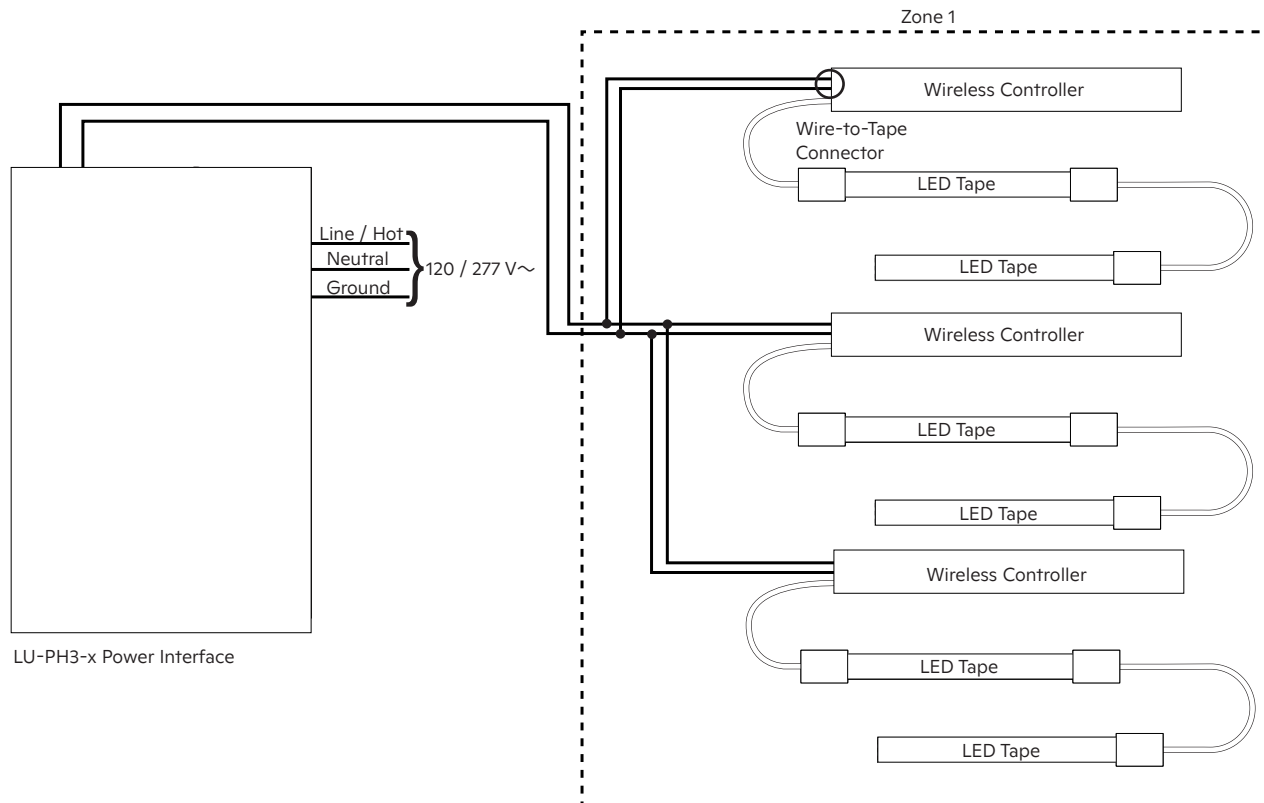
Wiring Diagram A: Homerun Wiring Configuration



NOTE: (LU-PH3-A only) When wiring 3 zones (wireless controllers) to the power interface, two of the three wireless controller LED+ and LED- wires need to be spliced together in the power interface wiring compartment into a single wire run to the terminal block. LED+ and LED- terminals on the wireless controller accept one wire per terminal only.

Wiring (cont.)

Wiring Diagram B: T-tap Wiring Configuration *



NOTE: For more details regarding wire lengths for Rania, please see Application Note #830 (P/N 048830) at www.lutron.com

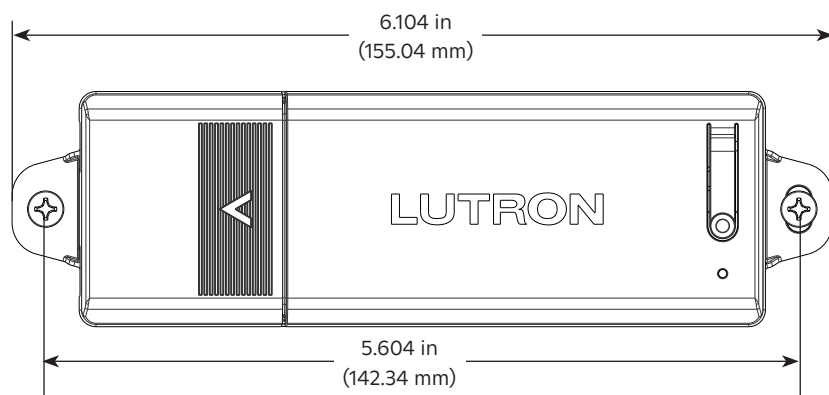
NOTE: To minimize the effect of lumen drop with Rania tape lights, it is recommended to use the "Dual End Option" for wiring as indicated in page 3 of Application Note #830 (P/N 048830) at www.lutron.com

* May result in subtle interaction between controllers programmed in separate zones.

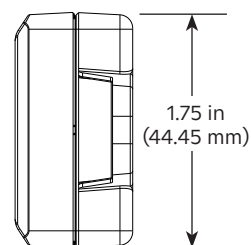
PRODUCT DIMENSIONS

Multi-channel Wireless Controller (HWL-MWCL-WH)

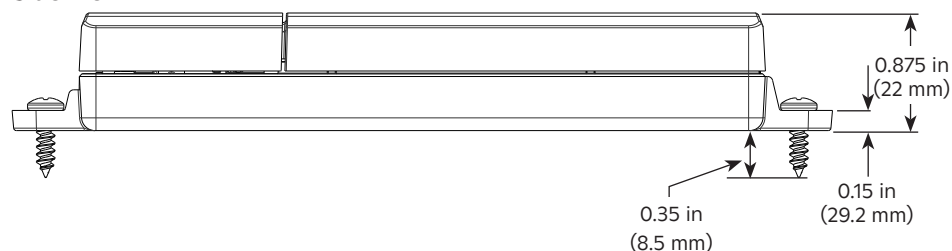
Top View



End View



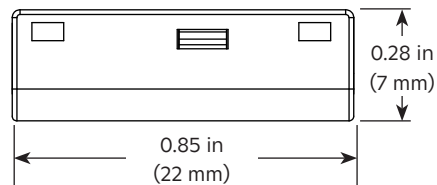
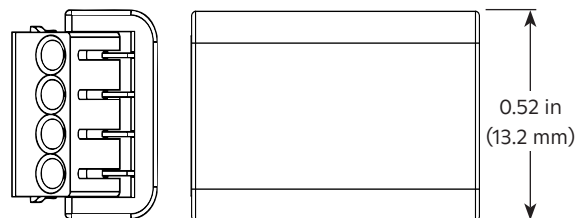
Side View



NOTE: The location of the wireless controller must be considered when laying out the Clear Connect - Type X network. For myLutron users, please see Application Note #745 (P/N 048745) at www.lutron.com for additional information on Clear Connect - Type X Best Practices.

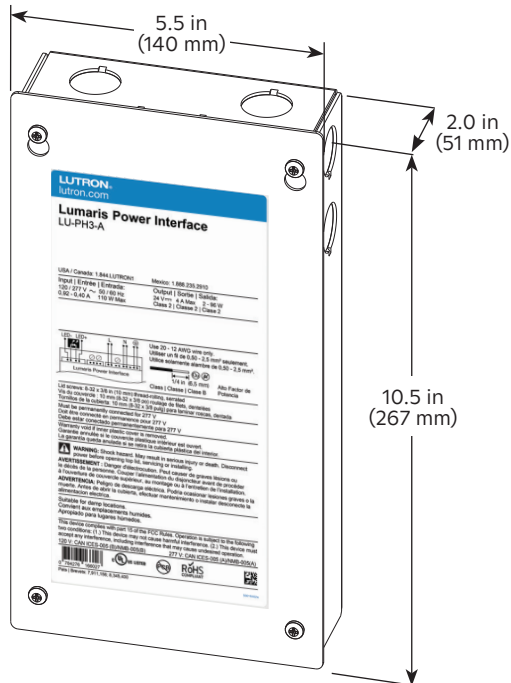
NOTE: Do not mount wireless controllers in or on metal enclosures or cabinets.

4-pin Wire-to-Tape Connector (LU-CK1-4W)



PRODUCT DIMENSIONS (cont.)

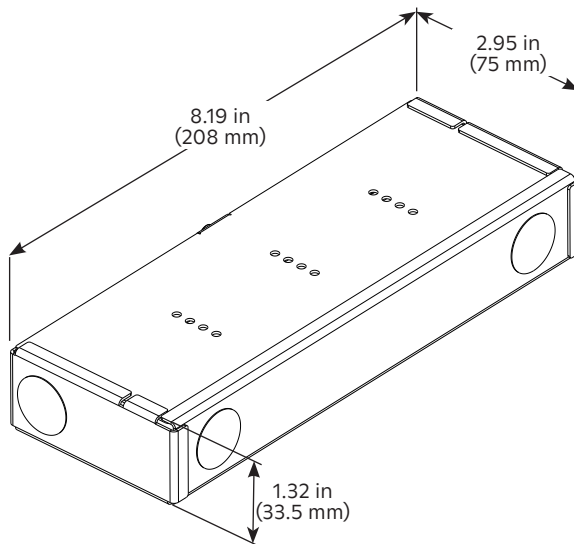
Power Interface Enclosure (LU-PH3-A)



Knockouts

- Sides
 - 4 locations: 1/2 in or 21 mm trade size
- Top
 - 2 locations: 1/2 in or 21 mm trade size

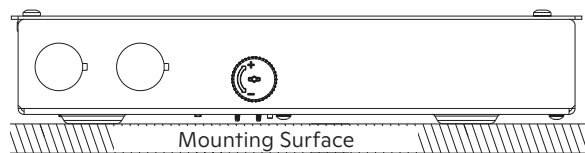
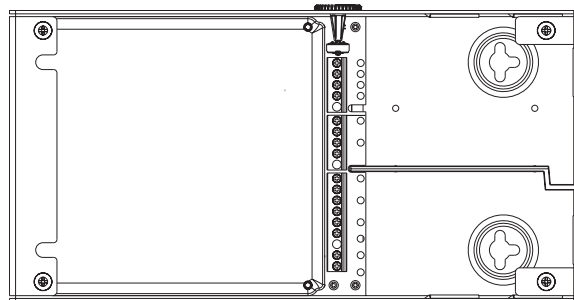
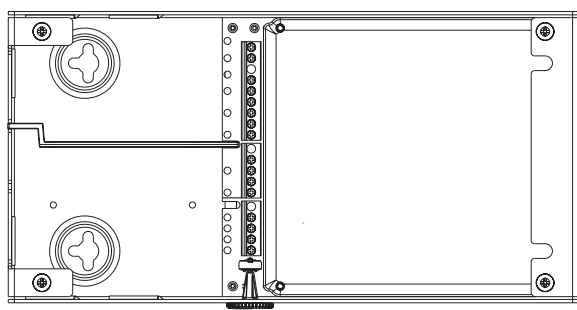
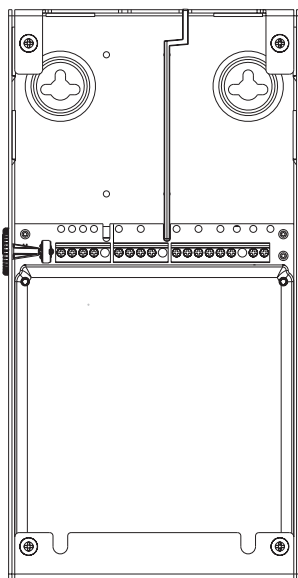
Power Interface Enclosure (LU-PH3-B)



Knockouts

- Sides
 - 6 locations: 1/2 in or 21 mm trade size
- Bottom
 - 2 locations: 1/2 in or 21 mm trade size

Mounting Options - Power Interface Enclosure (LU-PH3-A) ^{1,2}



NOTE: The gray knob on the side of the enclosure is not used and does not need to be accessed after installation. This knob has no affect on the operation of the power interface.

- 1 Any other mounting configuration will require additional mechanical support. Improper installation may result in hazards to personnel or property.
- 2 Mount the power interface in a position where it can be easily located and accessed if service or troubleshooting is necessary.

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