International Palladiom Keypad Installation Best Practices

Overview

Once installed, the Palladiom keypad is a beautiful wall control designed to be elegant and discreet. To ensure the best installation possible, this document outlines the international Palladiom keypad installation best practices.

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Wallbox Selection

Most wallboxes are well-suited to be used for Palladiom installations with few exceptions. To ensure that the keypad's adapter will be able to cover the wallbox and its installation, the wallboxes used for one-column, two-column, and four-column units should have a height, width, and diameter less than 75 mm (3 in). In order to ensure spacing exists for the connector and wiring, the depth of any wallbox should be greater than 25 mm (1 in).

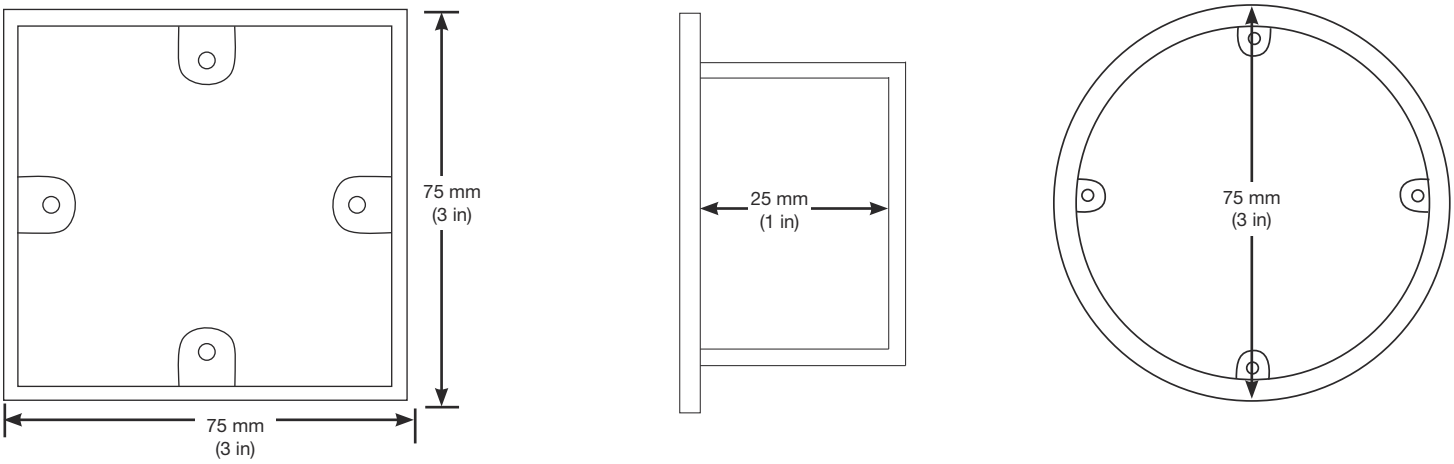
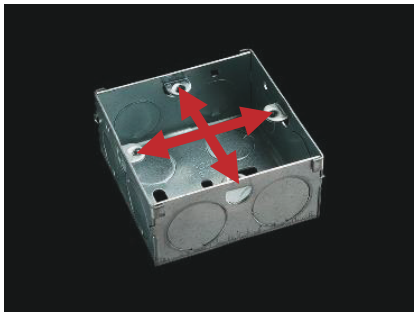
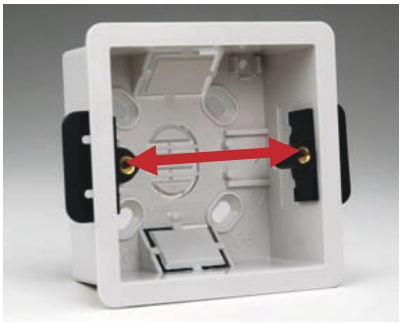


Figure 1: Visual depiction of limits of wallbox size.



UK Style Square Metal Wallbox:
Screw Spacing: 60.3 mm (2.4 in) (red arrows)
Recommended Lutron Part Number:
EBB-1-SQ*
EBB-15-SQ*



UK Style Square Plastic Wallbox:
Screw Spacing: 60.3 mm (2.4 in) (red arrows)
(Not sold by Lutron)



International Style Round Wallbox:
Screw Spacing: 60.3 mm (2.4 in) (red arrows)
Recommended Lutron Part Number:
EBB-1-RD*
EBB-15-RD*

* Please reference Table 1 on the next page for more information.

Wallbox Selection *(continued)*

A four-column keypad requires two wallboxes that must be spaced 92 mm (3.63 in) apart horizontally from wallbox centerline to wallbox centerline. Additionally, the screw spacing should be between 60 mm and 60.3 mm (~2.38 in) to ensure proper compatibility with the unit's adapter.

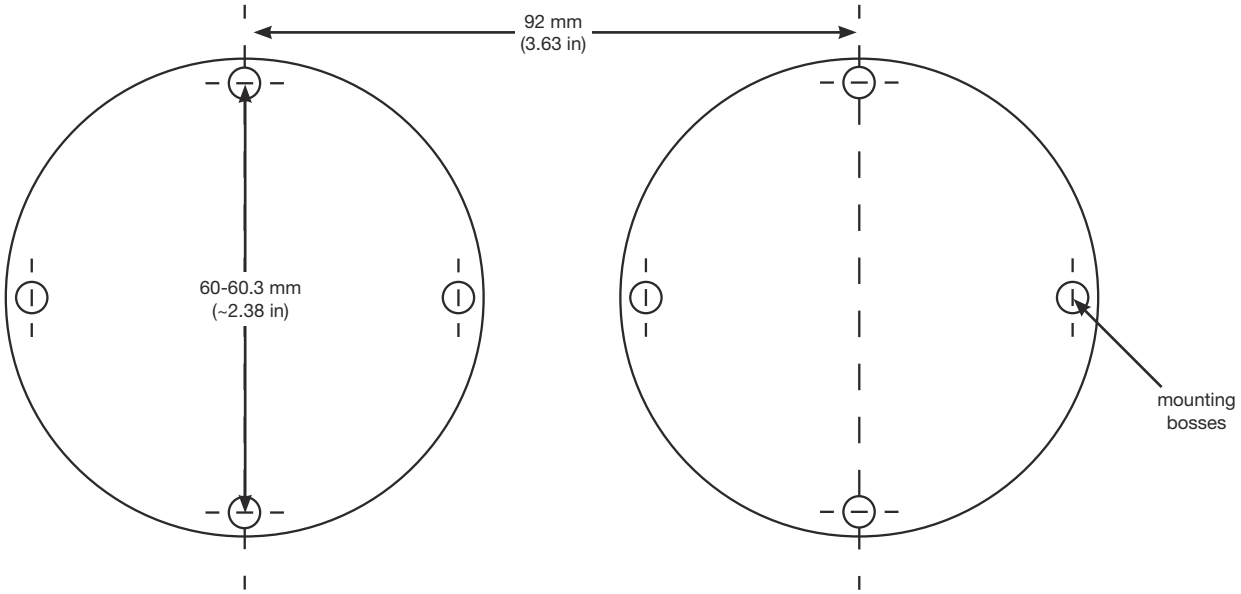


Figure 2: Schematic for four-column wallbox installation.

For one-column, two-column, and four-column Palladiom keypads, Lutron offers standard wallboxes using Lutron part numbers described in the table below.

Qty	1 Unit	15 Units
Round Wallbox	EBB-1-RD	EBB-15-RD
Square Wallbox	EBB-1-SQ	EBB-15-SQ

Table 1: Part Number for Lutron offered standard wallboxes.

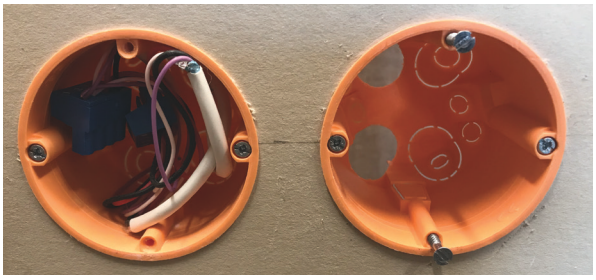


Photo 1: Example of four-column wallbox installation.

Wall Inspection and Preparation

One of the most important factors to consider in any Palladiom installation should be the flatness of the wall selected. A non-flat wall could be caused by various factors that include decorative wall coverings (tile, stone, etc.), plaster not evenly applied, drywall spackle applied but not sanded evenly, etc. This non-flat wall could create a gap between the adapter and wall or the faceplate and adapter. If the gap is too large, the snaps in one or more corners may disengage which will cause rocking, or in some extreme cases the unit will not be able to be installed into the adapter or may disengage over time.



Photo 2: Photo of straight edge used to evaluate wall flatness for Glass Units.

Wall Inspection and Preparation *(continued)*

Additionally, the wall and the surrounding area in which the Palladiom unit is installed can impact Dynamic Backlight Management (DBM). Based on your preference and the color of the wall, you may want to adjust the DBM settings in your myRoom/HomeWorks Designer Tool. Shelves and other devices (to include additional Palladiom units) should be installed at least 75 mm (3 in) from the bottom of the original keypad to the top of the shelf or other device.

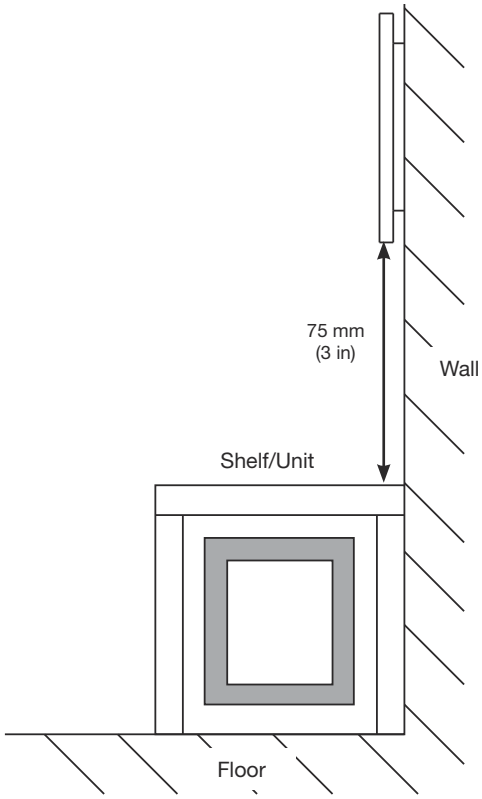


Figure 3: Space required between bottom of keypad and shelf or unit directly below it.

Wall Inspection and Preparation *(continued)*

If the installation wall is soft (ex. fabric, padded headboards), care should be taken to ensure the material does not wrap around the Palladiom unit and block the dynamic backlighting sensor. If you wish to install a unit in this environment, please contact Lutron Customer Assistance at 1.844.LUTRON1 for options.

Cutting Holes in Wall

Debris or burrs left from hole construction can cause gaps to exist between the wall and the Palladiom keypad.

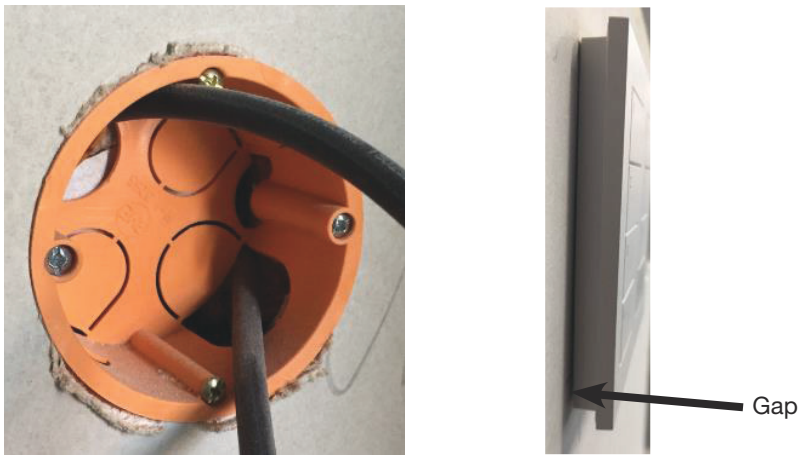


Photo 3: Before and after photo of debris and burr created during drywall installations.

Wallbox Installations

Prepare the wall and wallbox hole as described in the previous sections. Install the wallbox to ensure that the adapter does not contact it and that the mounting bosses/brackets are as close to the wall as possible. The goal of this installation is to ensure that the unit cannot shift on the wall under normal use while minimizing the gap between the wall and the adapter.

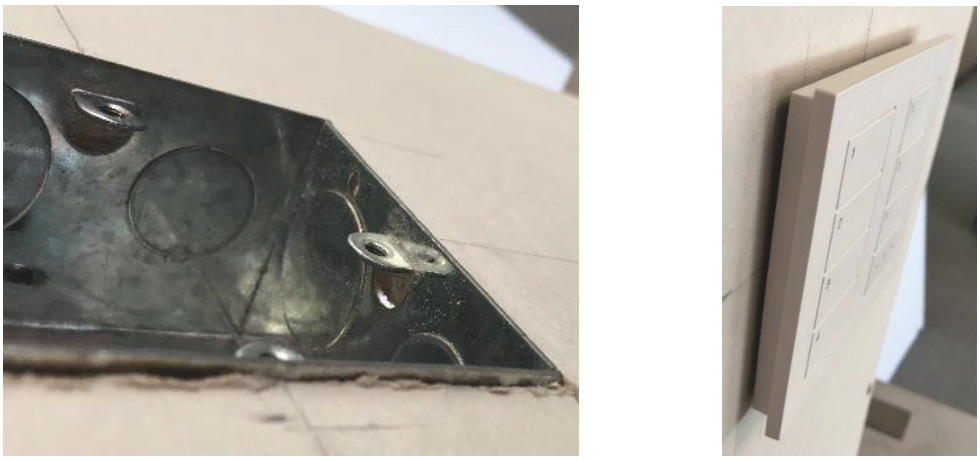


Photo 4: Example of a protruding wallbox and its impact on the keypad.

If the screw mounting brackets/bosses are mounted behind the surrounding wall, use spacers to prevent adapter warp. Cut the spacers to ensure the unit cannot shift on the wall (please use P/N 257453 on www.lutron.com). If the installation causes the adapter to warp, the plastic and metal keypads may be easy to remove and glass keypads may be difficult to remove.

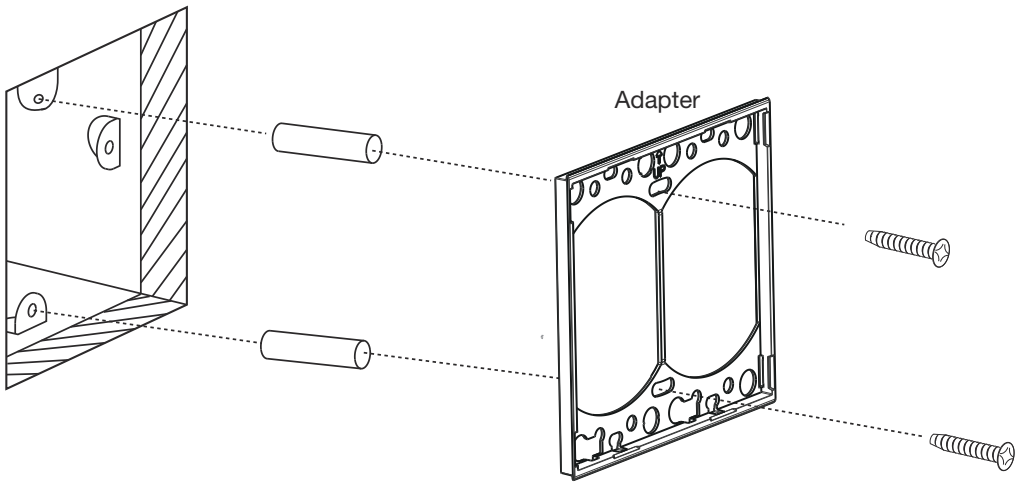


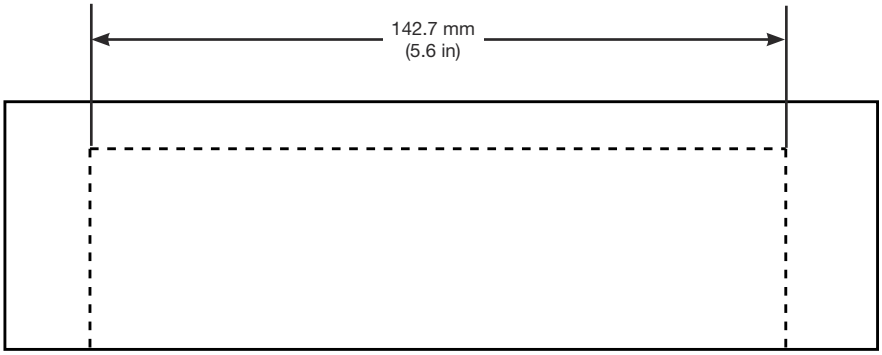
Figure 4: Example of using a wallbox spacer to improve adapter installation.

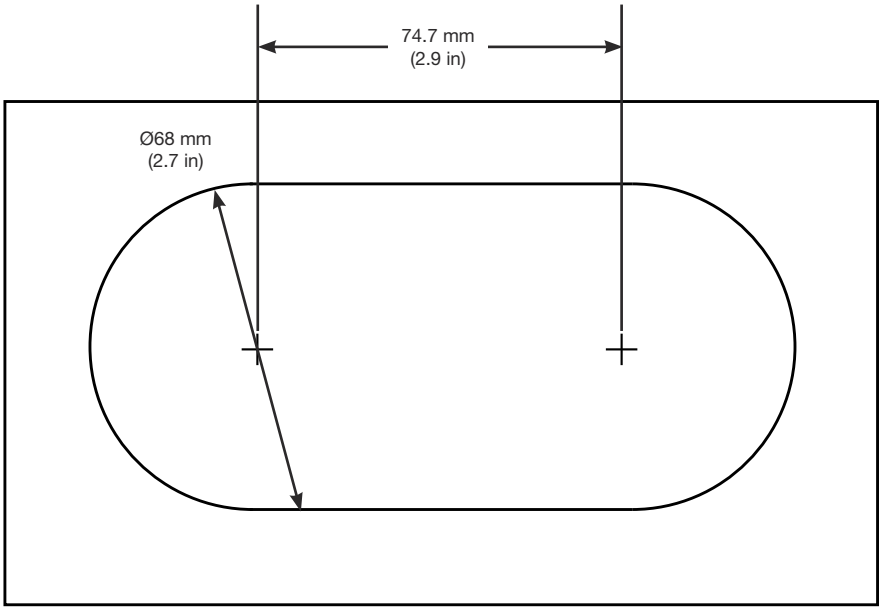
For two-column keypads, a thicker adapter is provided. This adapter provides space for the wallbox flange and is stiffer to help mitigate adapter warp.

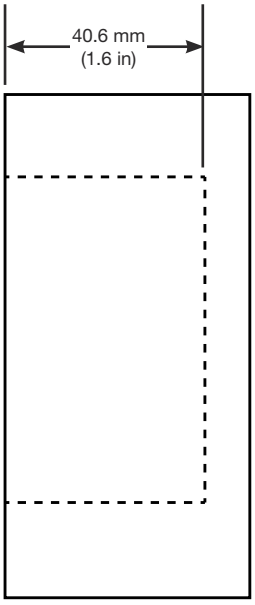
EBB-1-3COL Installation Instructions

This product is only to be used for mounting a Palladiom 3-column keypad where a wallbox installation is preferred over a surface-mount installation. EBB-1-3COL is for hollow wall or plaster installations. Do not use for concrete pour installations.

Wallbox Cutout Dimensions







EBB-1-3COL Installation Instructions *(continued)*

Hollow Wall Installation

1. Prepare opening per diagram on page 8. Two (2) holes (“A”) are provided to locate the Ø68 mm (2.7 in) hole saw cuts.
2. Secure wallbox to wall using included screws and clamps (“B”), or fasten to stud through the two (2) holes in the back of the box (“A”).

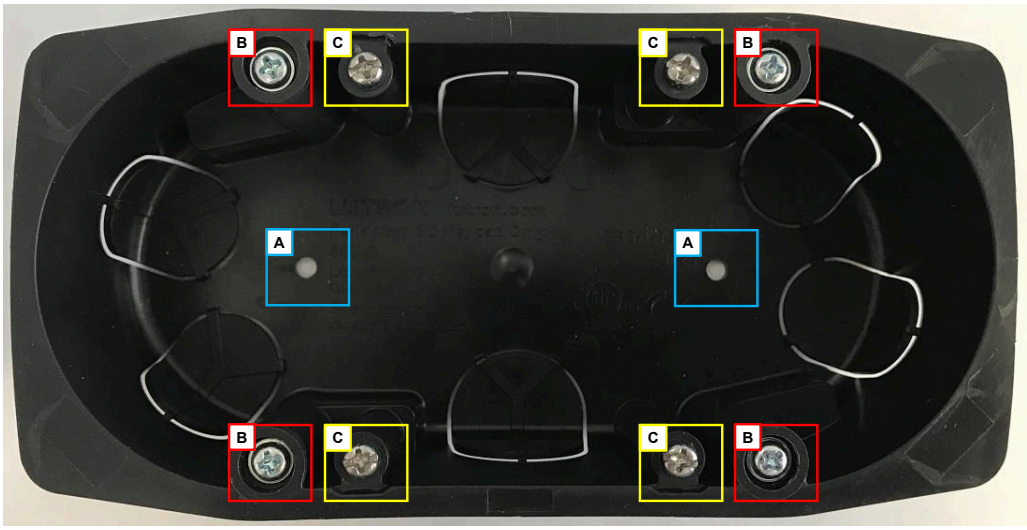


Photo 5: Highlighted layout for the hollow wall installation.

Plaster Installation

1. Prepare opening per diagram on page 8. Dry fit wallbox to check it fully seats in opening.
2. Fully seat four (4) mounting screws (“C”) used to fasten keypad adapter to wallbox. This ensures that the mounting screws will be able to be used if plaster happens to get in these areas (“D”). Plaster is not intended to be placed in these areas.
3. Apply plaster to the four (4) clamp screw areas (“E”), making sure that plaster gets in and around the screws. This is what will hold the wallbox in the wall for a plaster install.
4. Insert plastered wallbox into opening.

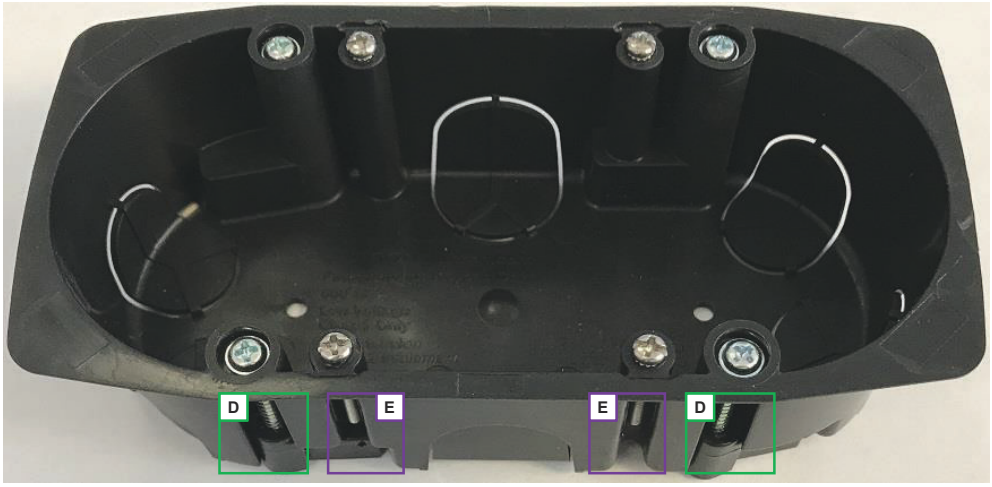


Photo 6: Highlighted layout for the plaster installation.

NOTE: Do not use for concrete pour installations. Wallbox is not rated for concrete pour installations.

EBB-1-3COL Installation Instructions *(continued)*

Cable Retention Assembly

When required for local codes, use included cable tie to retain wires to wallbox. Below are instructions for proper installation and use. Top and bottom Ø25 mm (0.98 in) knockouts are not compatible with this cable retention method. Use Ø20 mm (0.79 in) knockouts if cable retention is required. It is recommended to install the cable tie prior to installing the wallbox into a wall, and must be installed prior for plaster installations.

Step 1: Remove a Ø20 mm (0.79 in) knockout and insert cable tie through adjacent Ø20 mm (0.79 in) opening, which does not need the knockout removed.

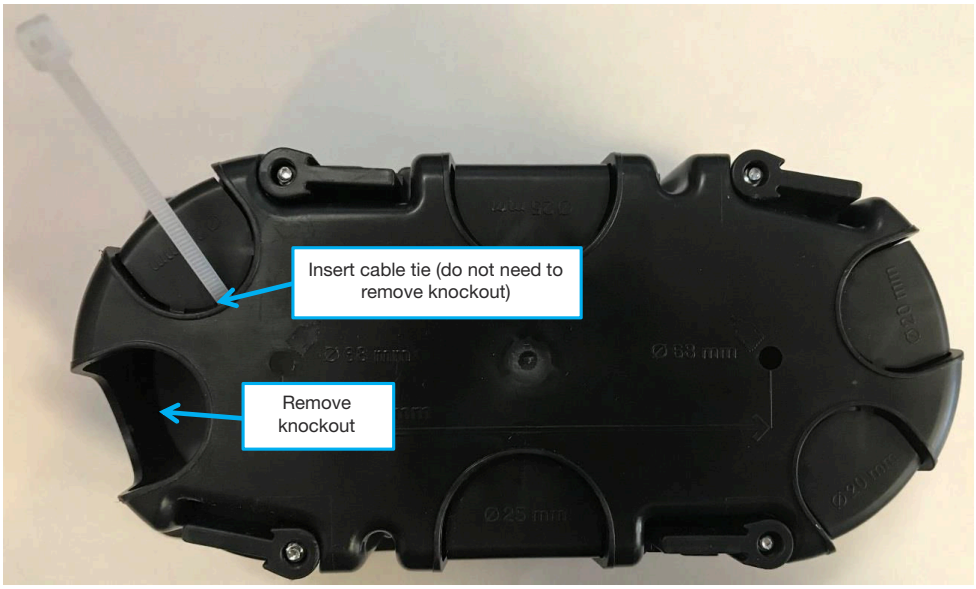


Photo 7: Visual instructions for step 1 of the cable retention assembly.

Step 2: Wrap cable tie around wallbox and connect both ends.

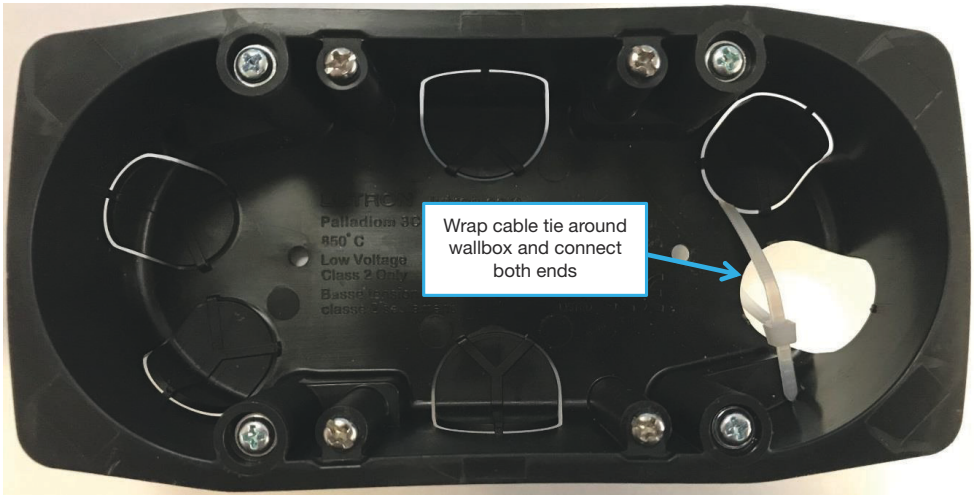


Photo 8: Visual instructions for step 2 of the cable retention assembly.

EBB-1-3COL Installation Instructions *(continued)*

Cable Retention Assembly *(continued)*

Step 3: Pull wire into the wallbox and through the cable tie loop. Tighten securely.

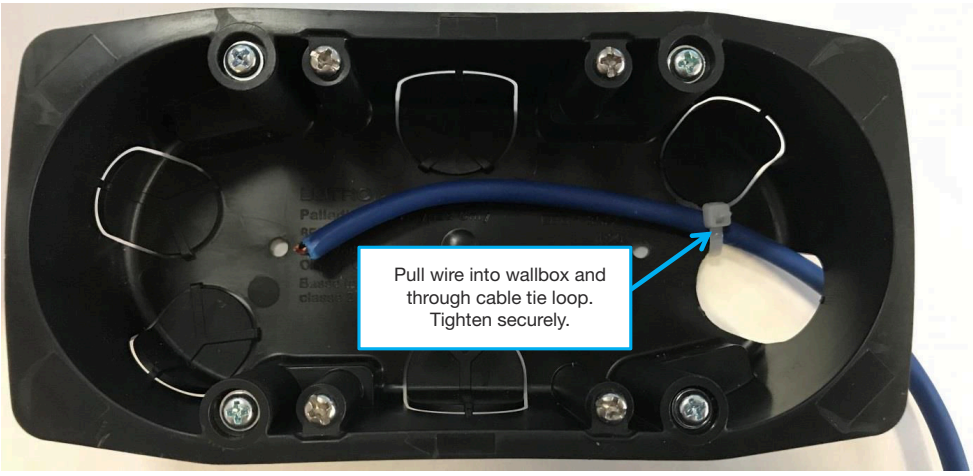


Photo 9: Visual instructions for step 3 of the cable retention assembly.

Surface Mounting Installations

Palladiom was designed to accommodate installations where a wallbox does not exist or may not be desirable. Prepare the wall and holes as described in previous sections. Space the backcover holes and screw locations according to the installation schematics (figures 4 to figure 7). Additionally, the screw mounting locations are located by specific features in the adapter (see photo 10 on page 14).

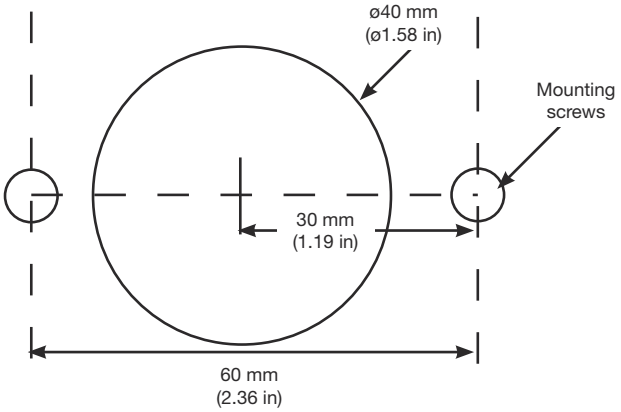


Figure 5: Installation for Palladiom one-column keypad surface mount installation.

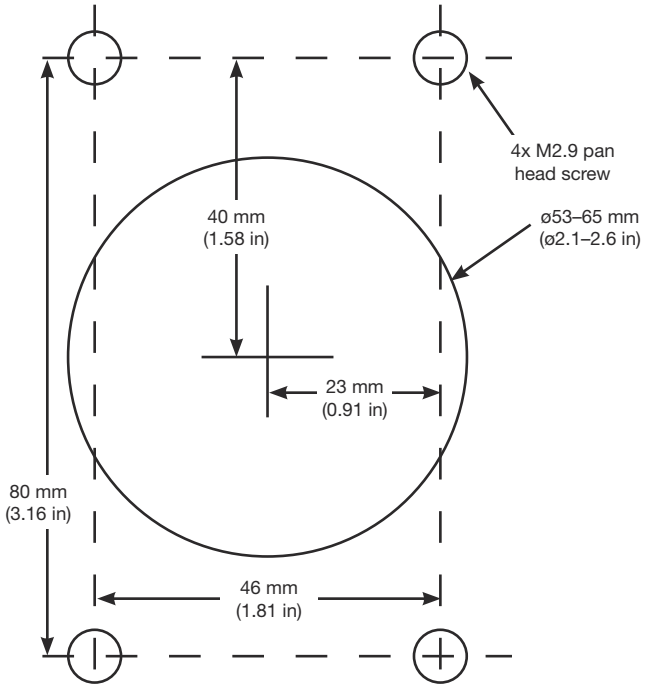


Figure 6: Installation for Palladiom two-column keypad surface mount installation.

Surface Mounting Installations *(continued)*

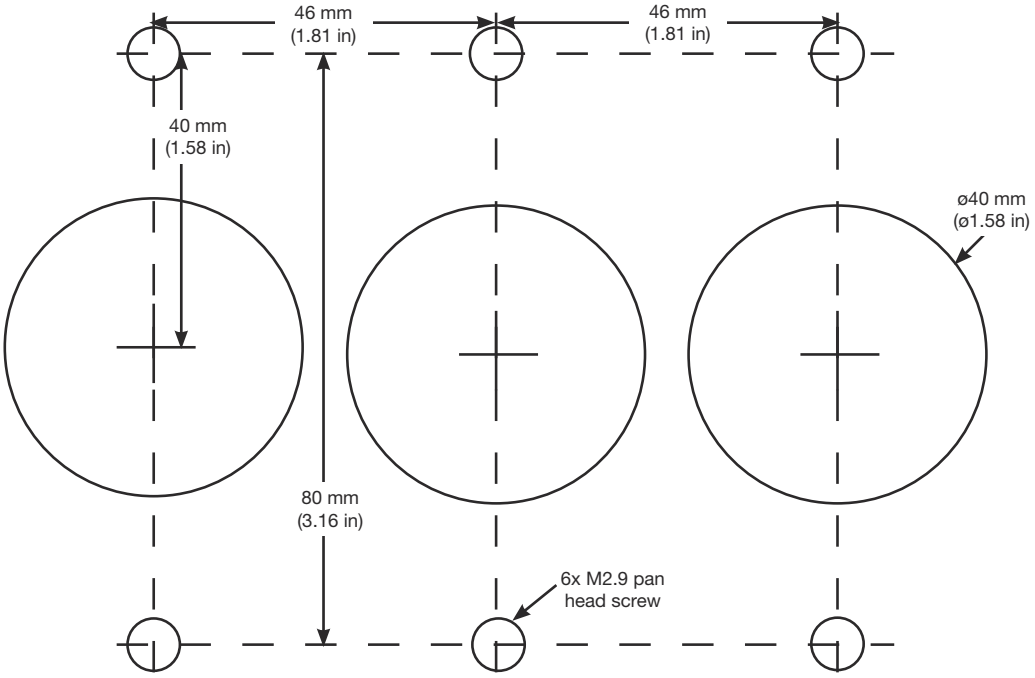


Figure 7: Installation for Palladiom three-column keypad surface mount installation.

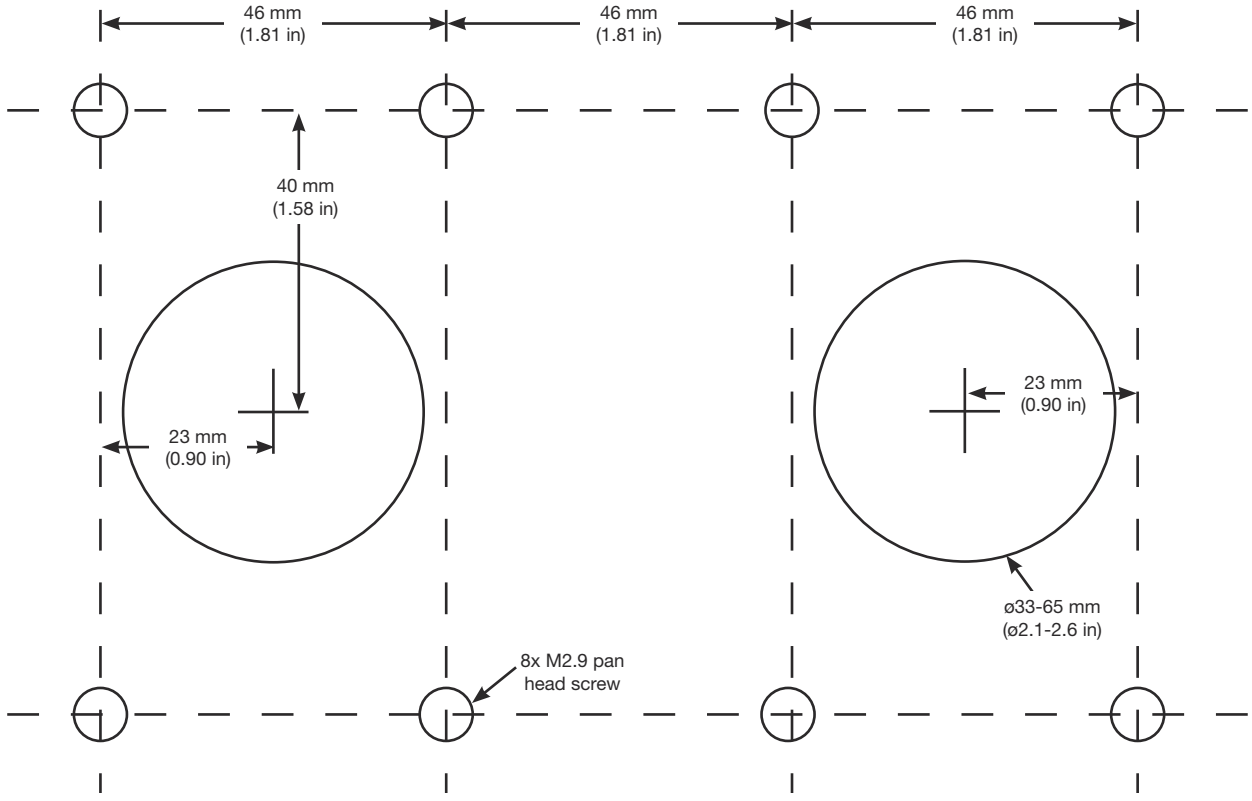


Figure 8: Installation for Palladiom four-column keypad surface mount installation.

Surface Mounting Installations *(continued)*

An installation recommendation is to place the adapter on the wall and level it to ensure it will be in the correct orientation. Then mark the mounting locations on the wall (to establish positions for drywall anchors) or just install the unit using an M2.9 screw (#4 Screw) with a screw head that does not interfere with the keypad. Then use the marked mounting locations and the schematics on the previous pages to cut the holes for the backcover and QS wiring. If during this installation, the screw or screwhead is too large, then it will interfere with backcover or the glass faceplate snap and could prevent the faceplate from snapping to the adapter (see photo 10 for example).

Note that the photo below does NOT match the requirements listed above.



Photo 10: Example of improper screw used for surface mount installations.

Ganging or Pairing Palladiom with Other Devices

When installing the Palladiom keypad with other devices as well as additional keypads, Lutron recommends a horizontal spacing of no less than 19 mm (3/4 in). Closer installation may produce noticeable product height differences or mis-matching edge lines due to part tolerances as well as wallbox/unit installation inconsistencies.

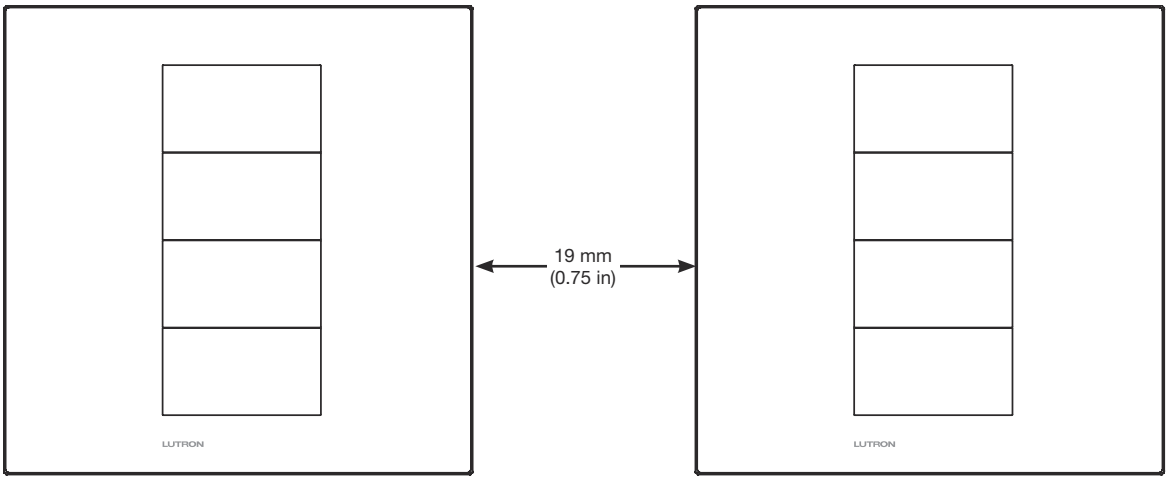


Figure 9: Horizontal spacing recommended for keypad installations.

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