

BACK BOXES

BACK BOX OVERVIEW

When using Meljac products it is important to consider and plan for the back boxes you will need. On any project, the selection and ordering of back boxes is the first milestone.

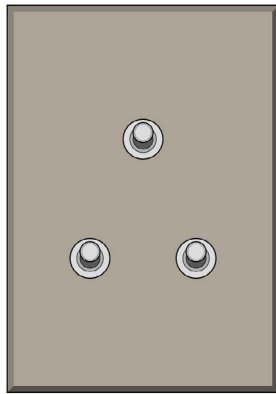
While some of our products are designed to be used with third-party back boxes, in most cases a Meljac back box is required. In other instances, a Meljac back box is strongly recommended because the larger box opening can accommodate more components and/or provide better spacing. All products and plate sizes that are not 82 x 117 mm require the use of a proprietary back box, which can be purchased directly from Meljac North America. We stock proprietary back boxes, allowing them to be shipped and delivered anywhere in the USA or Canada within 5-7 business days from purchase confirmation.

If third-party back boxes have already been installed on a project that is using Meljac then plate configurations can be designed with those spatial limitations in mind.

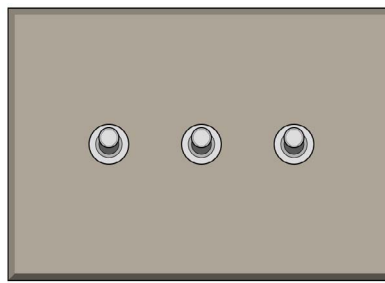
The appropriate back box that is needed will be determined by the plate size that is required, along with the installation conditions. The factors that must be considered are:

- 1. PRODUCT COLLECTION + SWITCH TYPE (KEYPADS)** - Differences in internal component dimensions determine how many switches can fit on any given plate size and how they can be arranged:
 - Ellipse and Solaris collections push buttons and toggles are larger in size than Classique push buttons and toggles.
 - Classique push buttons are smaller than Classique toggles and typically you can fit more push buttons on a plate than toggles
 - Damier push buttons are similar in size to Classique push buttons and can therefore be spaced interchangeably.
- 2. PORT TYPES (OUTLET PLATES)** - in general, power receptacles and charging ports require more plate space than low-voltage ports, and when combining different types of components you may also need to account for dividing low-voltage components from line-voltage components.

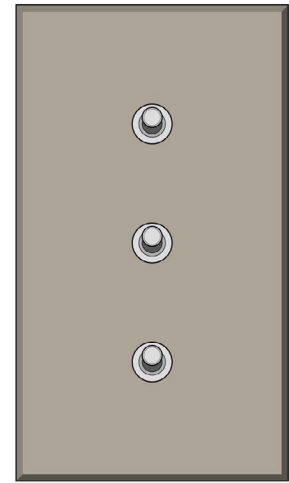
3. **CONFIGURATION OF COMPONENTS ON THE PLATE** - whether the components can be configured in a single column or arranged in separate columns is related to the plate size and components being used. As an example, we offer various plate sizes that can accommodate three Classique toggle switches. However, the plate size will dictate the configurations that are possible or required. Below are three examples of three different plate sizes and configurations, all with three toggles.



82 X 117
TRIANGULAR CONFIGURATION



117 X 82
HORIZONTAL ROW



82 X 144
VERTICAL ROW

In the above examples, we can see that a triangular configuration is required to fit three toggles on an 82 x 117 mm (vertical), but when the plate is 117 x 82 (horizontal) it is possible to have a single row of toggles. This difference is due to the internal height dimensions of the toggles. If a column of three toggles is desired then the additional space offered by the 82 x 144 mm plate size and back box is required.

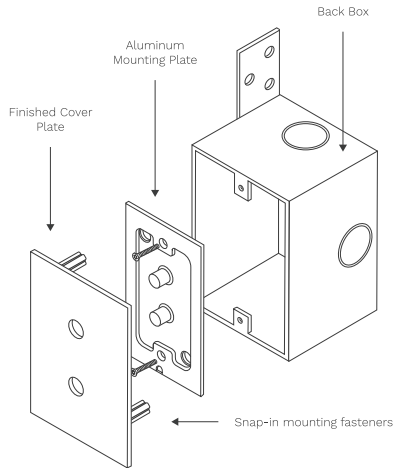
SCREW TYPES

Meljac plates are available with either visible or hidden screw plate construction. This detail must be specified on all orders.

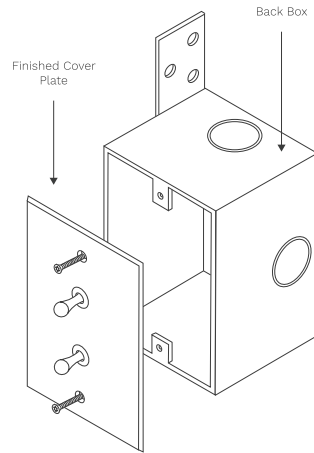
Visible screw plate construction consists of a single plate finished plate that contains the components and screws directly into the back box.

Hidden screw plate construction utilizes an aluminum mounting plate to contain the components and mount into the back box. The finished cover plate (visible after installation) then snaps into the aluminum mounting plate via plastic fasteners.

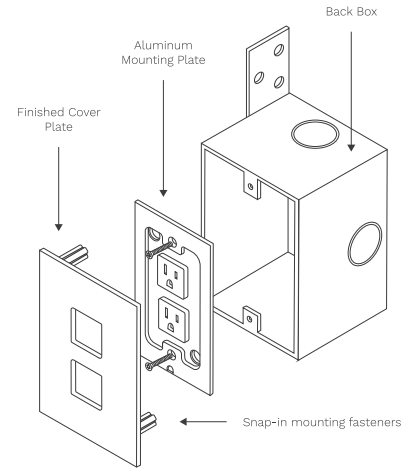
Since the aluminum mounting plate is machined according to the specified back box, it is important that your back box type is confirmed at the time of purchase when ordering plates with hidden screws in order to ensure successful installation.



HIDDEN SCREW PLATE ASSEMBLY
- KEYPAD



VISIBLE SCREW PLATE ASSEMBLY
- KEYPAD



HIDDEN SCREW PLATE ASSEMBLY
- WALL OUTLET

BACK BOX INSTALLATION

NEW CONSTRUCTION

1. Confirm that the appropriate back box is used for the corresponding Meljac plate size and plate orientation. Meljac back boxes can be mounted in both horizontal and vertical orientations depending on the plate specification.

NOTE: For 82 x 82 mm plates, the MELUS8282R ring adapter should always be mounted with the screws in a horizontal orientation. [\[View Drawing\]](#)

2. Meljac metal back boxes include brackets to attach to wood stud for new construction.
3. Back box must be mounted at a level position. Most plate constructions do not allow for any leveling adjustment.
4. It is recommended that the back box is installed with a minimum recess of 1/8" and a maximum recess of 1" from the finished wall surface. If the back box is recessed more than 1" then [hex standoffs](#) will be required to extend screw length (keypads only).
5. Boxes must never be proud of the finished wall surface.

CUT-IN STYLE FOR EXISTING CONSTRUCTION

Refer to the [Plastic Back Box Installation](#) overview.

KEYPADS

When using Meljac keypads it is strongly recommended that you use Meljac back boxes. We offer both new construction (metal), as well as cut-in style/retrofit (plastic) back boxes for all of our 82 mm width plates.

For projects where third-party back boxes have already been installed or where the configuration requires the use of standard American gang boxes, plate compatibility and back box specs must be confirmed prior to ordering.

Below is an overview of the different plate sizes and back box options for standard profile Meljac keypads.

KEYPADS - STANDARD WIDTH (82 MM)

Plate Size (mm)	82 x 82 x 3	82 x 117 x 3	82 x 144 x 3	82 x 207 x 3	82 x 269
Plate Size (inches)	3.2 x 3.2 x .11	3.2 x 4.6" x .11	3.2 x 5.7 x .11	3.2 x 8.1 x .11	3.2 x 10.6 x .11
Metal / New Construction Box	MELUS8282R (Ring Adapter for 4S/1900 Box)	MELUS11782	MELUS14482	MELUS20782	MELUS26982
Plastic / Cut-In Style Box	MEL8080	MELUS11782-FDM	MELUS14482-FDM	MEL20580	MEL26780

CLASSIQUE COLLECTION

Max. Push Buttons	4	6	8	12	16
Max. Toggles	4	4	8	10	14

DAMIER COLLECTION

Max. Push Buttons	4	6	8	12	16
-------------------	---	---	---	----	----

ELLIPSE COLLECTION

Max. Push Buttons	2	4	6	8	12
Max. Toggles	2	4	6	8	12

SOLARIS COLLECTION

Max. Push Buttons	2	4	6	N/A	N/A
Max. Toggles	2	4	6	N/A	N/A

CRESTNET COLLECTION

Max. Push Buttons	N/A	6	N/A	N/A	N/A
-------------------	-----	---	-----	-----	-----

Notes:

1. Plate sizes given are for vertical orientation but are also available in a horizontal orientation.
2. If third-party back boxes are already installed on a project, please refer to the third party back box section to confirm compatibility.
3. The maximums provided on this table are based on metal back boxes. Plastic cut-in styles will reduce the maximum number switches on 82 x 82 mm and 82 x 144 mm plates.
4. Due to the rounded corners of the Solaris collection, plate sizes are 84 x 84 mm, 84 x 120 mm, and 84 x 144 mm.

KEYPADS / SLIM (38 MM)

For our slim 38 mm (1.5") keypads we offer a virtual database of 3D printed, new construction back boxes which are made-to-order and can ship within 7-10 business days from purchase. These boxes are by default 90 mm (3.5") deep in order to provide sufficient space for a contact closure interface.

Masonry style boxes are also available. However, we generally do not suggest using these boxes due to their limited depth and the relative infrequency of masonry construction.

Below is a general overview of the standard plate sizes and back box options for slim profile Meljac keypads.

Plate Size (mm)	38 x 91	38 x 133	38 x 144	38 x 175
Plate Size (inches)	1.5 x 3.58 x .11	1.5 x 5.24 x .11	1.5 x 5.7 x .11	3.2 x 8.1 x .11
Plastic / New Construction Box (3D Printed)	N/A	MEL38133-NC16	MELUS38144-NC	MEL38175-NC16
Plastic / Masonry Style Box	MEL3891	MEL38133	N/A	MEL38175

CLASSIQUE COLLECTION

Max. Push Buttons	2	4	4	5
Max. Toggles	1	3	3	4

DAMIER COLLECTION

Max. Push Buttons	2	4	4	5
-------------------	---	---	---	---

ELLIPSE COLLECTION

Max. Push Buttons	1	2	3	3
Max. Toggles	1	2	3	3

WALL OUTLETS

For most wall outlet plate sizes a Meljac back box is required. We stock a full line of metal new construction back boxes that are UL-listed.

Third-party back boxes can also be used for our 82 x 117 and 117 x 82 mm plate sizes, which are the equivalent of an North American single-gang (duplex) outlet plate. Refer to the Third-Party Back Box section at the end of this document for more information.

Our single-gang plate size (82 x 117 // 3.2" x 4.6" or 117 x 82 mm // 4.6" x 3.2") will work with standard US single-gang boxes when ordered with visible screws. When using plates with hidden screws this plate size can also be ordered for third-party back boxes. However, this must be specified at the time of ordering and select configurations are not possible when using third-party back boxes due to their smaller cutout opening.

Below is an overview of the plate sizes and back box options for Meljac wall outlets.

Plate Size (mm)	82 x 82 x 3	82 x 117 x 3	82 x 144 x 3	82 x 207 x 3	82 x 269
Plate Size (inches)	3.2 x 3.2 x .11	3.2 x 4.6 x .11	3.2 x 5.7 x .11	3.2 x 8.1 x .11	3.2 x 10.6 x .11
Metal / New Construction Box	MELUS8282R (Ring Adapter for 4S/1900 Box)	MELUS11782	MELUS14482	MELUS20782	MELUS26982
Third-Party Box Compatibility	No	Yes	No	No	No
Max. Number of Power or Charging Ports	1	2	3	4	5
Max. Number of Low Voltage Ports	2	4	6	10	14

Notes:

1. Plate sizes given are for vertical orientation but are also available in a horizontal orientation.
2. Using third-party back boxes can limit certain port options and configurations and requires component spacing to be reduced.

[Click here](#) for installation information regarding Meljac wall outlets and back boxes.

FLOOR OUTLETS

When using Meljac floor outlets, our proprietary back boxes are required.

Below is an overview of the plate sizes and back box options for Meljac floor outlets.

Format	Single - Round	Single - Square	Double
Plate Size (mm)	100D x 14	100 x 100 x 14	180 x 100 x 14
Plate Size (inches)	3.94 x .55	3.94 x 3.94 x .55	7.09 x 3.94 x .55
Metal / New Construction Box	MELUSFL100	MELUSFL100	MELUSFL180
Third-Party Box Compatibility	No	No	No
Max. Number of Power or Charging Ports	1	1	2
Max. Number of Low Voltage Ports	2	2	No 2/2

[Click here](#) for installation information regarding Meljac floor outlets and back boxes.

READING LAMPS

The standard plate size for Meljac reading lamps is 82 x 117 mm with visible screws. This format is compatible with any standard single-gang back box with a minimum depth of 54 mm (2 1/8"). For ease of installation we recommend using a single-gang ring with a 4S box.

Our reading lamps are also available with hidden screws and in alternate plate sizes when using Meljac back boxes.

THIRD-PARTY BACK BOXES (117 MM PLATES)

Our 82 x 117 mm and 117 x 82 mm plates, which are the equivalent of a US single-gang plate size, can be ordered to be compatible with select third-party back boxes. When using a third-party back box, it must be specified on your order to ensure compatibility. If the incorrect back box is specified on an order then this will lead to the plates not fitting properly into the installed back box.

The purchaser is responsible for confirming that the correct back boxes are installed and properly specified on their order.

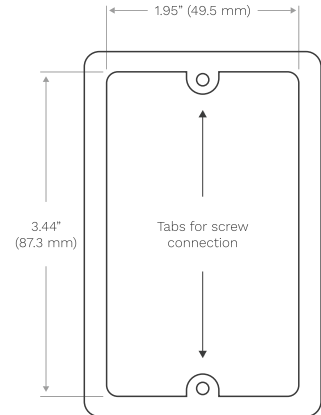
For optimal spacing and maximum flexibility with components and configurations, we recommend using Meljac back boxes, especially with keypad controls.

KEYPADS AND READING LAMPS

For [keypads](#) and [reading lamps](#) that are not able to use Meljac back boxes, the products can be ordered to be compatible with third-party back boxes or ring adapters for new construction that meet the following criteria:

1. Maximum cutout dimensions of 1.95" (W) x 3.44" (H)
2. Minimum depth of 2.5", unless contact closure interfaces (keypads) or transformers (reading lamps) will be remotely located.
3. Employ individual tabs for the screw connections.

When placing an order that should be compatible with this back box size, the back box reference "U4" should be used. The smaller size of the "U4" back box reference reduces the amount of space between two columns of controls.

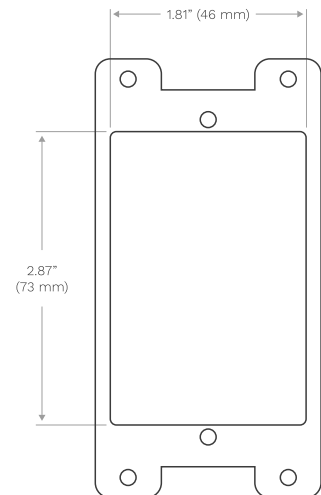


WALL OUTLETS

For wall outlets that are not able to use Meljac back boxes, the plates can be ordered to be compatible with third-party back boxes (new or old construction) or ring adapters (new construction) that meet the following criteria:

1. Maximum cutout dimensions of 1.95" (W) x 3.44" (H)
2. Minimum box depth of 2"

When placing an order that should be compatible with this back box size, the back box reference "U3" should be used.



OVERVIEW FOR 117 MM PLATE OPTIONS FOR THIRD-PARTY BACK BOXES:

Product Category	Plate Size (mm)	Back Box Reference	Back Box Opening (inches)	Back Box Openings (mm)	Component Spacing (center-center)	Example Part Numbers
Keypads, Wall Outlets, Reading Lamps	82 x 117 // 117 x 82	MELUS11782	2.48 x 3.73	63 x 94.5	32 mm	Meljac - MELUS11782
Keypads, Wall Outlets, Reading Lamps	82 x 117 // 117 x 82	U4	1.95 x 3.44	49.5 x 87.3	30 mm	Hubbell-Raco - 772 Carlon - B122A
Wall Outlets	82 x 117 // 117 x 82	U3	1.81 x 2.87	46 x 73	28 mm	Carlon - B120R Hubbell-Raco - 506, 690