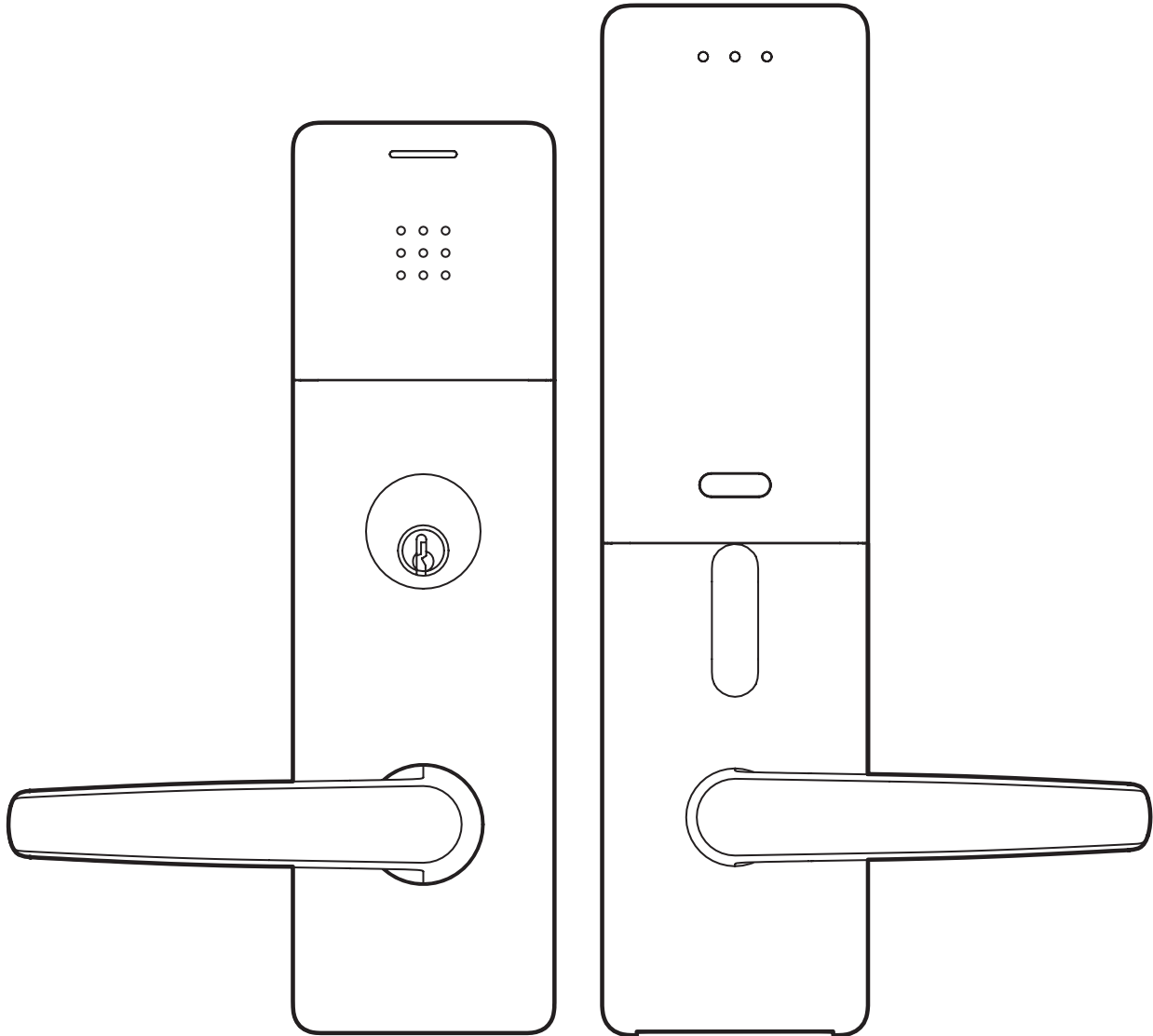


 Verkada

# AL54-MS

Mortise Wireless Lock



Install Guide

## Resources



Scan the QR code to access additional resources

- Installation Video
- Verkada Product Integration
- Troubleshooting Instructions

## AL54-MS Technical Specifications

<b>Dimensions (without Lever)</b>	Exterior Assembly: 286.3 x 82.3 x 35.2 mm Interior Assembly: 323.8 x 83.6 x 52.8 mm
<b>Dimensions (with Lever)</b>	Exterior Assembly: 286.3 x 171.7 x 87.1 mm Interior Assembly: 323.8 x 172.4 x 88.0 mm
<b>Key Cylinder Compatibility</b>	Conventional Core: 6 Pin [conventional core provided with cylinder] Schlage FSIC: 6 Pin, 7 Pin [key core not provided for FSIC] SFIC: 6 Pin, 7 Pin [key core not provided for SFIC]
<b>Weight</b>	6.8kg
<b>Supported Credential Technologies</b>	Low Frequency (125 KHz) High Frequency (13.56 MHz) Mobile NFC (13.56MHz) Bluetooth Low Energy (2.4GHz)
<b>Ratings</b>	IP65, IK08
<b>Wireless Communication Frequency</b>	915 MHz
<b>Wireless Communication Range</b>	Range up to 150 ft with obstructions (normal building installation), up to 300 ft clear line of site
<b>Wireless Communication RF Specifications</b>	Minimum Signal Strength RSSI: -65 dBm Maximum ambient RF noise level RSSI: -75 dBm
<b>Operating Temperature</b>	-35° to 55°C (-31° to 131°F) 5-90% RH non-condensing
<b>System Interface</b>	Requires WH32 (for wireless communication) and AC12 access controller (connected via RS-485 to WH32)
<b>Power Supply</b>	Compatible only with 8 x AA lithium batteries (nominal voltage ≥ 1.5V). For optimal performance and battery life, use batteries of the same brand and type. Energizer L91 batteries are recommended.
<b>Battery Life</b>	Battery life is based off using L91 AA cells and is dependent on the lock usage, lock polling frequency, and types of credentials used on the lock. Battery can last between 12 to 24 months based on these configurations.
<b>Backup Power</b>	Backup power can be provided via a USB-C cable connected to a 5V power bank to recover the device in the instance the batteries are drained [not evaluated per UL294]

**Version**  
V1.0 published 05/2026  
Document ID: AL54-MS Install Guide

**Product Models**  
This install guide pertains to model AL54-MS  

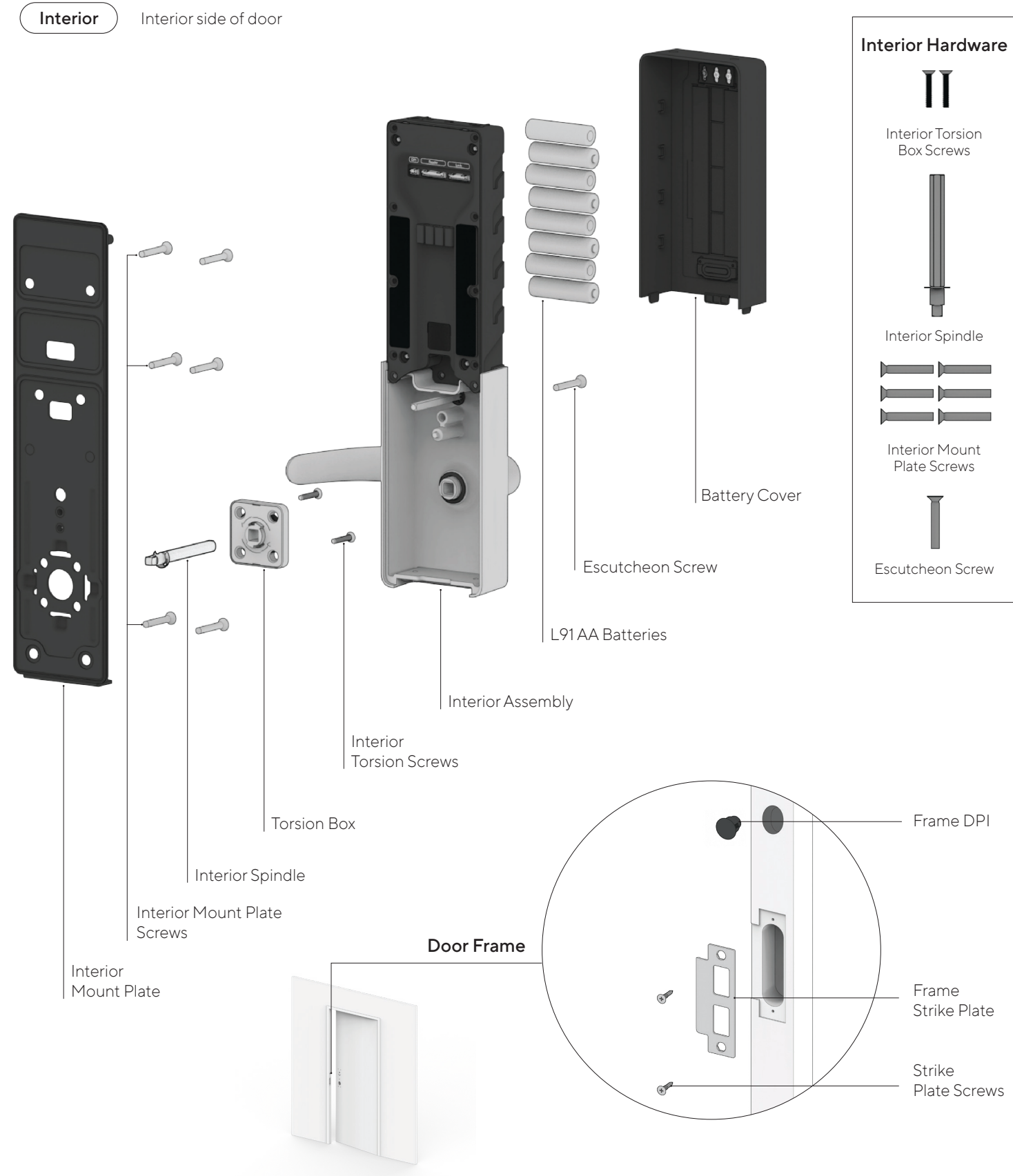
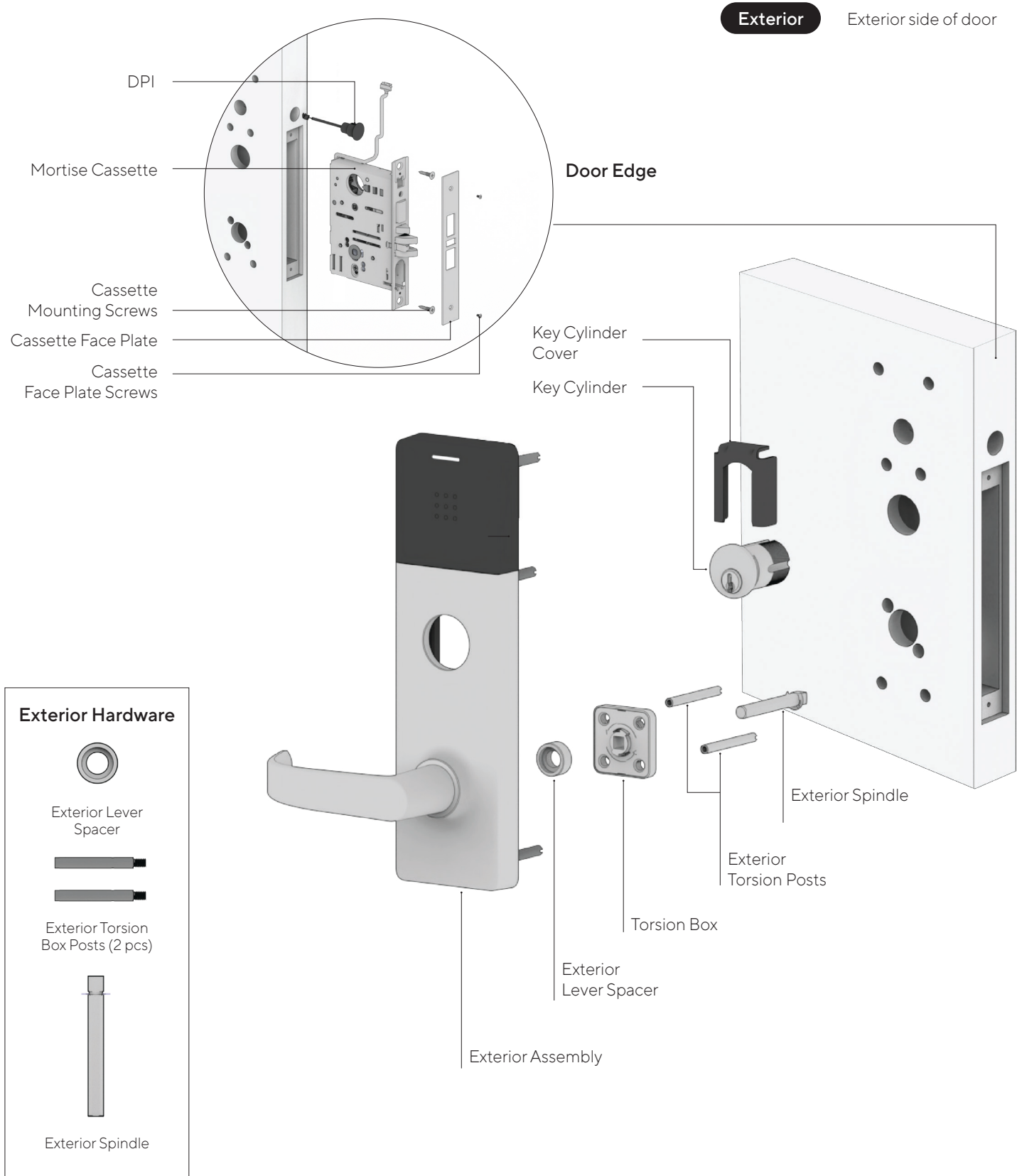
- AL54-MS-NK-01-26-HW
- AL54-MS-FC-01-26-HW
- AL54-MS-SC-01-26-HW
- AL54-MS-CC-01-26-HW



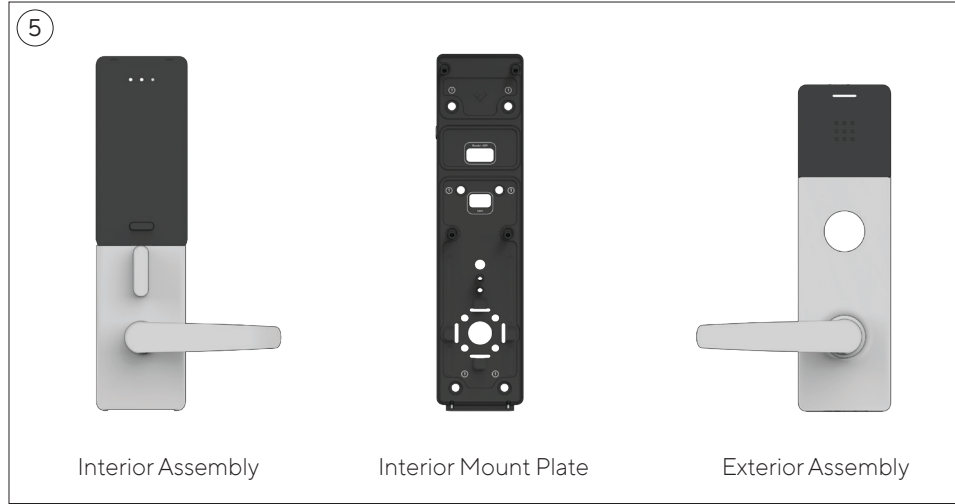
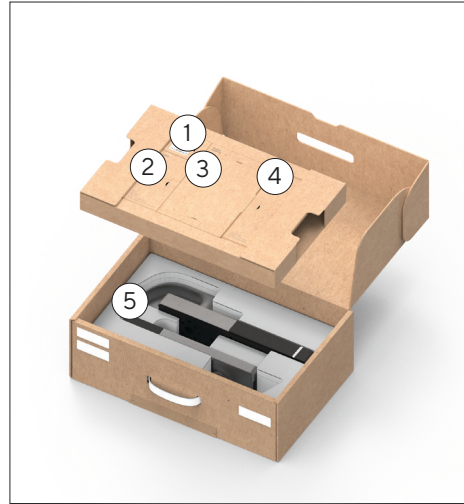
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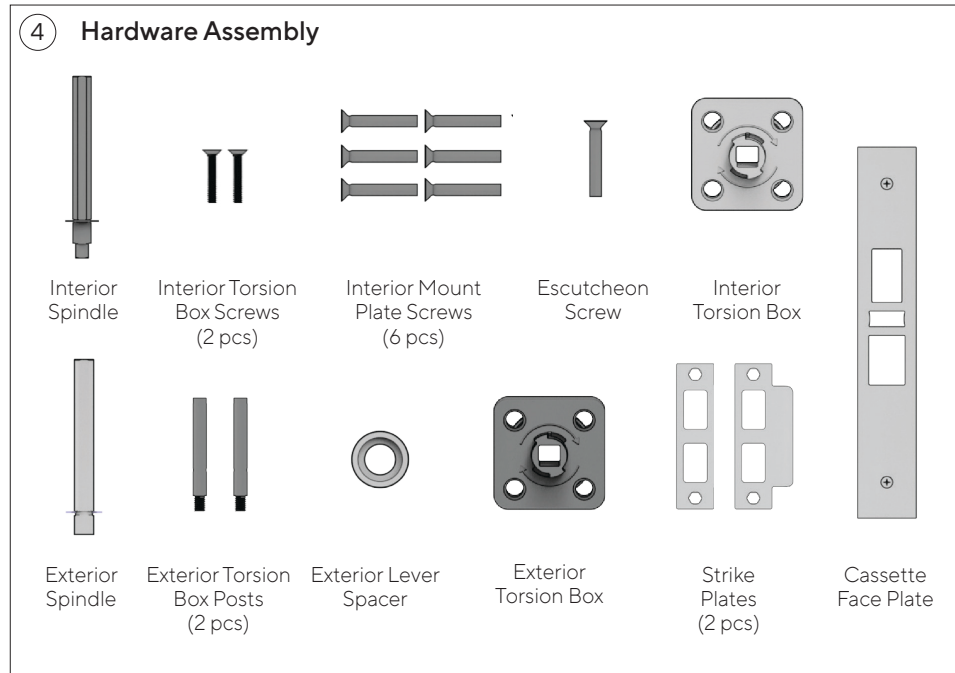
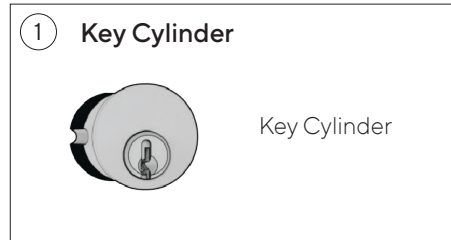
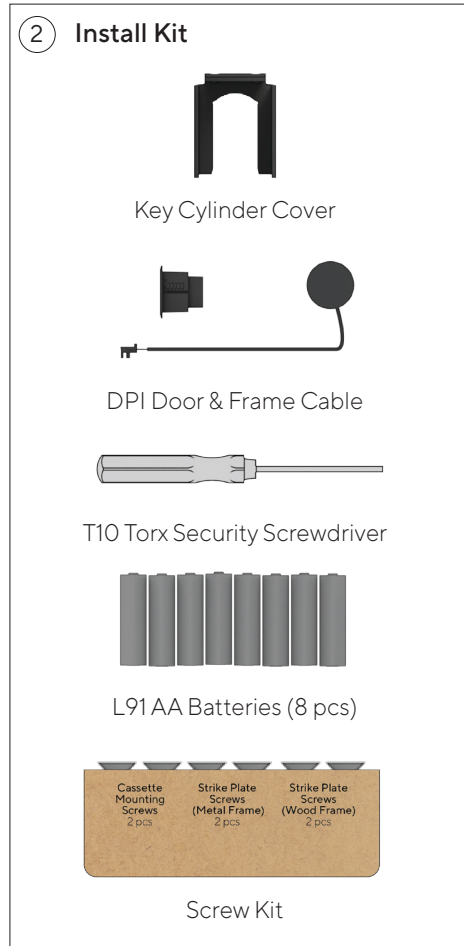
# Overview



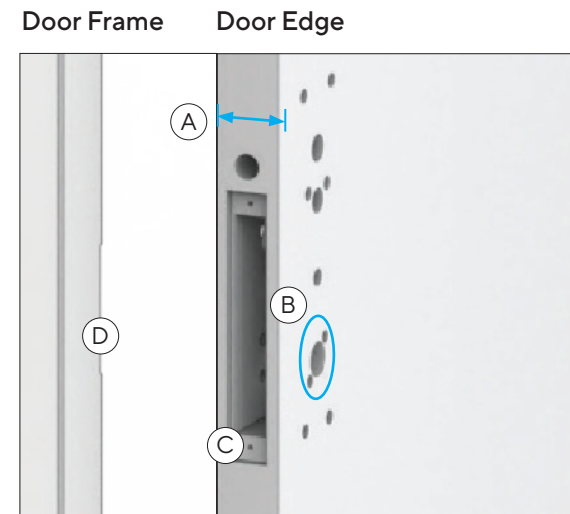
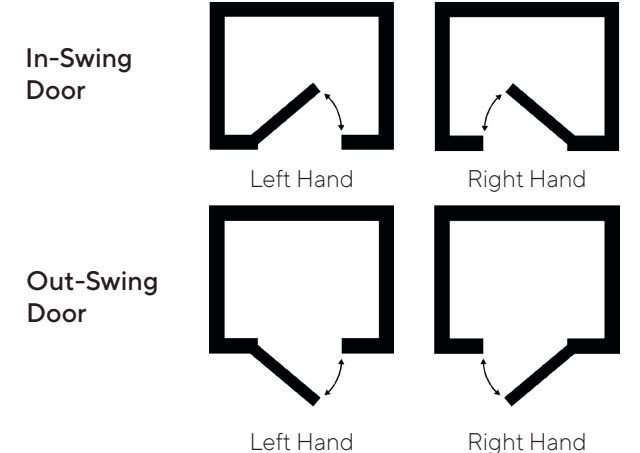
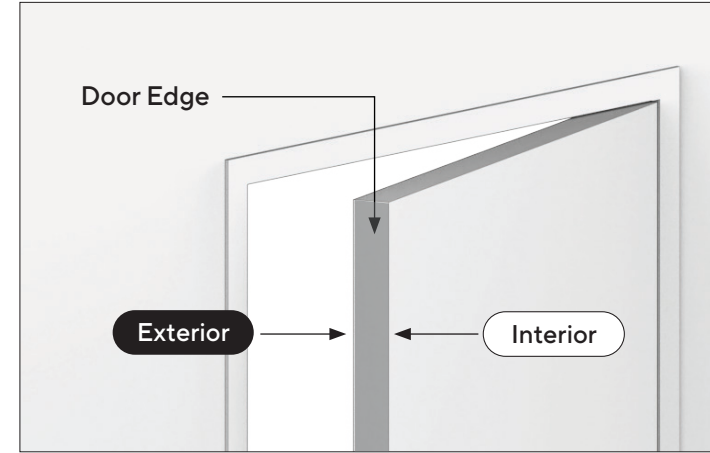
# What's in the Box



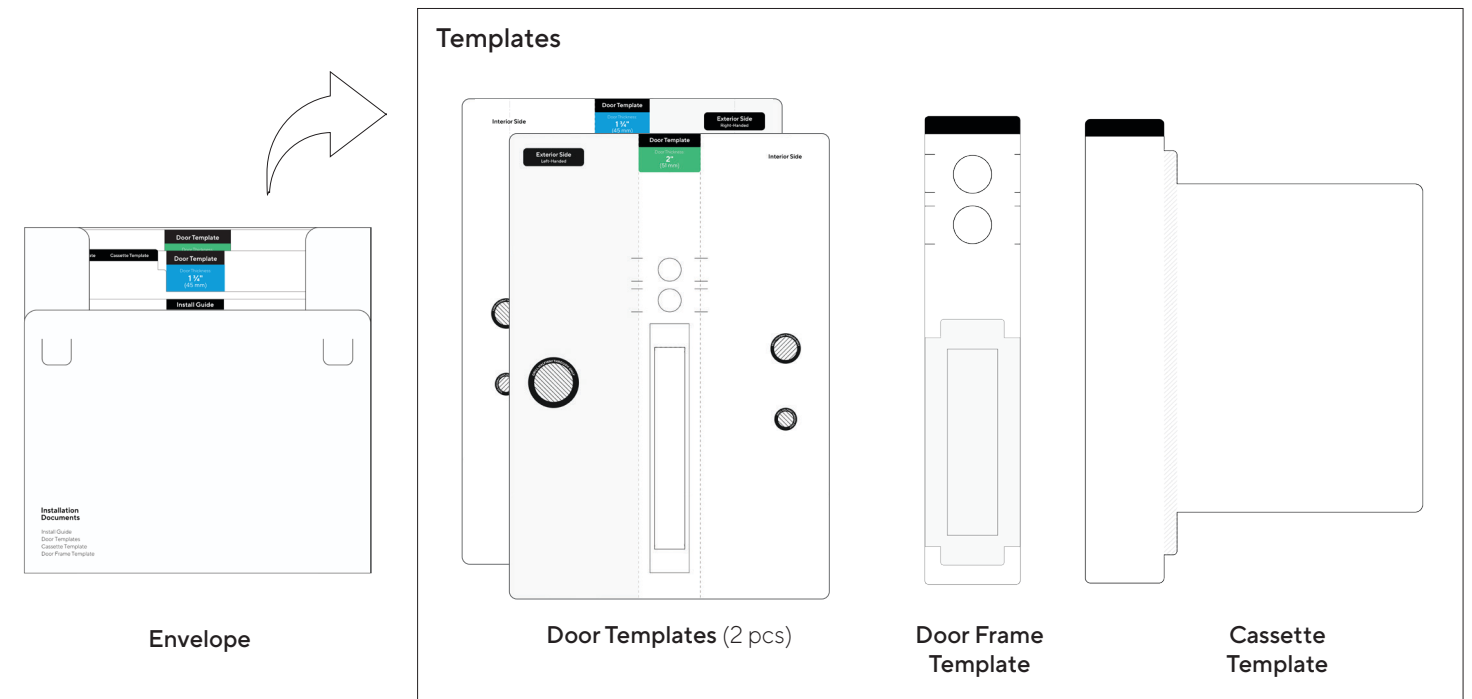
- What you'll need (Not included)**
- General purpose tape
  - Phillips Head #2 Screwdriver
  - Electric Drill
  - 3/8" Drill Bit
  - 3/4" Drill Bit
  - 1/2" Drill Bit
  - 7/16" Drill Bit
  - 1-3/4" Forstner Drill Bit or Hole Saw
  - 2-1/8" Drill Bit or Hole Saw



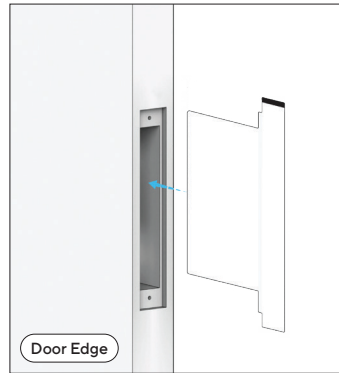
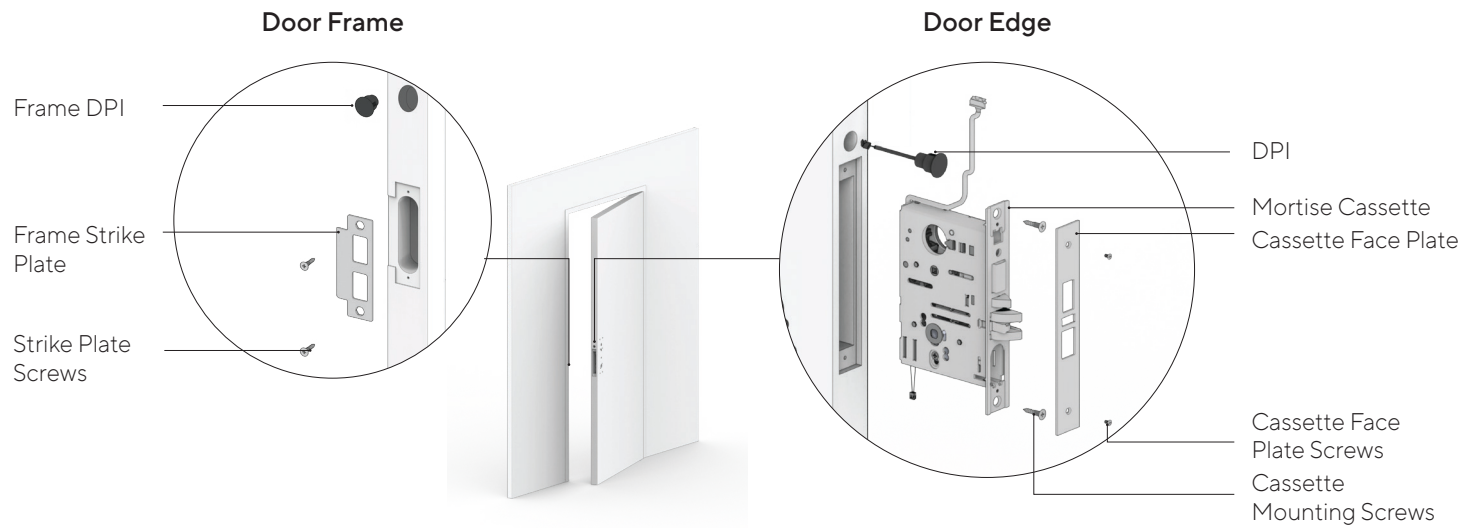
# Door Compatibility



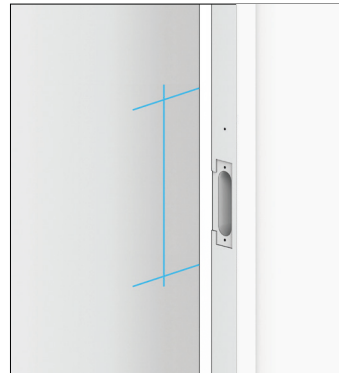
- A Door Thickness**  
Measure the door thickness to help select the appropriate template.  
1 3/4" 2"
- B Handing Orientation**  
Identify the exterior side of the door and determine if it will be right-handed or left-handed.
- C Cassette Pocket**  
Slot the Cassette Template into the cassette pocket to ensure that there is enough space for the Cassette.
- D Door Frame**  
Use the Door Frame Template to attach the DPI and appropriate Strike Plate.



## Door Frame and Door Edge Installation



Slot the Cassette Template into the cassette pocket to ensure that there is enough space for the Cassette.



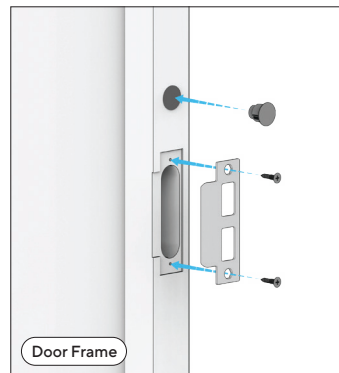
Reference the Door Template and draw the backset center line on both sides of the door.



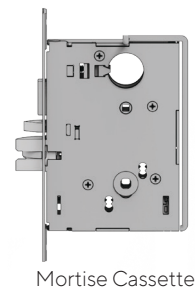
Reference the backset center line to place the appropriate Door Template onto the door. Push in tabs to align with cassette pocket.



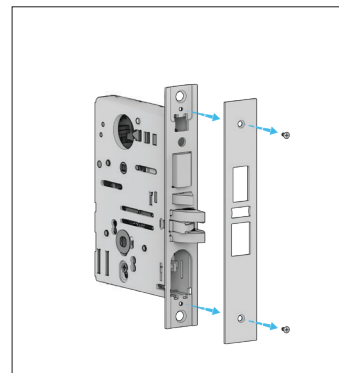
Align all necessary templates. Mark holes for drilling. Remove the templates and drill all holes according to the drill bit sizing denoted on the template.



Install the Frame DPI and Strike Plate to the Door Frame.



Retrieve the Mortise Cassette from its box.



Remove the Cassette Face Plate by undoing the screws. Set the screws aside for later.

### Checkpoint

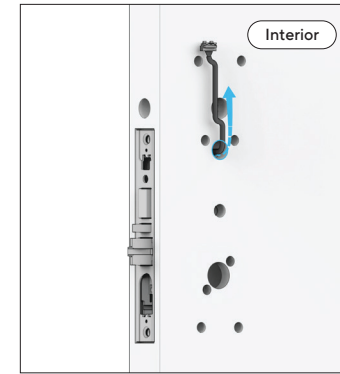
Prop the door open and make sure it does not close until the installation is complete.



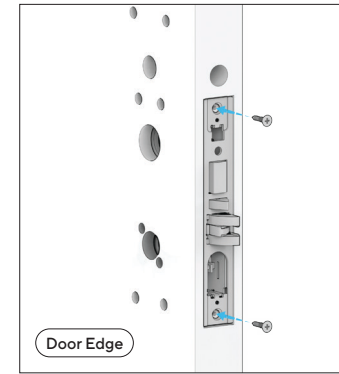
## Door Frame and Door Edge Installation (cont.)



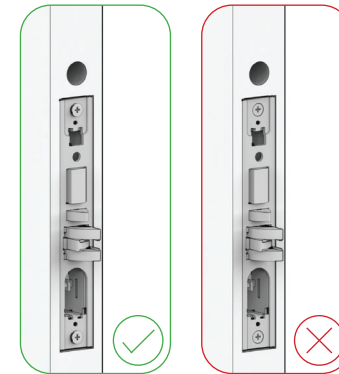
Insert the Cassette into the cassette pocket of the door.



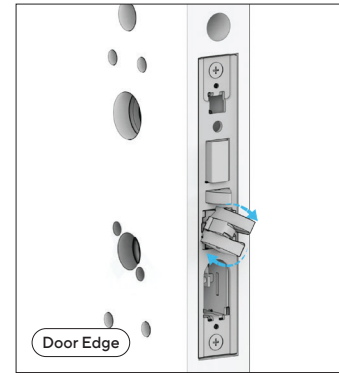
Route the Cassette Cable through the lock cable hole on the interior side.



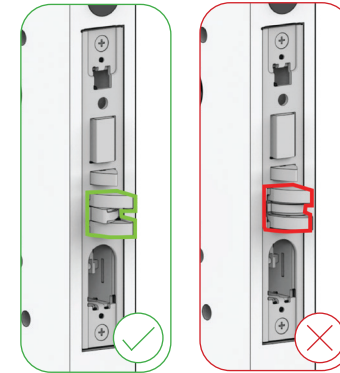
Use the Cassette Mounting Screws from the Screw Holder, in the Install Kit, to fasten the Cassette.



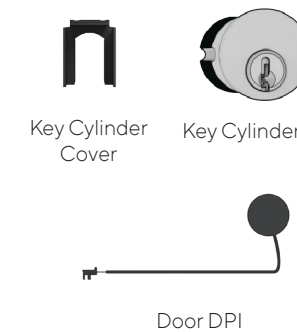
Keep screws loose.



Adjust the latch direction depending on the swing direction of the door.



Make sure the prongs alternate.



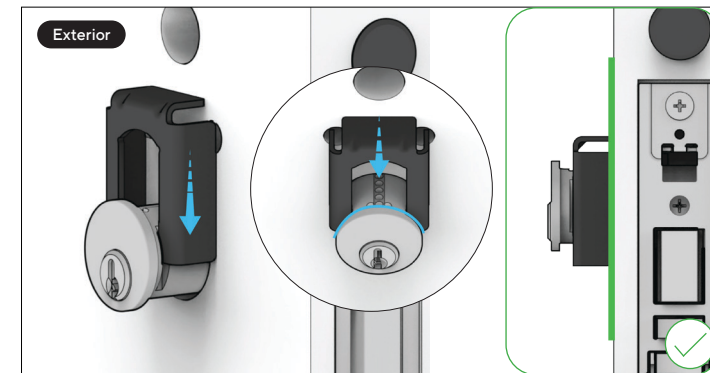
Retrieve the following items from the Key Cylinder and Install Kit.



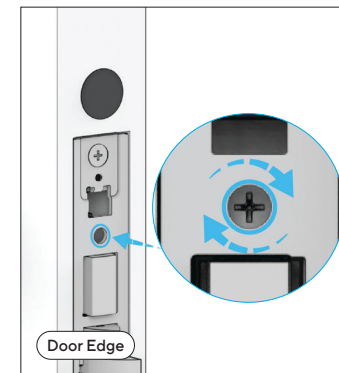
Route the DPI Cable through the DPI hole, with the cable routing into the interior side.



Insert the Key Cylinder and turn it clockwise into the Cassette.

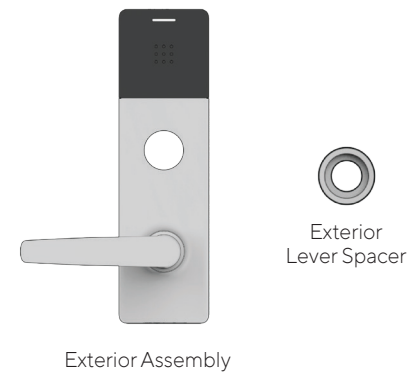
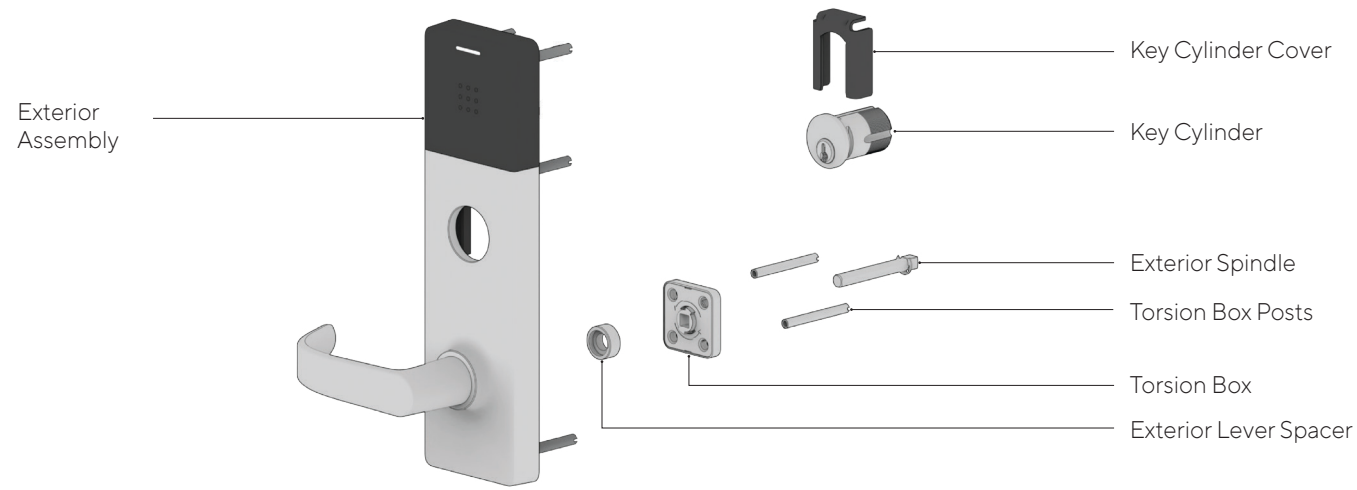


Make sure the set screw is loose. Slide the Key Cylinder Cover into the Key Cylinder grooves. Turn the Key Cylinder assembly until it is flush with the door.

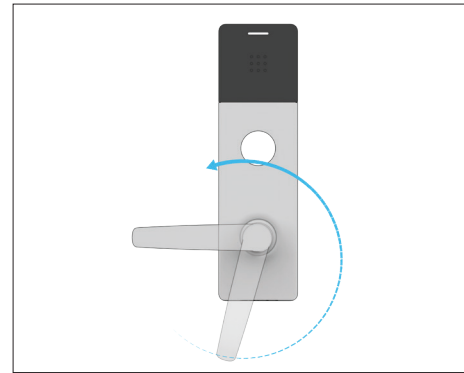


Tighten the set screw in the Cassette, using a Phillips Head Screwdriver, to secure the Key Cylinder.

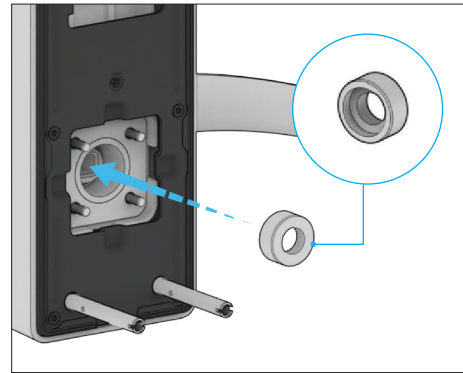
# Exterior Installation



Retrieve the following items from the Assembly Kit.



The Lever will rotate freely.



Place the Exterior Lever Spacer into the lever opening. Hollow side facing inwards toward the opening.

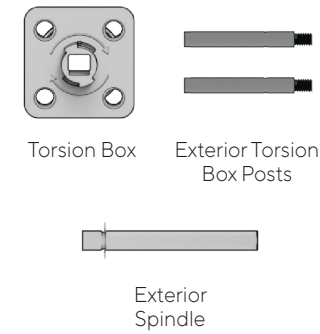
**Checkpoint**

Determine the correct handing direction of the Lever and hold it. This step will determine the placement of the ① turn direction on the Torsion Box and ② the Torsion Box Posts placement.

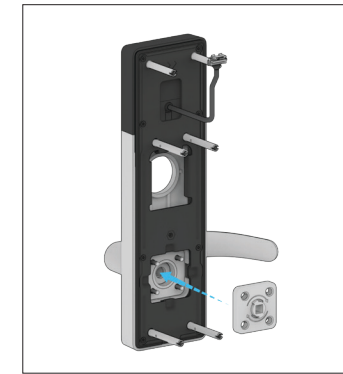
**Left Handed, Exterior**

**Right Handed, Exterior**

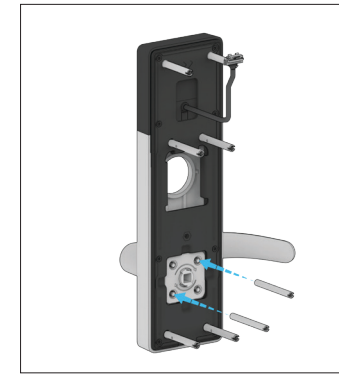
# Exterior Installation (cont.)



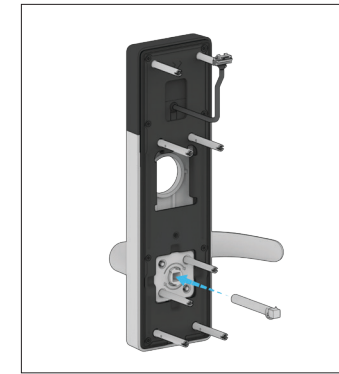
Retrieve the following items from the Assembly Kit.



Place the Torsion Box in the Exterior Assembly in the appropriate direction. Refer to Checkpoint ①.



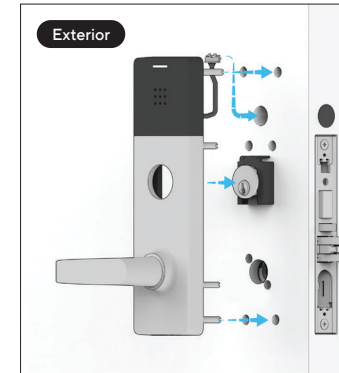
Hand-tighten the Exterior Torsion Posts onto the Torsion Box in the appropriate formation. Refer to Checkpoint ②.



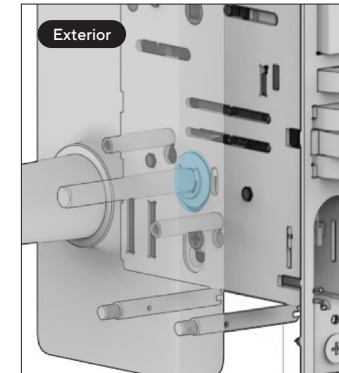
Hold the lever in the desired handing direction and insert Exterior Spindle into the opening in the Torsion Box.

**Checkpoint**

Ensure that the Lever rotates downward. If the Lever rotates upward, the Torsion Box is reversed. If so, check the previous Checkpoint again.



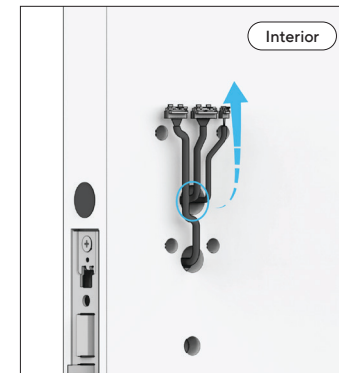
Take the Exterior Assembly and route the cable and posts through their respective holes. Press Assembly onto door.



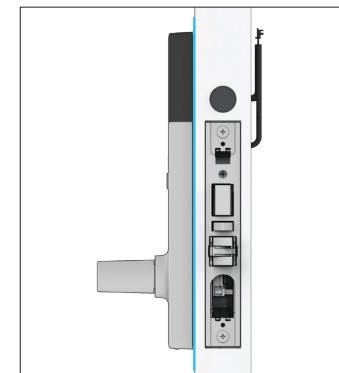
Take special care to ensure the Exterior Spindle is inserted in Cassette body.

**Checkpoint**

Turn the handle to check that the Spindle engaging the lock. The Spindle should be seated fully into the Cassette body.

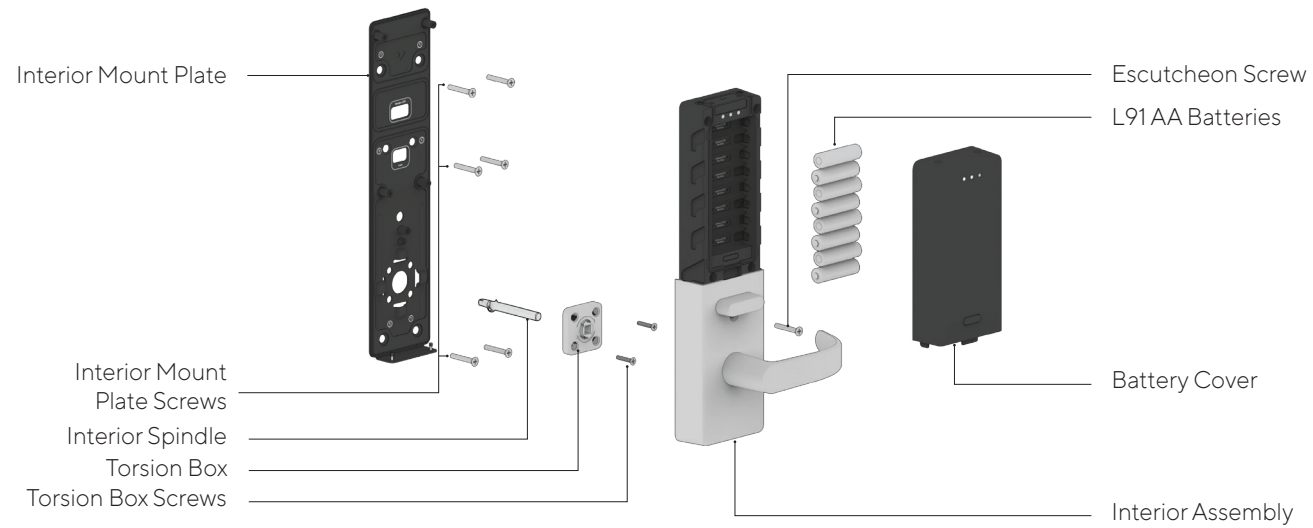


Make sure the cable is routed through the door, to the interior side.

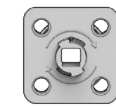


The Exterior Assembly should be flush against the door.

## Interior Installation



## Interior Installation (cont.)



Interior Torsion Box



Interior Torsion Box Screws

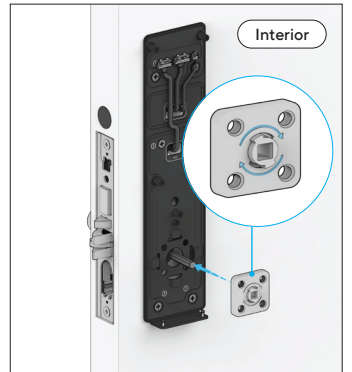
Retrieve the following items from the Assembly Kit.

**Checkpoint**

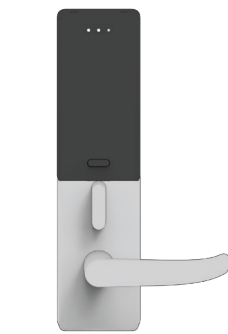
Note the correct handing orientation and follow the direction of the arrow on the Torsion Box.

**Left Handed, Interior**

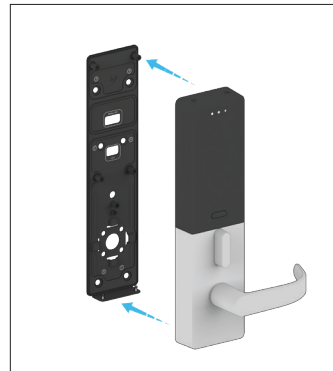
**Right Handed, Interior**



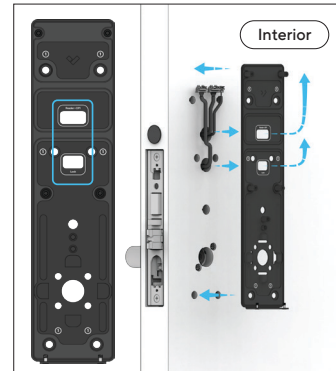
Place the Torsion Box on the Interior Spindle, matching the desired lever rotation direction.



Interior Assembly



Take the Interior Assembly and separate it from the Interior Mount Plate.



Note the cable openings and route cables through respective openings labeled on the Interior Mount Plate.



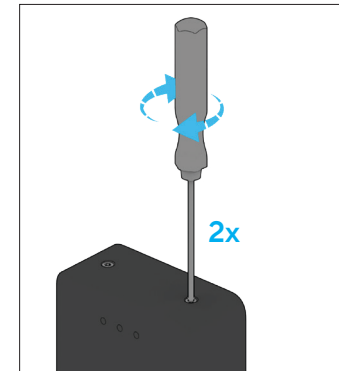
Pull the cables through the appropriate holes.



Note the location of the Exterior Torsion Posts when looking through the Interior Torsion Box.



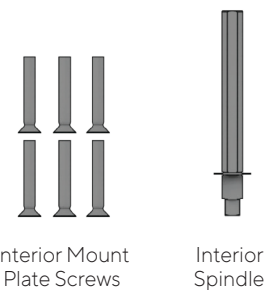
Take the Interior Torsion Box Screws and fasten them onto the posts with a Phillips Head Screwdriver.



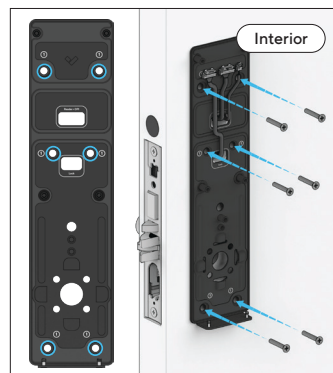
Using the T10 Torx Security Screwdriver, loosen the two captive screws on the top of the battery cover.



Remove the battery cover by lifting up and pulling out.



Retrieve the following items from the Assembly Kit.



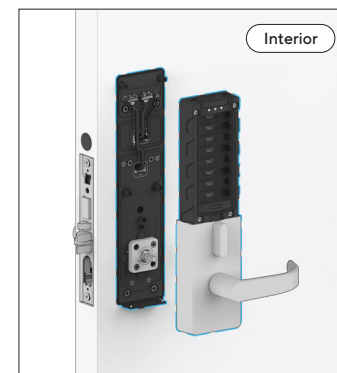
Screw in six Interior Mount Plate Screws into the ① locations on the Mount Plate.



Insert the Interior Spindle through the central hole (short side is facing inwards).

**Checkpoint**

The Spindle should be seated fully in the Cassette body.



Align the Interior Assembly to the Interior Mount Plate.



Turn the thumbturn into the desired unlock state before sliding it onto the Interior Mount Plate.

**Checkpoint**

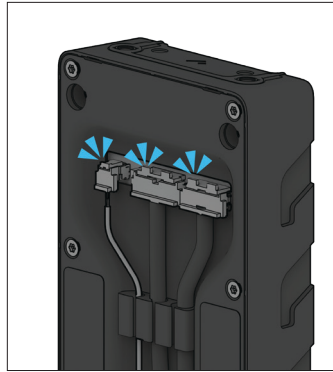
Thumbturn must be either in a fully horizontal or vertical position. If thumbturn is angled, the Interior Assembly will not be able to be placed on the Interior Mount Plate.

Thumbturn cannot be angled in other ways.

## Interior Installation (cont.)



Bring the Interior Assembly closer to the Interior Mount Plate to begin connecting the connectors.



Plug the connectors to their respective ports on the rear of the Interior Assembly and press cables into the grommets.

**Checkpoint**

Incorrect cable placement can disrupt the installation process. Ensure that the cables are tightly packed into the Interior Assembly by checking:

Cables are routed through their respective grommets.

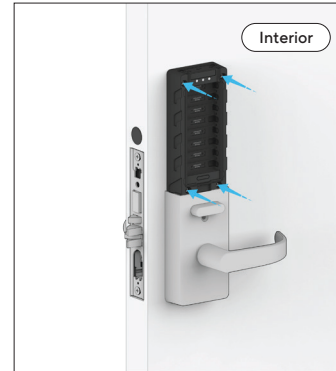
Press the cables into the grommets to ensure no movement.



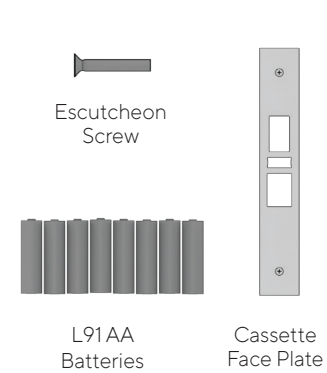
Place the Interior Assembly onto the Interior Mount Plate.

**Checkpoint**

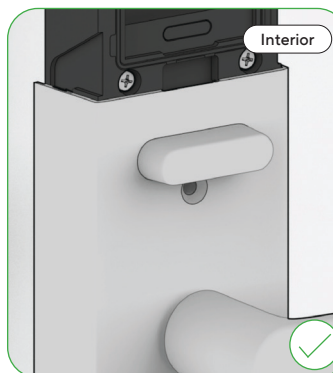
Ensure that the Interior Assembly is sitting flush along the mount plate. There should be no gaps anywhere and no pinched cables.



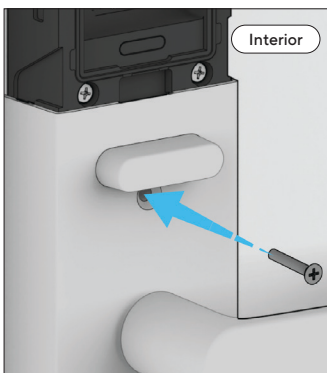
Tighten the four captive screws on the Interior Assembly with a Phillips Head Screwdriver. It is recommended to tighten them evenly.



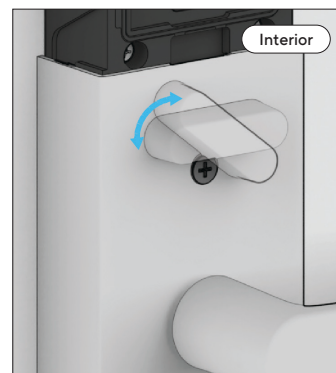
Retrieve the remaining items.



Make sure thumbturn is in the horizontal position.



Insert the Escutcheon Screw and tighten it to the Interior Assembly.



If the deadbolt is extended, retract it by turning the thumbturn.

## Interior Installation (cont.)



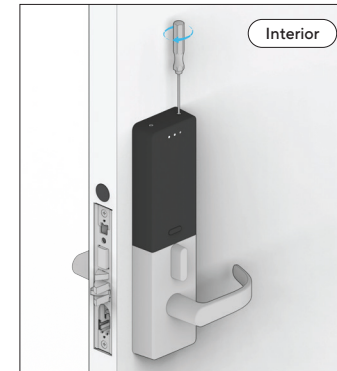
Install the eight L91 AA batteries included in the Install Kit. The device LEDs should begin to cycle.

**Checkpoint**

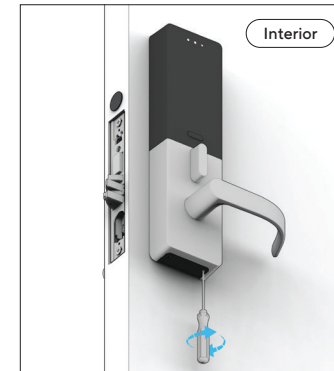
For easy product registration, scan the QR code on the label located on the Interior Assembly. If you prefer to manually enter the S/N, please proceed to: [verkada.com/start](http://verkada.com/start)



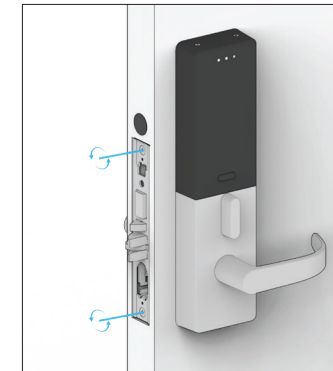
Attach the Battery Cover by following the grooves on the side of the Interior Assembly.



Tighten the two captive screws located on the top of the Battery Cover with the T10 Torx Security Screwdriver.



Tighten the two captive screws located on the bottom of the Interior Assembly.



Tighten the two Cassette Screws on the Cassette.



Tighten Cassette Screws before attaching the Cassette Face Plate. Screw the two Face Plate Screws onto the Cassette using a Phillips Head Screwdriver.

**Checkpoint**

Check that the thumbturn engages the deadbolt.

Make sure that the latch is engaged when the Interior Lever is turned.

Use the Key to turn the lock to ensure that the deadbolt engages (for CC only).

Once device is connected use a credential (i.e. key card, FOB) to test unlock feature.

# Key Core Installation

Key Cores



FSIC



SFIC

# Additional Resources

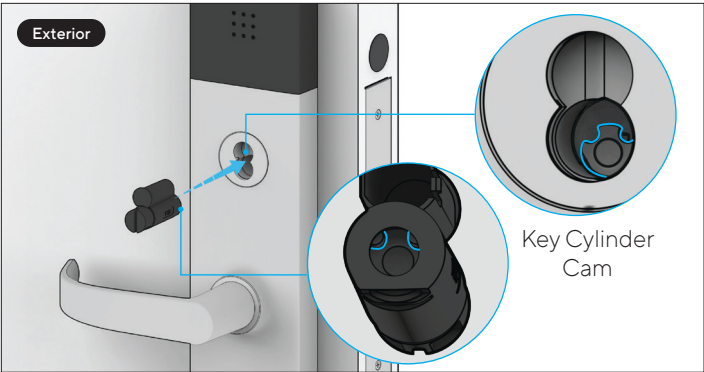
For further instructions, scan here.



## Full Size Interchangeable Core (FSIC) Installation



Rotating the cap of the FSIC Temporary Key Core will adjust the back opening orientation. This will engage with the Key Cylinder cam.



Note the orientation of the cam in the Key Cylinder. Align the opening on the back of the FSIC Temporary Key Core to the Key Cylinder cam and push it into the Key Cylinder.

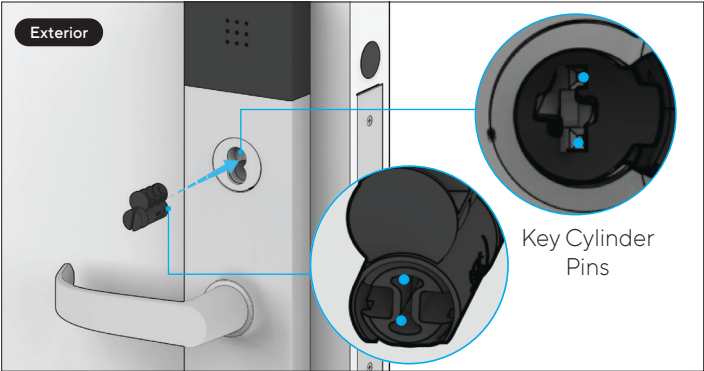


A subtle click will indicate that the Temporary Key Core is installed.

## Small Format Interchangeable Core (SFIC) Installation



Rotating the cap of the SFIC Temporary Key Core will adjust the SFIC opening orientation. This will engage with the Key Cylinder pins.



Note the orientation of the pins in the Key Cylinder. Align the opening on the back of the SFIC Temporary Key Core to the Key Cylinder Pins and push it into the Key Cylinder.



A subtle click will indicate that the Temporary Key Core is installed.

## Support

Thank you for purchasing this Verkada product. If for any reason you're experiencing issues or need assistance, please contact our 24/7 Technical Support Team immediately.

Sincerely,  
The Verkada Team  
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