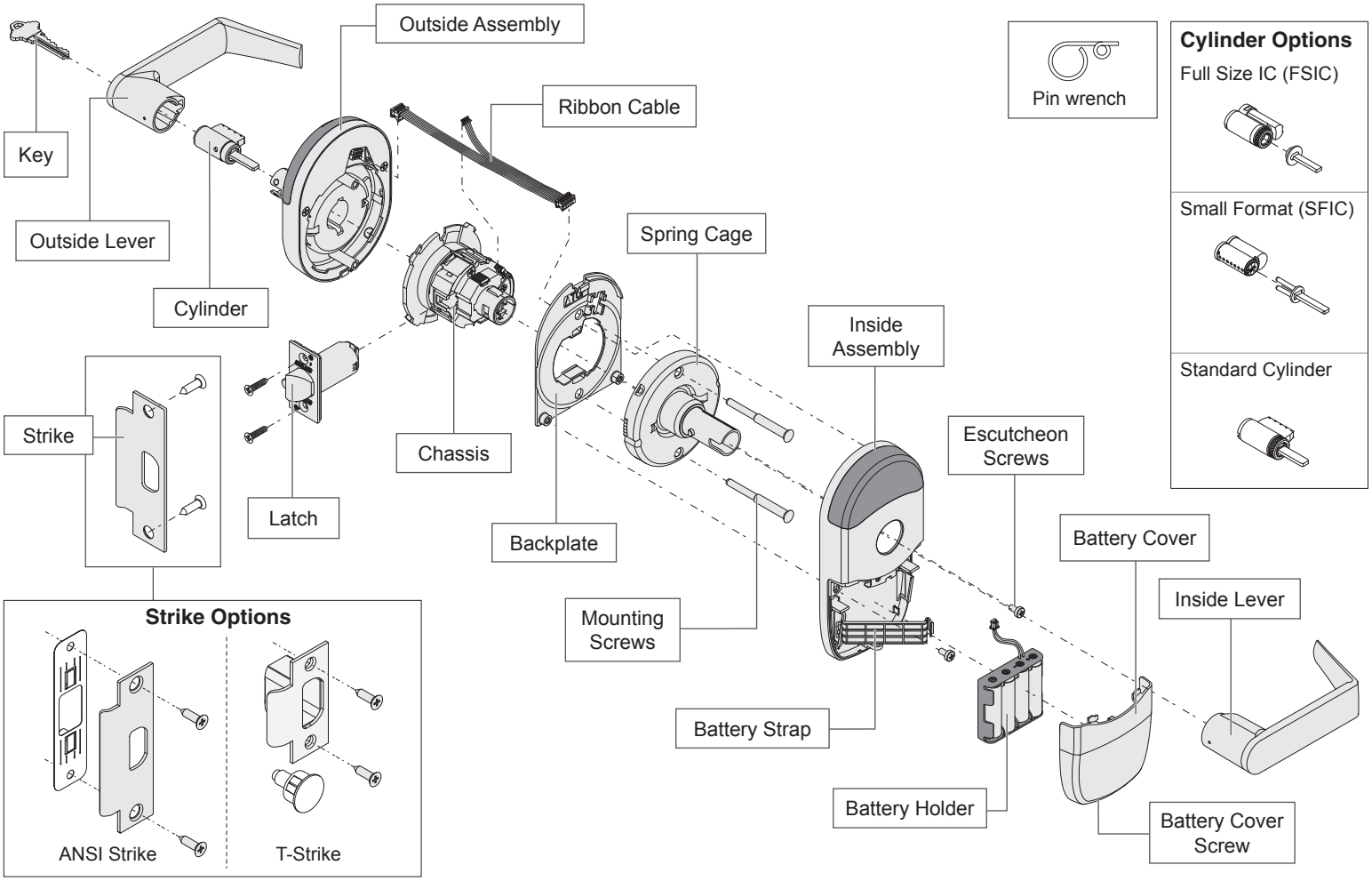
P516-958

NDE Wireless Lock

Model NDE80

Installation Instructions and User Guide



Installation Preparation

Tools Needed

- Phillips screwdriver
- Pin wrench
- Pencil

Optional

- T-15 Tamper Torx screwdriver

Door preparation:

For door preparation instructions, see included instructions or contact Technical Service at 1-877-671-7011.

IMPORTANT NOTES

Magnet tray and included strike MUST be installed!

The magnet is used to indicate door position.
Door position MUST be calibrated using the application.

Install and test lock with door open to avoid being locked out.

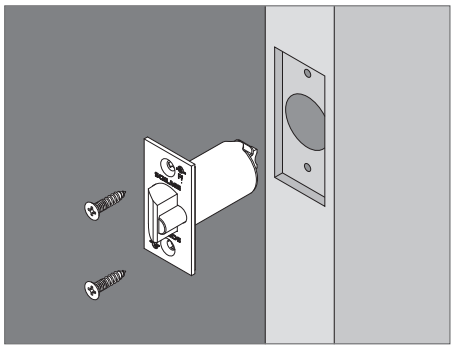
MOBILE APPLICATION

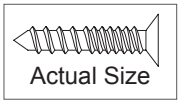
Search for “Schlage Engage” in the Apple App Store or Google Play Store to download.

Navigate to the website to set up your online account.

A Install latch.

The bevel must face toward the door stop.





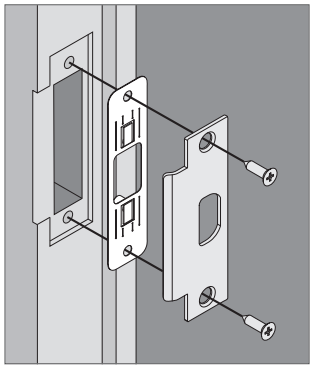
Actual Size

B Install strike and magnet tray assembly.

Note: If dustbox is included, install first.

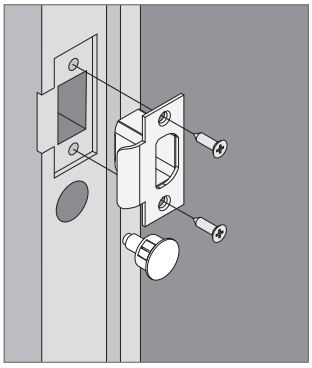
CAUTION

Magnet tray and included strike must be installed! DO NOT DISCARD!



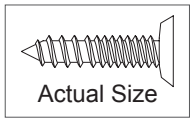
ANSI Strike

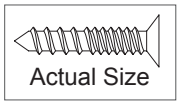
OR

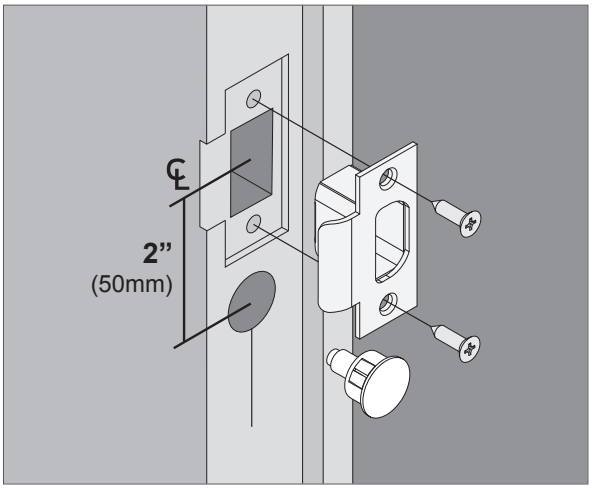


T-Strike

See instructions below for magnet installation.







Drill a hole ¾” (19 mm) diameter, 1½” (38 mm) deep

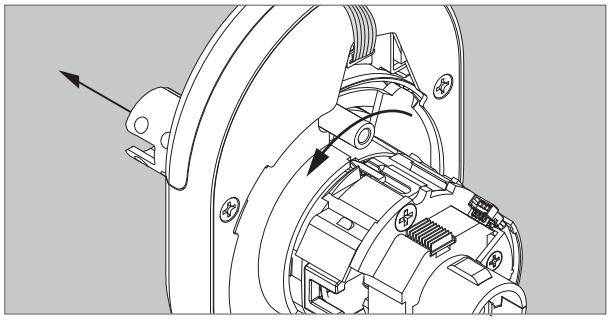
Door Thickness Adjustment

For 1⅝” or 2” thick doors, complete the following door thickness adjustment steps.

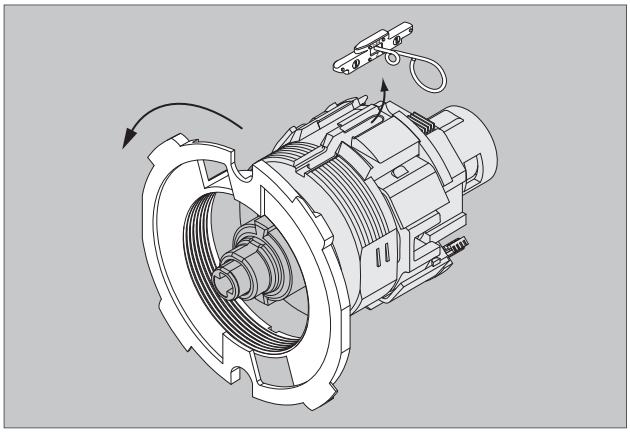
ⓘ **For 1¾” thick doors, NO ADJUSTMENT IS REQUIRED. Continue to step 3.**

A Remove chassis from outside assembly.

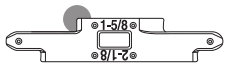
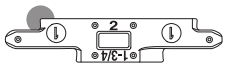
Pull lever post and rotate 10 degrees counter-clockwise until adjustment plate tabs align with cutouts on assembly, then remove chassis from escutcheon.

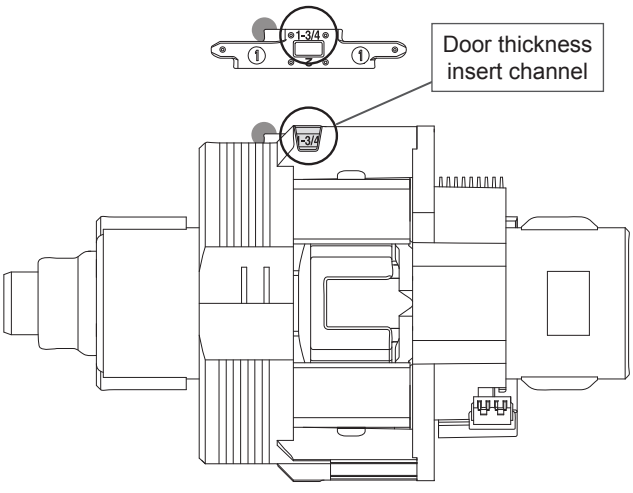


B Remove adjustment plate and door thickness insert.



C Reorient and replace door thickness insert.

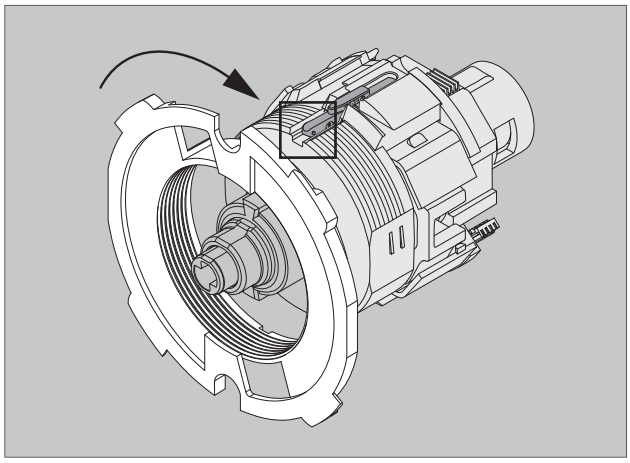
Door Thickness	Door Thickness Insert
1⅝”	
2”	



Chassis Side View

D Reinstall adjustment plate.

Tighten until door thickness insert enters notch in adjustment plate.



E Secure chassis in outside assembly.

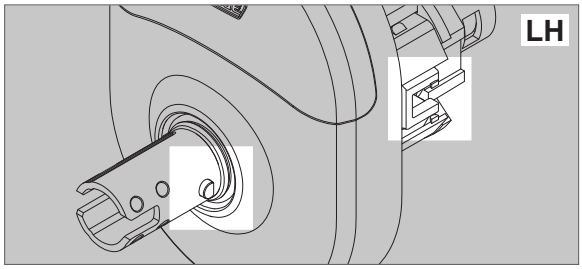
Continue to next step.

Install Outside Assembly

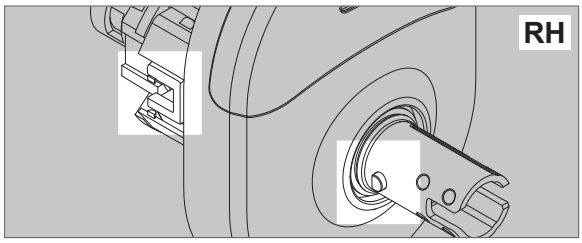
1 Prepare outside assembly.

1a Check that slide hole on chassis is aligned with lever catch pin.

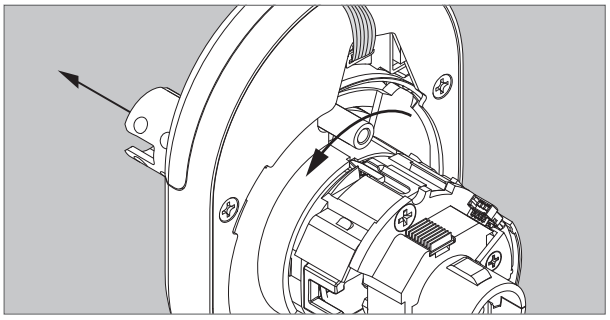
If not aligned, remove chassis and reassemble with correct orientation as shown below.



OR



To remove chassis, pull lever post and rotate 10 degrees counter-clockwise as shown below until adjustment plate tabs align with cutouts on assembly.

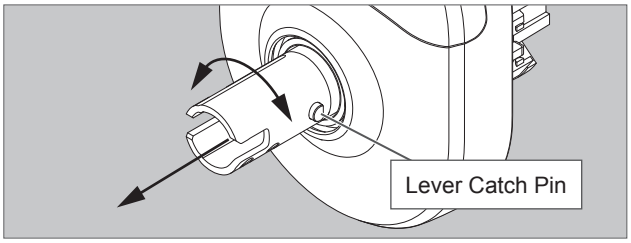


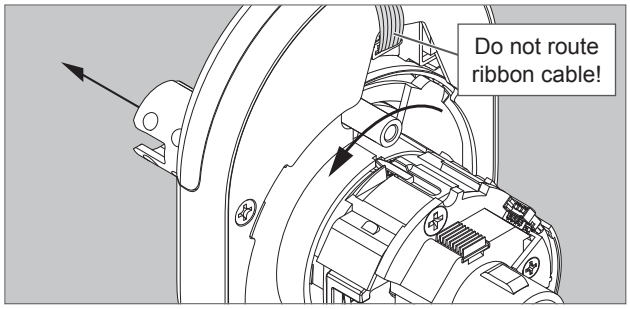
1b To change handing, pull lever post until it stops, then rotate 180 degrees.

Align lever catch pin and slide hole to latch side. Release lever post. Assembly will click into place.

CAUTION

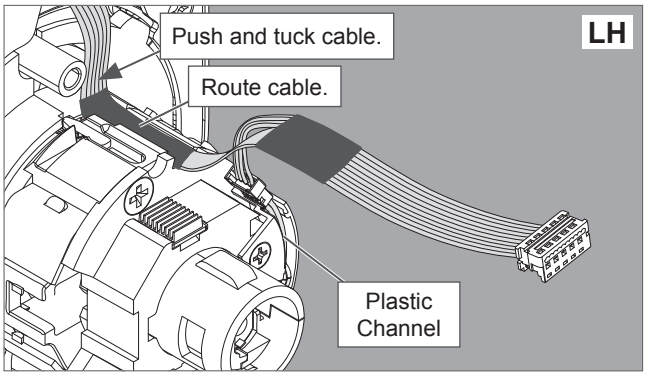
Do not route ribbon cable before rotating chassis!





1c Connect chassis cable. Route cables.

The cable should be routed on top of the chassis! Connect cable from outside assembly to connector in chassis.



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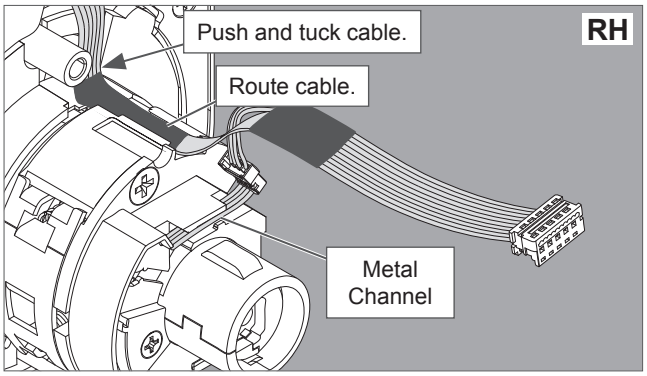


Tuck connected chassis cable into appropriate channel.

2 Align assembly and install on door.

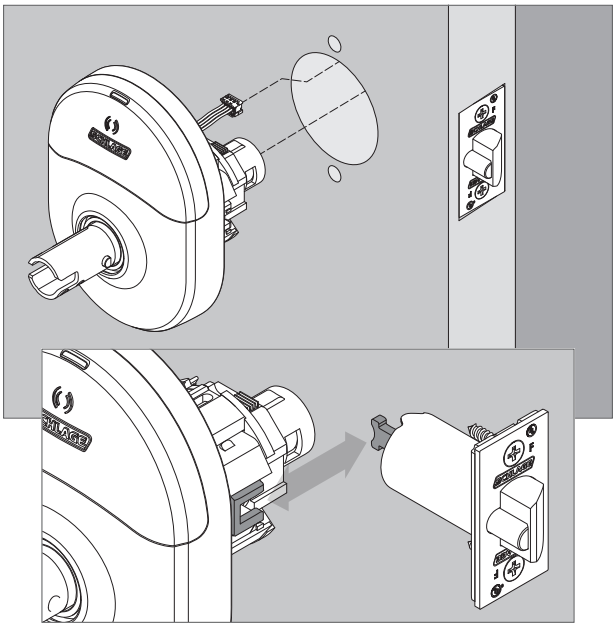
Let the wire hang on the other side, through the hole.

WARNING

Do not pinch ribbon cable!

WARNING

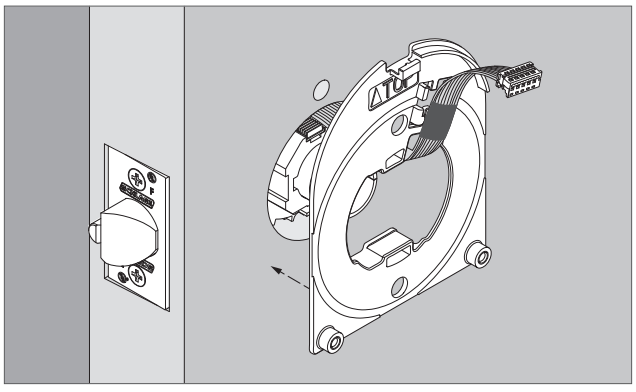
Ensure that the lever catch pin is aligned with latch side before continuing!



Latch tail fits inside slide.

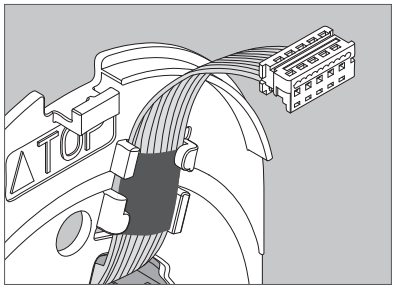
Install Inside Assembly.

3 Install backplate first, then route ribbon cable.



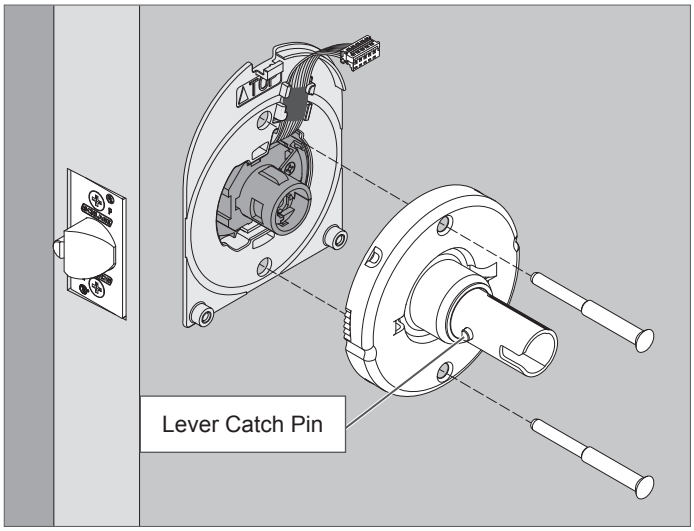
CAUTION

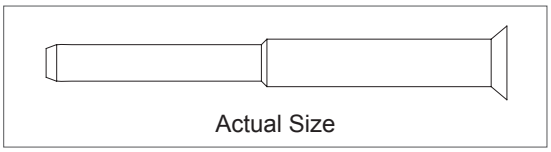
Do not pinch ribbon cable!
Route cable through indicated space.



4 Install spring cage.

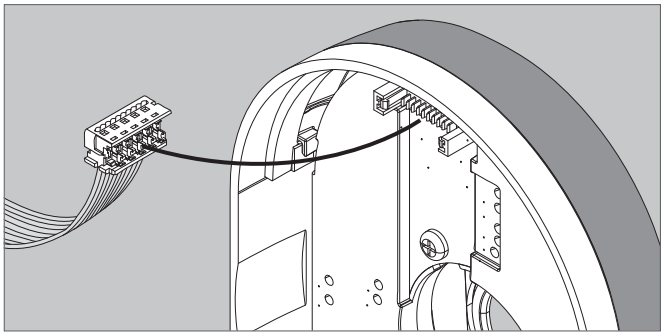
Align lever catch pin to door edge.



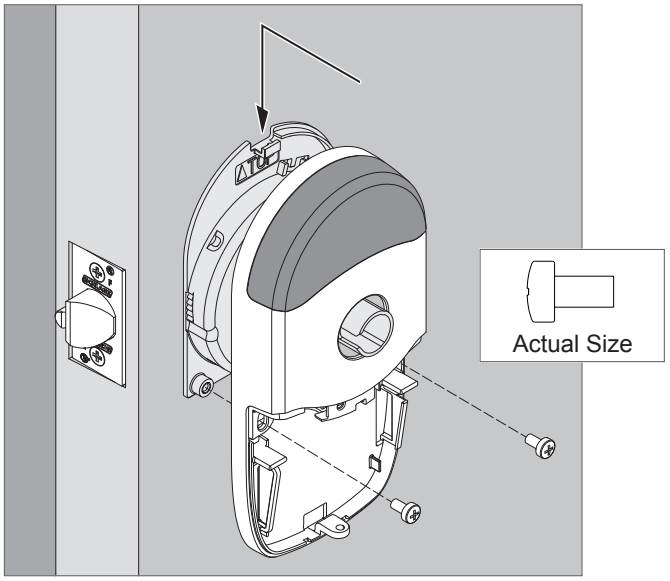


5 Install inside escutcheon.

5a Connect the cable from the outside escutcheon to the port on the inside escutcheon.



5b Place inside escutcheon on backplate, and slide down to hook onto backplate. Secure with screws.

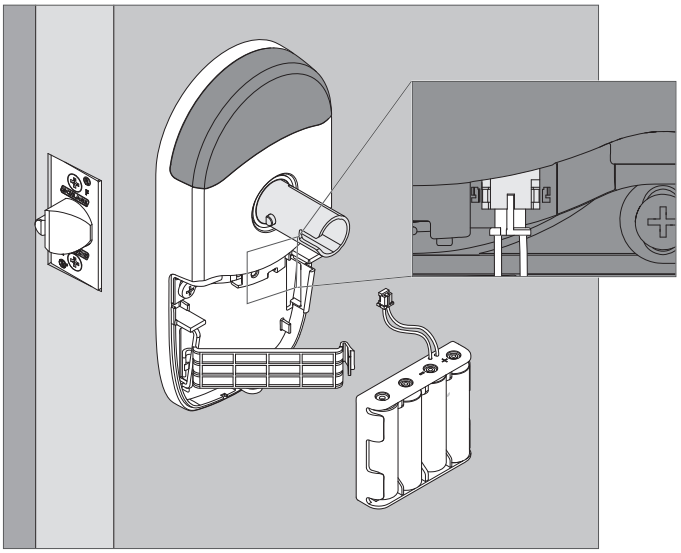


Install Batteries

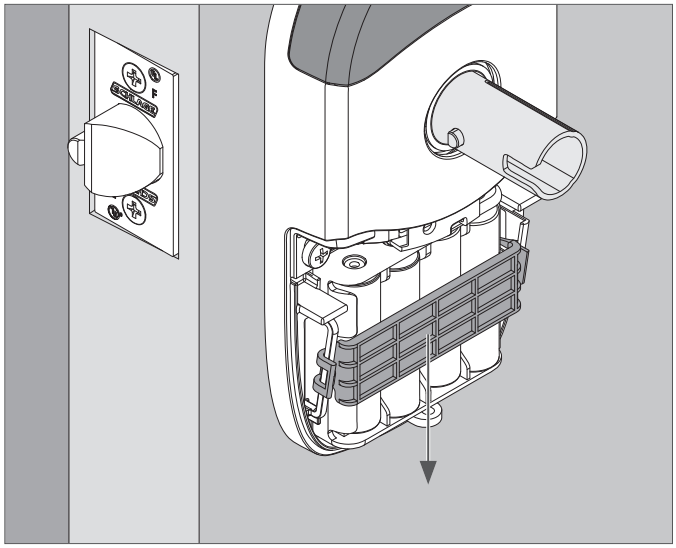
6 Install batteries into battery holder.

6a Push the tab on the right of the battery securing band, and pull out to release battery holder.

6b Connect cable from battery holder to connector on circuit board.

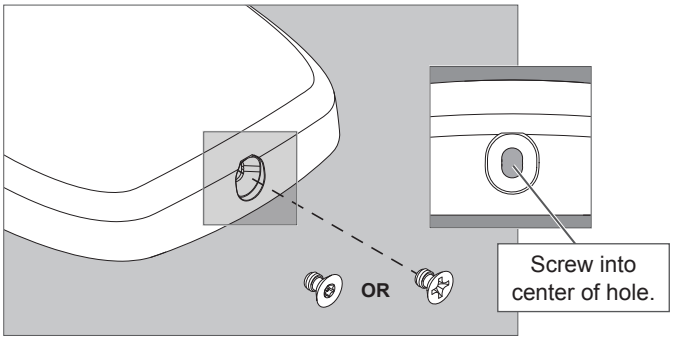


6c Snap the battery securing strap into place, then slide the strap down until snug.



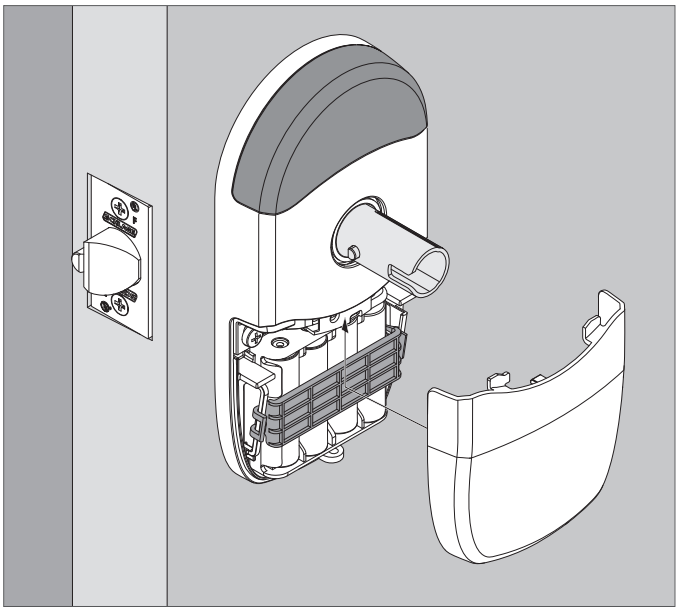
7 Install battery cover screw.

Choose either standard Phillips screw or Torx screw.



8 Install battery cover.

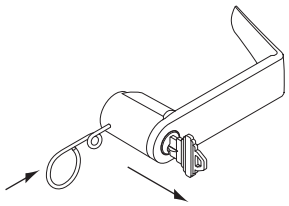
Install battery cover in place, then push up to secure the cover. Tighten bottom cover screw.



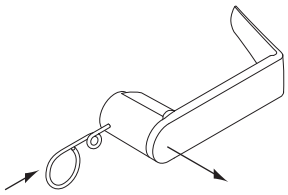
CAUTION

Removing the battery cover will cause lock Tamper Mode, which halts BLE and Wi-Fi communications!

Lever Removal



To remove a lever with a cylinder, insert key first, and turn it 90 degrees toward door edge. Press pin wrench into hole in lever, and pull off.

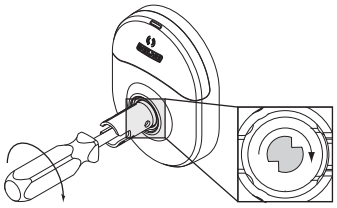


To remove a lever without a cylinder, press pin wrench into hole in lever, and pull off.

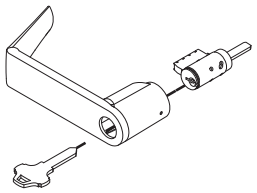
Cylinder and Lever Installation

Lever With Standard Cylinder

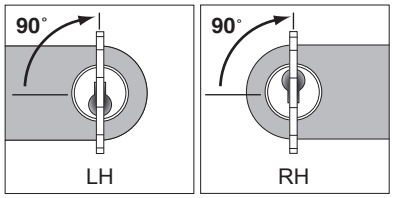
Rotate cam in lever post until the cam stops.



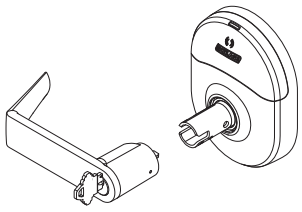
Insert cylinder into lever, then insert key.



Rotate the key as shown.

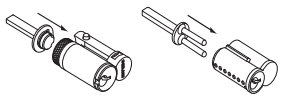


Install lever.

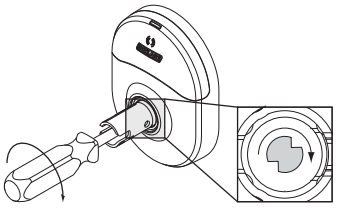


Lever With Interchangeable Core Cylinder

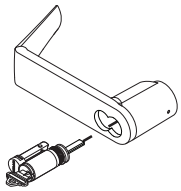
Install cylinder tailpiece.



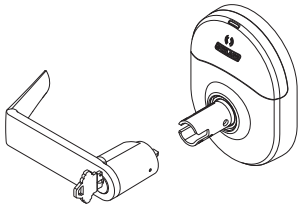
Rotate cam in lever post until the cam stops.



Insert key into cylinder and insert into lever. Rotate the key clockwise 15 degrees.

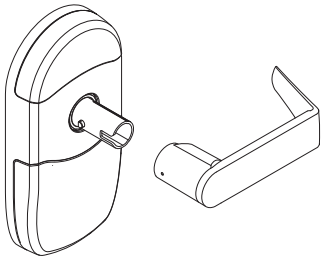


Install lever.



Non-keyed Lever

Press lever onto lever post.



Continue to User Guide to capture lock with your mobile device.

CAUTION

Door position MUST be calibrated using the mobile application!

NEED HELP?

See **Troubleshooting** on pages 8 - 9.

Lock Testing

Correct lock installation is indicated by three green LED flashes and beeps at the end of power on boot up.

Power On Self Test

The Power On Self Test (POST) is a self-diagnostic that the lock runs to verify that the lock is installed correctly. If the red LED lights on power up, use the mobile app to see the exact cause of failure.

Capture Lock With Application

Make sure the app is downloaded and ready. The lock must be fully assembled, including having the batteries installed. **Battery cover must be installed!**

1. Download the mobile application.
   Search for “Schlage Engage” in the App Store.
2. Set up the mobile application.
   Register a new account if you do not have one already.
3. Select “Connect To Locks” icon at bottom of screen.
4. Go to “Update Locks,” then “Pending.”
5. Turn the inside lever and release.
   This will put the lock into discoverable mode for 2 minutes.
6. Pull down on the list on your device to refresh the list of locks.
   The lock will show up as “Schlage Lock”
   6a. Select this lock.
   6b. Select “Create new lock”.
   6c. Select “Create from scratch”.
   6d. Enter lock name.
   6e. Press “Save”.
   Lock will reset and beep when complete.

Door Position Sensor Calibration

CAUTION

You must calibrate door position! Once lock is captured in Engage application, follow instructions to calibrate door position!

Construction Access Mode

Construction Access Mode is NOT required to operate lock. Construction Access Mode is used to allow access before the lock is linked and/or for testing purposes before linking.

Construction Access Mode requires a credential other than a PIN.

- Enabled by default and after a factory reset.
- The lock will remain in Construction Access Mode until the mode is cancelled as described below.
- No audits are captured while the lock is in Construction Access Mode.

ⓘ **Once enabled, Construction Access Mode requires a factory default reset to exit this mode and allow capture with the application.**

1 Create the Master Programming Credential.

The first card presented to a new lock while turning the inside lever automatically becomes the Master Programming Credential. The Master Programming Credential will not grant access. It is used only to add additional credentials.

ⓘ **Use the same Master Programming Credential for all the locks in the facility.**

1a Turn and hold down the inside lever and present to the NDE reader the card you want to make the Master Programming Credential.

The NDE LED will blink five times for successful enrollment of Master Programming Credential.

CAUTION

Do NOT lose the Master Programming Credential. If lost, reset the lock to factory settings.

WARNING

If the first card presented to a new lock to create the Master Programming Credential is not accepted, the lock has either been programmed or already has a Master Programming Credential. If the Master Programming Credential cannot be located, or to put the lock back into construction access mode, reset the lock to factory settings. See Reset to Factory Default for more information.

2 Enroll user construction credentials.

2a Present the Master Programming Credential.

The NDE LED will shine steady green for twenty seconds. You must complete the enrollment within this time.

2b Present credential to enroll for access.

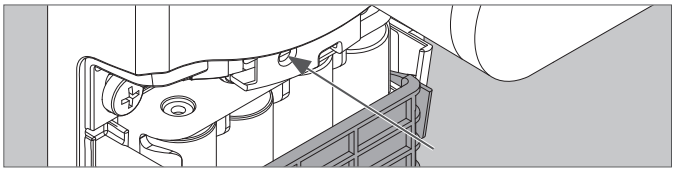
The LED will blink green five times and beep five times if successful.

2c To enroll more credentials, repeat steps 2a and 2b.

Reset to Factory Default

A Factory Default Reset (FDR) will return the NDE lock settings to the original settings as shipped from the factory. Removes configurations, databases, and requires the lock to be re-captured. A FDR will not remove the lock from your ENGAGE account.

A Press and hold the FDR button for five seconds.



The NDE will blink green two times and beep two times.

B Turn the inside lever three times.

LED will blink red and beep with each turn.

C Use the ENGAGE application to capture your lock.

Turn the inside lever. The NDE will communicate on BLE looking for your ENGAGE application for two minutes after each lever turn in FDR mode.

If you have used this NDE in Construction Access Mode, you must complete a FDR before it will communicate on BLE.

Factory Firmware Reset

A Factory Firmware Reset causes the lock to reload firmware back to original state.

1. Remove batteries from lock then wait 30 seconds.
2. Turn and hold inside lever.
3. While holding inside lever, plug batteries back in.
4. While holding inside lever, press and hold FDR button for 10 seconds.
   Lock will reset and beep when complete.

Lock Indicator Guide

Indicators	Meaning
Fast flash green x5	Construction Access Mode: Successful creation of master or user construction credential.
Steady green until timeout (20 seconds)	Construction Access Mode: Waiting for credential after presentation of master construction credential.
Long flash red x2	Manual/Construction Mode: Timed out to construction mode.
Flash red x9 followed by the respective credentials indication	Low battery.
Flash green x1 + beep, then flash red x1 upon relock	Access granted.
Flash green x2 + beep	Already unlocked.
Flash red x12 + beep	In secure privacy/lockdown mode.
Flash red x1 + beep	Access denied
Flash alternate green-red x5 + beep	Freeze/Lockdown mode.
Flash red x4 + beep	Access denied. Outside credential schedule.
Flash red x1	BLE communicating.
Fast flash green x3 + fast beep x3	Power On self test - Pass.
Fast flash red x3	Power Off self test - Fail.

Troubleshooting

Problem	Possible Cause	Action
No beeps or blinks when battery pack is connected.	• Improper plug connection. • Pinched wires or bent pins. • Reversed battery or dead battery.	• Check all wiring, and the three plugs. • Check that battery voltage is 6 VDC or better with new batteries
Fails power up self test. There were no three green LED blinks and beeps at the end of power up, just three RED LED blinks and beeps.	• Motor not connected. • Battery voltage low.	• Check all three plug connections, inspect for cut or pinched through door wires. Measure battery voltage, must be over 6 VDC
Unable to connect to the device with BLE, don't see the expected lock name, or "Schlage Lock".	• The battery cover must be installed to avoid Tamper Mode before BLE will work. • The tamper switch could be broken.	• Hit the '+' on the ENGAGE mobile Application. • Install the battery cover. • Turn the outside lever, and check for the name again by hitting the "+" sign in the application.
Latch is not retracting when access is granted	• Latch tail assembly incorrect.	• Check installation step 5.
NDE is crooked in the door prep	• Check installation step 4, that the latch tail fits in the slide slot.	• Center and square the lock in the door prep.
Outside lever won't go on	• Key cylinder is assembled incorrectly.	• See Cylinder and Lever installation. • Check cam rotation and key rotation for handing.
Batteries are hot.	• A battery is reversed.	• Replace all batteries, with polarity per the battery pack markings. Measure the battery voltage as 6 VDC or more when new to confirm proper insertion
Can't do a Factory Default Reset (FDR)	• Motor/RTX cable is disconnected. Pins are bent or cut.	• Hold down the FDR button until there are two green blinks and beeps; then turn the inside lever three times. Check all connections are correct and no wires are cut or pins are bent
No Wi-Fi connection	• Wrong Wi-Fi Configuration.	• Check the Wi-Fi configuration for the location.You must have the SSID, Security type, Password, and User Name.

Problem	Possible Cause	Action
Intermittent Wi-Fi connection Wi-Fi signal is weak	• Your phone's Wi-Fi may be turned off. • You may be too far from a Wi-Fi access point or have walls blocking the Wi-Fi signal.	• Use your smart phone Wi-Fi settings to confirm the desired SSID is present and listed under "Choose a Network" on your phone. Use the same SSID, password, and user Name to connect your smart phone to the Wi-Fi to confirm the Wi-Fi is functioning at this door location. The NDE lock and phone can both connect with the proper Password and User ID. Make sure the SSID assigned to the lock is on an the nearest access point with a strong signal.
After enrolling credentials and access files into the NDE, all valid cards are still denied.	• DPS (door position sensor) is not calibrated. • Activation or Expiration date errors.	• Calibrate DPS using your mobile application. • The DPS must be calibrated before access is granted. Use the ENGAGE mobile application to calibrate the DPS. • The NDE clock is set automatically with the first communication to the Engage mobile application. Check the User Credential information in the mobile application to make sure you have enrolled the "User Configuration" with the proper access Activation and Expiration dates.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement
To comply with FCC/IC RF exposure requirements for mobile transmitting devices, this transmitter should only be used or installed at locations where there is at least 20 cm separation distance between the antenna and all persons.

Industry Canada Statement
Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.
Industrie Canada Déclaration
Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Industry Canada Radiation Exposure Statement
This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Industrie Canada l'exposition aux radiations
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.