

# CX-SERIES

*With EZ Connect*

## INSTALLATION MANUAL



 **Proxess**

To learn more: visit [www.proxess.com](http://www.proxess.com) or  
call (303) 317-6656

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INTRODUCTION

The *Proxess CX-Series Installation Manual* contains important information to assist you in installing your Proxess Cylindrical Lockset.

CERTIFICATIONS AND STANDARDS

3-A

ANSI/BHMA A156.25 (Indoor/Outdoor)	RoHS
ANSI/BHMA A156.2 Grade 1	Industry Canada (IC)
UL 294	ETSI EN 300 330-1
ULC S319 PDR	ETSI EN 301 489-1
UL10C Positive Pressure Rated	ETSI EN 301 489-3
UL10B Neutral Pressure Rated	CENELEC EN 61000-6-3
FCC Part 15	IEC61000-4-2 ESD Immunity
ADA Compliant	CENELEC EN 50130-4

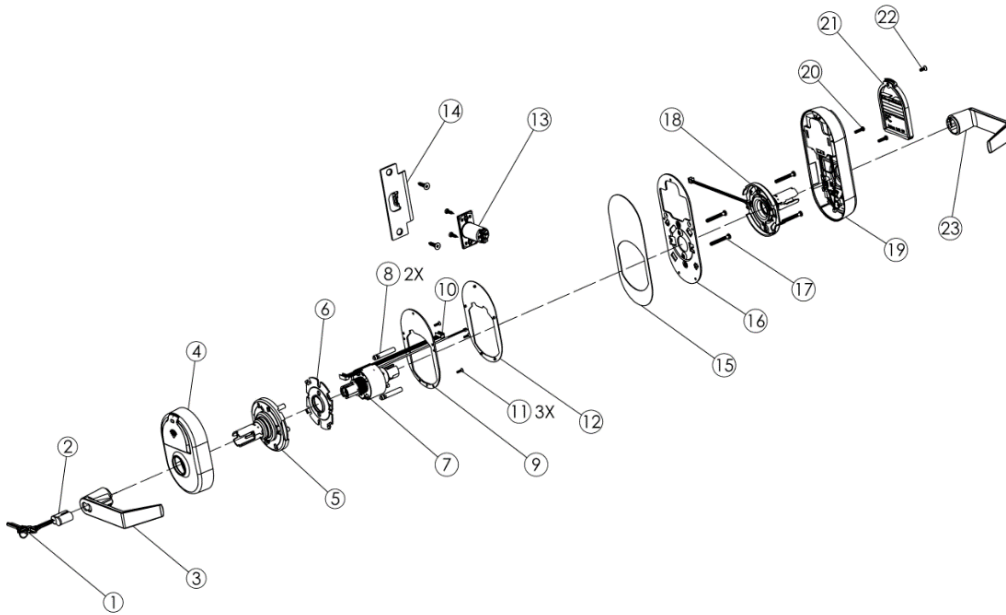
TECHNICAL SUPPORT

3-C

The first source for technical answers is this CX Series Service Manual. All documentation and training materials are also available on our website: [www.proxess.com](http://www.proxess.com). If you are not able to find an answer in these resources, contact your local Proxess Representative. If you do not know your local Proxess Representative, contact the Customer Service Department at Proxess (303) 317-6656.



# CX-SERIES INSTALLATION INSTRUCTIONS

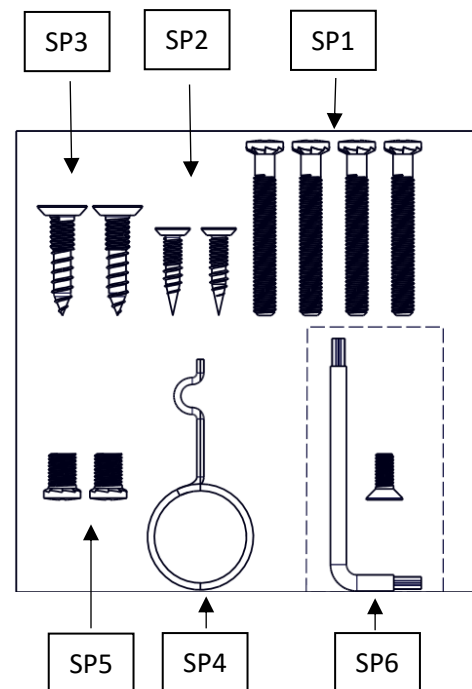


## A. CHECKLIST (4 AA Batteries Included)

FOR DOOR AND FRAME PREPARATION INSTRUCTIONS, SEE APPENDIX A OR GO TO [PROXESS.COM](http://PROXESS.COM)

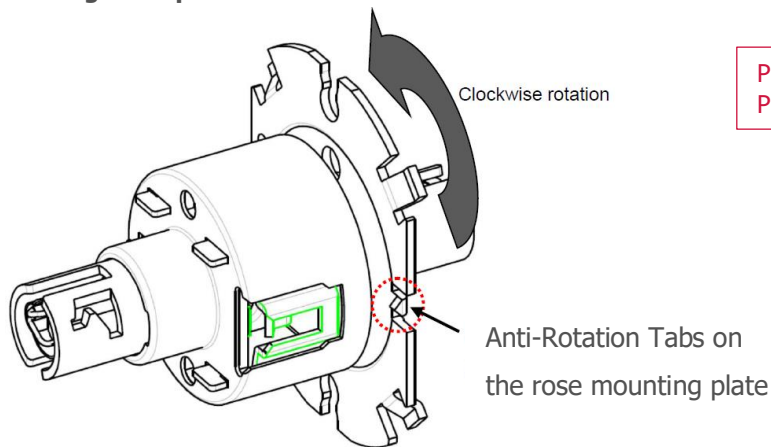
### Parts List: Each Proxess CX-Series lockset includes

- Door Preparation Template
- Cylindrical Lever Lockset with Installation Instructions
- Exterior lock assembly (include housing, lever and cylinder drive unit)
  1. Keys
  2. Removeable Core
  3. Exterior Lever
  4. Exterior housing (includes plastics and light pipes)
  5. Exterior Rose
  6. Chassis plate
  7. Chassis
  8. Through Bolt Posts
  9. Exterior Backplate
  10. Ribbon Cable
  11. Exterior Assembly Screws
  12. Exterior Gasket
- Hardware box includes:
  13. Latch
  14. ASA Strike Plate
- Screw Pack includes:
  - (SB1) Hager mounting screws M5 x 38mm x4pcs
  - (SB2) Flat head tapping screws #8x3/4" x2pcs
  - (SB3) Flat head tapping screws #12-24 x 18mm x2pcs
  - (SB4) Lever release tool
  - (SB5) Hager mounting screws M6 x 10mm x2pcs (optional)
  - (SB6) Torx Wrench and Optional Torx Security Screw
- Interior lock assembly
  15. Interior Gasket
  16. Interior Backplate
  17. Interior Backplate Screws
  18. Interior Rose
  19. Interior Housing
  20. Interior Housing Screws
  21. Battery Cover
  22. Battery Cover Standard Screw
  23. Interior Lever



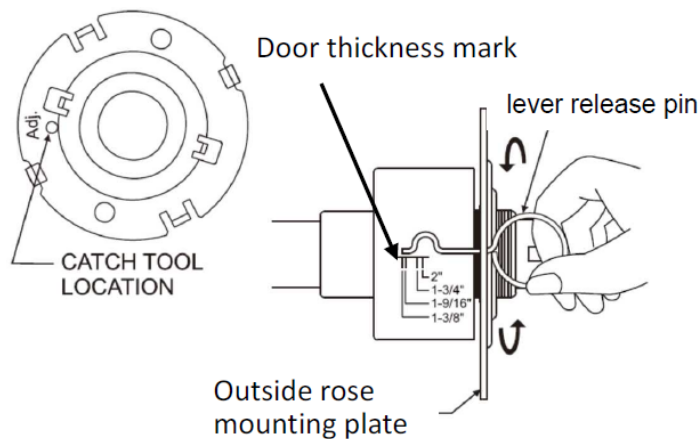
## B. ADJUST FOR DOOR THICKNESS

Remove through bolt posts from chassis. Pull chassis and rose mounting plate from exterior lock assembly.



PLEASE NOTE THAT THE LOCK BODY COMES PRE-SET TO ACCOMMODATE A 1¾ INCH DOOR

1. Please follow the steps below:
  - a. Rotate exterior rose mounting plate toward cylindrical chassis.
  - b. Put the lever release tool into the allocated position of exterior rose mounting plate per the illustration below.
  - c. Rotate exterior rose mounting plate to door thickness by using the lever release tool.



## C. LOCK HANDING AND REHANDING (IF NECESSARY)

Determine the hand of your door. The product is set up for **Right Hand** by default.

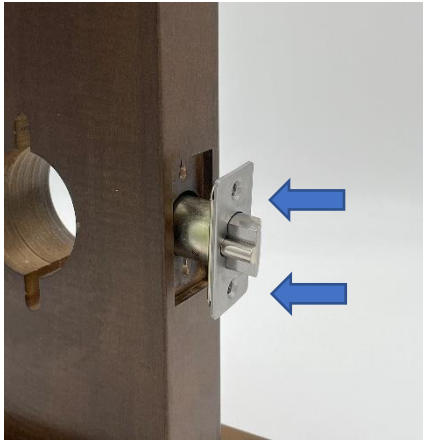
Door Handing Chart	
<p>Right Hand</p>	<p>Left Hand</p>
<p>Right Hand Reverse</p>	<p>Left Hand Reverse</p>

Indicates Key Side

## D. Hardware Installation Steps

### STEP 1

Install the latch in the door with the SP2 screws provided. The latch tube prongs should project into the chassis hole.



### STEP 2

Install the strike plate with the SP3 screws provided, checking to make sure that the position of the deadlocking plunger is aligned against the strike plate.



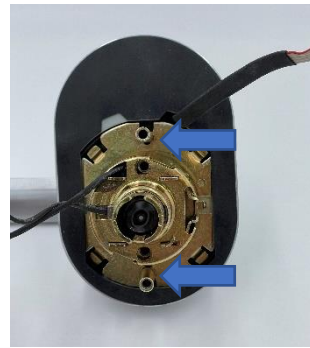
### STEP 3

Ensure the cable from the exterior board is properly routed through the cylindrical lock chassis by first inserting one edge, then pressing the other into the cable slot.



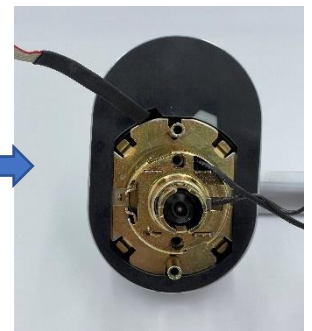
### STEP 4 (To Re-hand if Necessary)

1. To re-hand the lock chassis, begin by removing both the through bolt posts. See arrows below.



2. Remove the lock chassis and rotate both the internal mechanics and the chassis 180 degrees to accommodate the hand of the door. You will not need to remove the exterior gasket or backplate.

3. Replace through bolt posts.



Re-handed lock chassis to accommodate left-handed door

### STEP 5

Slide the lock chassis through the chassis hole in the door, ensuring that the chassis engages the latch.





### STEP 6

Place the back plate on the interior of the door with the upper and lower screws near the chassis. Route the cable and wires through the oval holes in the backplate. Wire paths may differ according to handing.

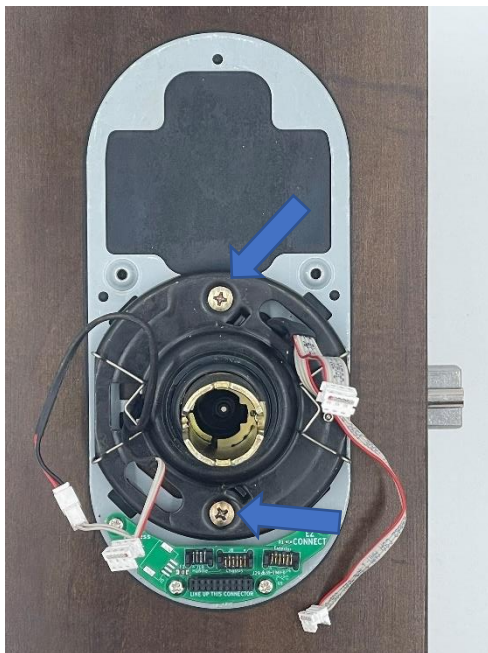


### STEP 6B Deadbolt Configuration

For information about installing the Proxess Cylindrical Lockset with a deadbolt, see "Door Preparation and Installation" on Page 7 in the CX-Series 3.0 Service Manual.

### STEP 7

Place the interior rose liner on the interior back plate and screw in. Ensure that all wiring go through the oval holes in the rose liner. Ribbon and latch cables together when right-handed, ribbon and handle switch when left-handed.



### STEP 8

Connect the Exterior, Chassis, and Handle cables to the EZ connect board, leaving the Exterior cable (6 pin rightmost connection) for last. Ensure all cables are neatly tucked into the retaining clip on the rose plate.



### STEP 9

Install the interior trim onto the back plate. The boards will plug into one another when placed correctly. Screw the interior trim onto the back plate using the two screws on the right and left of the battery compartment.



**STEP 10**

Install the four AA batteries, beginning with the outer two.

Insert outer batteries first



After the batteries are properly installed, the lock should beep and the motor will run. **The lock is then in the locked position.**

**STEP 11**

Screw the battery cover onto the trim.



**Note:** An optional Security Torx screw is also included and may be used in place of the default Philips screw.

**STEP 12**

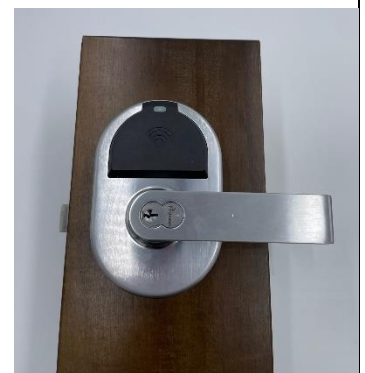
Install the levers onto the inside of the door. Make sure to tug on the handle after installation to verify it's fully seated.

**STEP 13 (If Necessary)**

Install the removable core.



Align back of core with prongs of forked pin (throw member)



Once the removable core is aligned with the forked pin in the lock, insert the control key and turn clockwise 15 degrees to retract the locking lug, then insert the core into the lever. Turn the control key back counterclockwise 15 degrees to engage the core and remove the key.

**E. Now that the hardware is installed, see "Software Solutions" in this manual to locate your software resources and begin programming.**

## DEADBOLT DOOR CONFIGURATION

12-E

To mount the Proxess cylindrical lockset on a door with a deadbolt installed, you may need to mount the internal housing (battery side) upside down. The backplate and rose plate are designed to accommodate this mounting.

STEP 1	STEP 2	STEP 3
<p data-bbox="110 283 553 380">Position the backplate on the interior of the door so that the large opening is underneath the chassis assembly.</p>  <p data-bbox="110 447 565 1052">A photograph showing the backplate of the lockset being positioned on the interior side of a wooden door. The backplate is a silver-colored metal plate with a large circular opening at the bottom. The door has a deadbolt installed on the exterior side.</p>	<p data-bbox="586 283 1029 415">Route the cable and wires through the oval holes in the backplate. Make sure to run all cables through the oval holes in both backplate and rose plate.</p>  <p data-bbox="586 447 1029 1236">Two photographs for Step 2. The top photo shows the backplate being aligned with the door, with wires being routed through the oval holes. The bottom photo is a close-up of the backplate's internal wiring, showing the wires connected to the lockset's internal components.</p> <p data-bbox="641 1245 982 1308">NOTE: Wire paths may differ according to handing.</p>	<p data-bbox="1062 283 1511 415">Fasten to the door using the upper and lower screws nearest the chassis, then plug in connectors and install interior trim.</p>  <p data-bbox="1062 447 1484 1031">A photograph showing the lockset fully installed on the interior side of the door. The backplate is secured with screws, and the internal housing is visible, showing the battery compartment and the lock mechanism.</p>



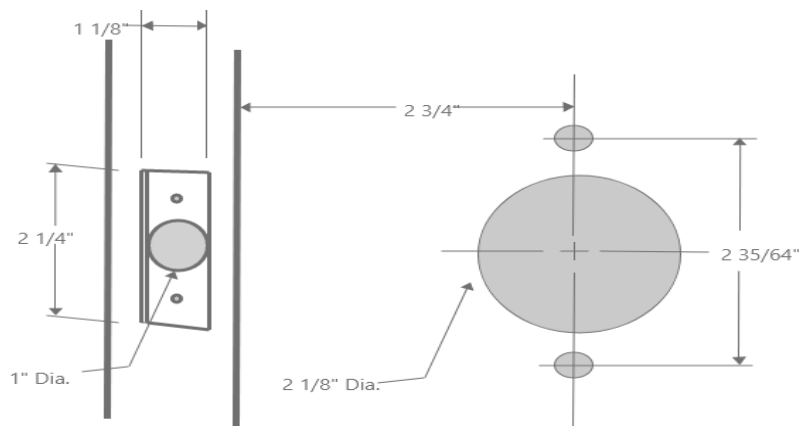
## A. CHECKLIST

### Tools for Door Preparation

- Drill
- Drill Bits: 1" (31/32" for drive in latch), 5/16"
- Hole Saw: 2-1/8"
- Phillips Screwdriver, #2
- Hammer
- Chisel

## B. DOOR PREPARATION

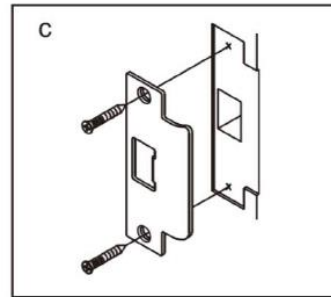
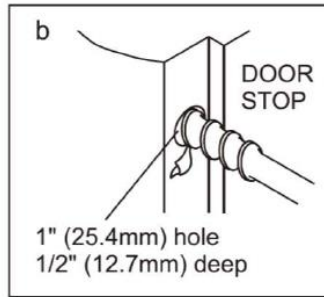
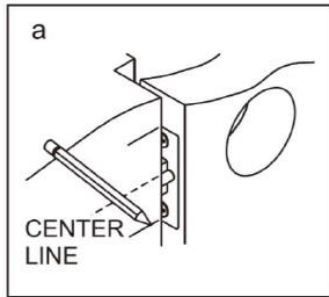
1. Doors: Steel or Wood
2. Door thickness range: 1-3/8" (35mm) ~ 2" (51mm).
3. Match the Backset of your Proxess CX-Series lockset to the corresponding installation (either 2-3/8" [60 mm] or 2-3/4" [70 mm] Backset).
4. Place the installation template onto the door and mark holes. Drill the 2 1/8" (54 mm) first, then drill the two 5/16" (8mm) holes for lock chassis mounting. Drill the 1" (25 mm) cross bore hole for the latch last.
5. Insert latch into 1" hole and hold it parallel to door face, mark outline and remove latch. Chisel 11/64" (4.3mm) deep or until faceplate is flush with the edge of the door. Insert latch into the 1" hole again, making certain that the latch bolt bevel faces direction of closing door (see section E for Lock Handing).
6. Secure the latch to the door using two #8x3/4" screws (SP2).



NOTE: Removing the through bolt posts from the chassis will decrease the security of the lock, converting it from Grade 1 to Grade 2.

## C. FRAME PREPARATION

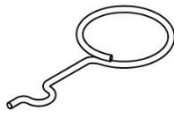
1. Close the door and mark the horizontal line aligned to the strike.
2. Measure one half of door thickness from door stop to mark vertical center line of strike. Drill 1" (25 mm) hole, 1/2" (12.7 mm) deep at intersection of horizontal and vertical center lines.
3. Chisel out the jamb 3/32" (2.4mm) deep or until strike is flushed with jamb and then secure the strike to the jamb using two #12-24 x 1" screws (SP3).



## MAINTENANCE

### TOOLS FOR MAINTENANCE

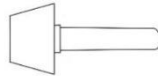
10-A



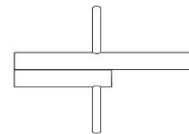
Lever Release Tool  
(Included with lock)  
**SP4**



Philips Screwdriver, #2



Core Turn Knob Tool  
**AX-309**



Cylinder and Core  
Testing Wrench  
**AX-609**



Torx Wrench  
(Included with lock)  
**SP6**

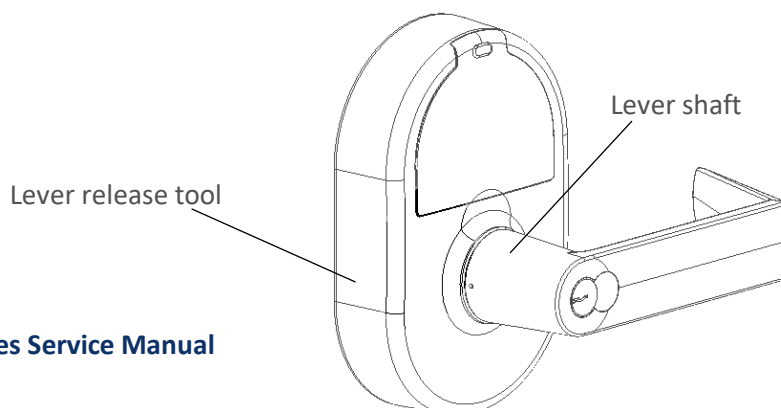
Lockset can be quickly installed  
with only a Philips Screwdriver.

### REPLACING LEVERS

10-B

#### TO REMOVE THE LEVER

1. If removing the exterior lever, first remove the removable core by inserting the control key and turning it 15 degrees clockwise. Then, pull out the removable core and key.
2. Line up the mechanism on the inside of the lock where the core was removed with a core turn knob tool.
3. Insert the pin of the lever release tool into the small hole at the base of the shaft on the lever.
4. Push in and then slide the lever off the sleeve of the lever shaft.



6-pin or 7-pin removeable cores  
allow for added security and  
painless re-key.

Proxess cores are stamped with  
your custom key code to make  
ordering simple and reliable.

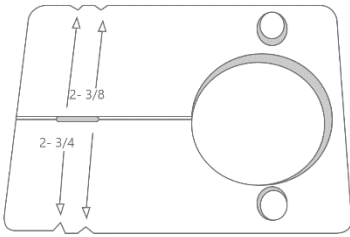


## TO REPLACE THE LEVER

1. Position the lever so the handle points towards the door hinges.
2. Slide the lever onto the lock and push firmly until it is seated. If the lever does not easily seat, move the throw member with the core turn knob tool.
3. If replacing the exterior lever, reinstall the removable core by aligning the throw member (forked prongs) within the lock chassis and then sliding the core back in place. Turn the control key 15 degrees counterclockwise and remove the key.
4. Turn both levers to make sure they retract the latch if the door is unlocked.

### INSTALLATION JIGS OFFERED

11-C



The CX-Series Wireless Cylindrical lockset contains two through bolt posts for added stability and security. This installation plate assists in drilling the holes for both the chassis and the through bolt posts.

**NOTE:** Removing the through bolt posts from the chassis will decrease the security of the lock, converting it from Grade 1 to Grade 2.

### CYLINDRICAL INSTALLATION JIG KITS

Light-duty, small quantities: Home Depot and Lowes sells inexpensive kits from Ryobi, Milwaukee and DeWalt.

Heavy-duty, industrial: Pro-Lock (“Killer Jig”) and Templaco (115-C3) offer kits.

### BATTERY PERFORMANCE AND EXTREME CLIMATE USE

11-D

- Proxess locks use four AA batteries and are tested and validated using Duracell Coppertop™ alkaline batteries to over 70,000 cycles with physical credentials and over 90,000 cycles with only mobile credentials. Proxess locks are tested and validated using Energizer Ultimate Lithium™ batteries for extended temperature range support and offer similar performance to Duracell Coppertop™ batteries. However, any quality AA alkaline or non-rechargeable lithium battery should give acceptable performance.
- Average/Expected performance = 2 years (approximately 30 credential entries per day)
- Batteries are not covered under Proxess warranty.
- Disclaimer: Performance may vary based on environment, feature use, credential usage/type, how often the locks are synced, etc. Contact Proxess for questions related to expected performance in your system.
- For heavy usage doors that drain power in less than a year, Proxess recommends either a modified maintenance schedule or the external power feature (specify “EP” feature when ordering).
- Exterior use: Standard Proxess locks are approved for exterior use when the interior trim is not constantly exposed to exterior weather. For locks in which the interior trim is entirely exposed to exterior climates (pool gates, etc.) Proxess recommends the weatherized option (specify “W” feature when ordering). Proxess weatherized locks offer protection to interior electronics from precipitation and improved corrosion resistance. Weatherized locks also feature Energizer Ultimate Lithium™ batteries for extended temperature range support in very hot and cold conditions.
- Reported battery percentages assume the use of alkaline batteries; lithium batteries do **NOT** report correctly.
- Rechargeable batteries are **not** recommended.
- **Avoid** Heavy Duty (Zinc Carbon) or other chemistry batteries.



## TROUBLESHOOTING

### TROUBLESHOOTING HARDWARE

13-A

The following table illustrates possible causes and solutions for common problems after installing the lock hardware.

PROBLEM	CAUSE	SOLUTION
<b>No beeps or blinks when the batteries are installed</b>	Improper plug connection	Check all wiring and connectors to make sure the connectors are secure, and the cable is not pinched
	Reversed battery or dead batteries	Check the position of the batteries to make sure they are seated correctly
	Pinched wires or damaged cabling	Ensure the internal cabling is routed properly and cables have not been damaged during assembly
<b>LED does not beep or blink on exterior when presented</b>	Batteries are dead and need to be replaced	Replace the batteries, synchronized the lock with the MPD and try the credential again
	Damaged or disconnected 6 pin cable	Check both ends of the 6 pin cable for proper connection.
<b>MPD does not connect to the lock</b>	Bluetooth is not enabled on the MPD	Enable Bluetooth in Settings
<b>Red LED When credential is presented (Access Denied).</b>	Improper Credential Permissions	Ensure the credential has appropriate access to the door.
	Lockset is in Lockdown	Have administrator take the lockset out of lockdown, or program the necessary credential to have "Pass-Through" privileges. (See software manual).
<b>Incorrect response from the lockset when a card is read</b>	Damaged or disconnected 6 pin cable	Check both ends of the 6 pin cable for proper connection.
<b>MPD does not connect to the lock</b>	Bluetooth is not enabled on the MPD	Enable Bluetooth in Settings

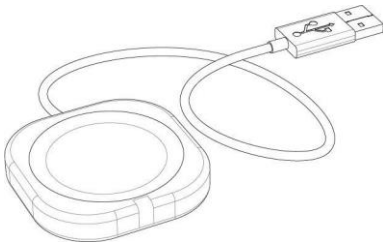
### BEEP AND BLINK GUIDE

Operation indicators (Usually non-repeating)	Description
3 Red Beep/Blinks	The lockset has been set to toggle unlocked.
3 Green Beep/Blinks	The lockset has been set to toggle locked.
Warning Indicators (Will continue until problem resolved)	Description
3 Red Blinks (No Beeping)	Battery Low
3 Amber Beep/Blinks	Battery Critical
3 Double-Red Beep/Blinks	Battery Critical
3 Double-Red Beep/Blinks	Lockset Not Synchronized
Start-Up Sequence Beep/Blinks	
If a problem with the lockset occurs there may be a sequence of Beep/Blink indicators during start-up that will help to determine the problem. These will be 3 short Beep/Blinks followed by a series of longer Beep/Blinks. Please note them and contact a Proxess customer service representative.	

## ADDITIONAL RESOURCES

### SERVICE EQUIPMENT

20-A



#### **ENR™**

##### ***Enrollment Reader and Programmer***

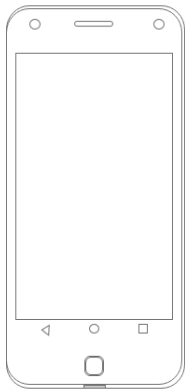
Proxess' ENR™ makes the credential enrollment process intuitive and simple. Just place a credential on the desktop reader and a pop-up window automatically appears. From here you can create a new user, assign this card to an existing user, or view the details of an existing cardholder. A detachable USB-C cable broadens device compatibility for all modern PCs and most modern Android Smart Phones.



#### **NX™ Smart Credentials**

##### ***Network on Card Smart Credentials***

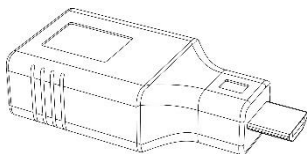
Proxess systems utilize the most advanced and flexible credential technology in the industry, DESFire EV1, 2, and 3, and add six layers of protection, encryption and mutual authentication, providing the most secure credentials in the industry.



#### **MPD Mobile Programming Device**

##### ***Android Mobile Phone with no Sim Card***

The Mobile Programming Device is used with the Proxess LoxIQ™ and ProxessSync™ software to build door groups, access profiles, time schedules, synchronize locksets, and so much more. It can also be used to assign high security Network on Card credentials to personalized profiles with the Proxess Enrollment Reader. ProxessSync™ software is currently available on Android devices with the Google Play Store. The LoxIQ™ software is available for both iOS and Android compatible devices. Please check our website for the latest capabilities for Proxess products.



#### **OTG On-the-Go Converter**

The On-the-Go Converter is provided with some Mobile Programming Device and Enrollment Reader to assign credentials. Proxess offers OTG converters for Micro USB devices only.

*For additional information about service equipment and Proxess products, please visit our website:*

[www.proxess.com](http://www.proxess.com)

### **LoxIQ™**

LoxIQ™ is a software app created by Proxess, LLC. Instead of requiring all the expensive components of an access system (approx. \$3k/dr), LoxIQ™ requires only the locks, a phone, and a programmer. Although the system has the capability of unlimited doors and users, it is typically implemented in smaller systems of 100 doors/users or less...Expandable to full server system software.

For more information about LoxIQ™, please visit our website:

[http://www.proxess.com/Proxess/media/Proxess/Images/Graphics/loxiq\\_datasheet\\_4pg\\_06.pdf?ext=.pdf](http://www.proxess.com/Proxess/media/Proxess/Images/Graphics/loxiq_datasheet_4pg_06.pdf?ext=.pdf)

### **ProxessIQ™**

ProxessIQ™ is the scalable access control software, supporting Proxess intelligent wireless locksets and door controllers. A ProxessIQ™ system can begin with a single wire-free lockset and incrementally expand to an unlimited number of locations, doors and users.

For more information about ProxessIQ™, please visit our website:

<http://www.proxess.com/Proxess/media/Proxess/Documents/ProxessIQ-Scalable-ACS.pdf?ext=.pdf>

### **Proxess Sync™**

The Proxess Sync™ mobile phone App synchronizes changes from the ProxessIQ™ software to locksets across the country. It is a simple to use configuration App, requiring just a click to perform the synchronizations. Strictly a performance App, it is secure and uncompromising. The App user simply clicks in Proxess Sync™ to have the changes securely made on the PC software executed at the lockset.

For more information about Proxess Sync™, please visit our website:

[http://www.proxess.com/Proxess/media/Proxess/Images/Solutions/Proxess-Sync-DS-Pg-1-\(1\).pdf?ext=.pdf](http://www.proxess.com/Proxess/media/Proxess/Images/Solutions/Proxess-Sync-DS-Pg-1-(1).pdf?ext=.pdf)

## FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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.

### 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.

FCCID: 2AKUZPXH01

IC ID: 22335-PXH01

Contains: SH6MDBT50Q

Models (HVINS):

- PXH01-CX03-B (Proxess CX-Series Wireless Cylindrical Lockset)
- PXH01-CX03-DC (Proxess CX-Series DC Powered Lockset)
- PXH01-MX02-B (Proxess MX-Series Wireless Mortise Lockset)
- PXH01-MX02-DF (Proxess MX-Series DC Powered Mortise Lockset)

## UL STATEMENT

Outside lever is normally locked. Inside lever always allows egress.

Unit shall not interfere with the operation of Panic Hardware.

Wireless communications, Wi-Fi, Bluetooth, Door Position, and Request to Exit features are not part of UL Listed product.

Tested to compliance with UL 294 5th Edition Class I.