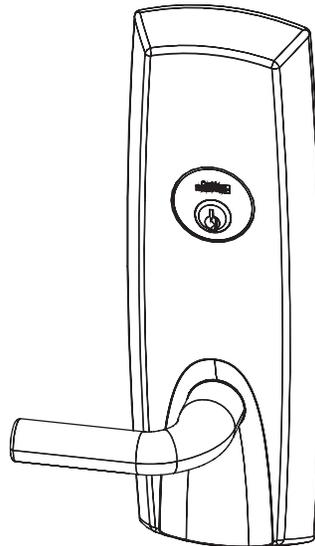
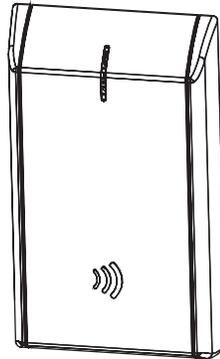


# Installation Instructions



## IN100 (with Aperio™ Technology)

**ED5200 (S)N & ED5600N Series**  
Exit Devices- Includes Rim and Mortise



### Attention Installer:

Please read these instructions carefully to prevent missing important steps. Improper installations may result in damage to the lock and void the factory warranty. The accuracy of the door preparation is critical for proper functioning and security of this lock. Misalignment can cause premature wear and a lessening of security.

For specific security information, please contact your local ASSA ABLOY Door Security Solutions sales consultant or call 800-810-9473.

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# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

**Corbin  
Russwin**

**ASSA ABLOY**

## Installation Instructions

### 1. Regulatory Compliance

Changes or modifications to this device not expressly approved by ASSA ABLOY could void the user's authority to operate the equipment.

#### FCC:

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 communications. 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 or more 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.

#### Innovation, Science and Economic Development Canada:

Under Innovation, Science and Economic Development 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 necessary for successful communication. Conformément à la réglementation d'Innovation, Sciences et Développement économique 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.

#### General Regulatory Compliance:

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Ce dispositif contient des émetteurs/récepteurs exemptés de licence conformes aux RSS d'Innovation, Sciences et Développement économique Canada. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée à le dispositif.

This equipment complies with FCC and IC radiation exposure limits set forth for general population (uncontrolled environment). This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations de la FCC et IC définies pour la population générale (environnement non contrôlé). Cet appareil ne doit pas être co-localisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.



**CAUTION:** When using hard power, DO NOT install batteries.  
**AVERTIR:** Ne pas installer de batteries si vous utilisez l'alimentation électrique.

**CAUTION:** Risk of Explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.  
**AVERTIR:** Risque d'explosion si la batterie est remplacée par un type incorrect. Jetez le batteries usagées conformément aux instructions.



This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to: [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov).  
Ce produit peut vous exposer au plomb qui, dans l'état de la Californie, est reconnu pour causer le cancer, des anomalies congénitales ou d'autres problèmes de reproduction.  
Pour plus d'informations, visitez: [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov).

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and ASSA ABLOY Access Egress Hardware Group, Inc makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.



To avoid possible damage from electrostatic discharge (ESD), some basic precautions should be used when handling electronic components:

- Minimize build-up of static by touching and/or maintaining contact with unpainted metal surfaces such as door hinges, latches, and mounting plates especially when mounting electronic components such as readers and controllers onto the door.
- Leave components (reader and controller) protected in their respective anti-static bags until ready for installation
- Do not touch pins, leads or solder connections on the circuit boards

## 2. General Description

The Corbin Russwin® IN100 lock with Aperio™ Technology makes it easy and cost-effective to bring access control to more doors. It uses local wireless communication between the lock and an Aperio hub to connect to an access control system, eliminating the greatest cost and inconvenience of traditional access control – the wiring at the door. The IN100 utilizes HID® multiCLASS SE® technology; it supports heightened identity security and multiple credentials, including mobile access.

All technology features are supported by the physical security of Corbin Russwin ANSI/BHMA Grade 1 hardware - quality components that provide high security, performance and durability.

## 3. Specifications/ Features

### Hardware Specification

- Latch – Stainless steel, 3/4" (19mm) throw deadlocking fire latch
- Deadlocking latch prevents manipulation when door closed
- Door Thickness – 1-3/4" (44mm) to 2" (50mm) Standard Optional 2" (50mm) to 2-1/4" (57mm) optional
- ADA Compliant
- ANSI/BHMA A156.25 Listed Grade 1 Compliant
- May be used for indoor and outdoor\* applications

\*A weather-protective gasket is required for outdoor applications.

### Electrical Specifications

- Input Power: DC 9V, 1.5A (6 AA alkaline batteries)
- Optional hard-power 12-24VDC, 1.0A
- HID® multiCLASS SE® technology offers support for the following credentials:
  - High Frequency (13.56 MHz):
    - HID iCLASS®
    - HID iCLASS SE® (SIO-enabled)
    - HID iCLASS® Seos™
    - HID MIFARE® SE
    - HID DESfire® EV1 SE
    - MIFARE Classic
    - DESfire EV1
  - Low Frequency (125 kHz):
    - HID Prox®, AWID, EM4102
  - NFC & BLE-enabled Mobile Phones

- Utilizes IEEE 802.15.4 wireless communication
- Multiple time zone and holiday access scheduling
- First-in unlock or automatic unlock configuration, based on specified time schedule
- Uses AES 128-bit wireless encryption\*\*
- Privacy button

\*\*For specific security information, please contact your local ASSA ABLOY Door Security Solutions sales consultant or call 800-810-9473.

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

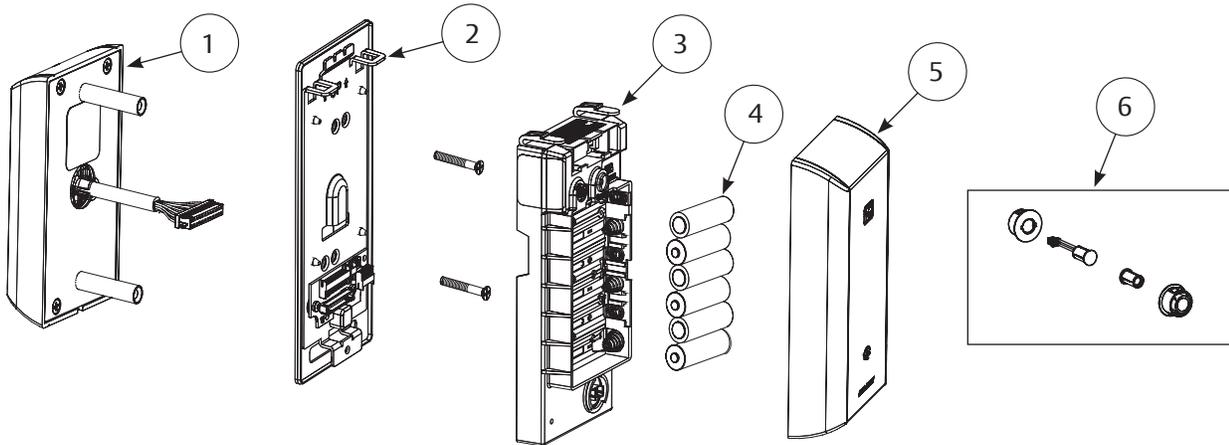
## Installation Instructions



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### 4. Product Illustrations

#### Rim/CVR/Mortise



- Tools Required:
  - a. #2 Phillips Screwdriver
  - b. 1/8" Security Hex Key

**Note:** Escape Return functionality is not available with IN100 Series Exit Devices.

ITEM NO.	Description
1	Aperio Reader Assembly
2	Mounting Plate Assembly (include gasket)
3	Aperio Controller
4	AA alkaline batteries (6)
5	Branded Battery Cover Assembly with Privacy Button
6	Door Position Switch Kit (SPDT)

## 5. Rim Exit Installation Instructions

### Verify Hand and Bevel of Door

1. Door should be fitted and hung.
2. Verify box label for size of exit device, function, and hand.

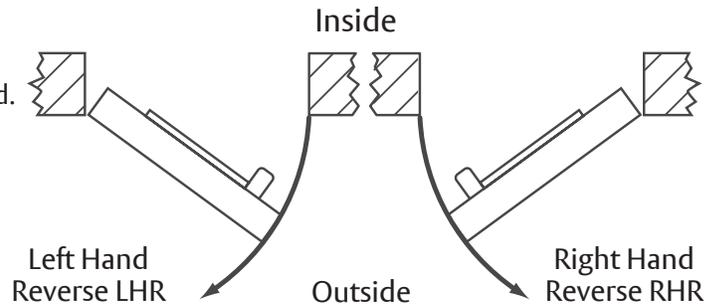


Figure 1

### Prep Door According to Door Marker FM429

- For door manufacturer templates visit [www.corbinrusswin.com](http://www.corbinrusswin.com) and reference template #'s T31235 & T31236.

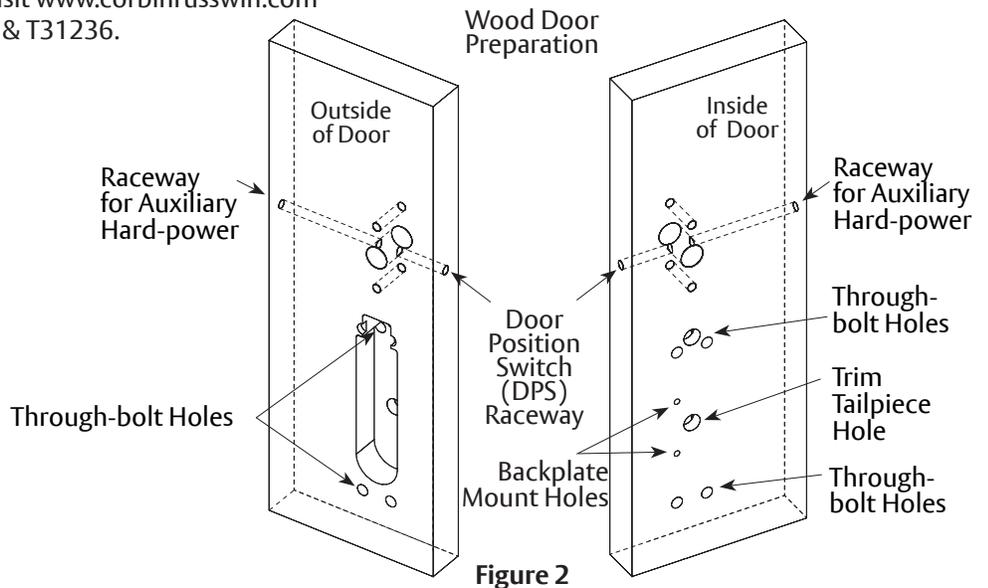


Figure 2

### Install Door Position Switch (DPS)

1. Insert DPS into raceway on latch edge of door.
  2. Push wires through raceway toward lock prep.
  3. Push DPS firmly into place by hand.
- Note:** Do not tap Switch with any tool.
4. Install magnet into door frame. Push firmly into place by hand. See instruction A7983



If DPS is not installed or is installed improperly, door status monitoring features will not function.

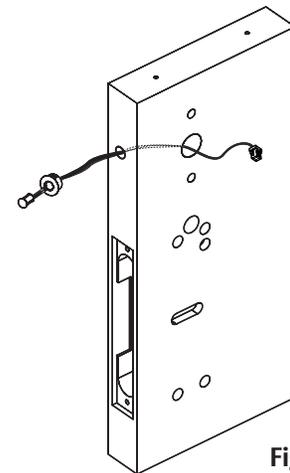


Figure 3

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

## Installation Instructions



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### 5. Rim Exit Installation Instructions (continued)

#### Trim Assembly Instructions

1. Check cylinder components.
  - Cylinders longer than 1-1/8" (29mm) require collars.

Refer to Cylinder Collar Chart.

**Note:** For Mortise, skip to "Install Exit Device" on page 9.

Corbin Russwin Cylinder Collar Chart	
Cylinder Length in (mm)	Collar
1-1/8" (29)	None
1-1/4" (32)	422F88M FIN
1-1/2" (38)	686F98M FIN

2. Spindle comes with breakaway features to accommodate door thickness from 1 3/4" to 2 1/4".

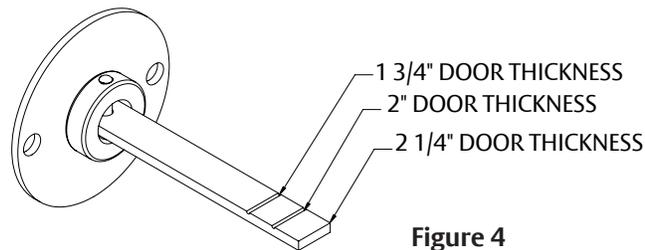


Figure 4

3. Key Override installation
  - a. Insert cylinder housing prongs into notch.
  - b. Insert key override ring into cylinder with "smaller leg" between cam as shown in Figure 5.

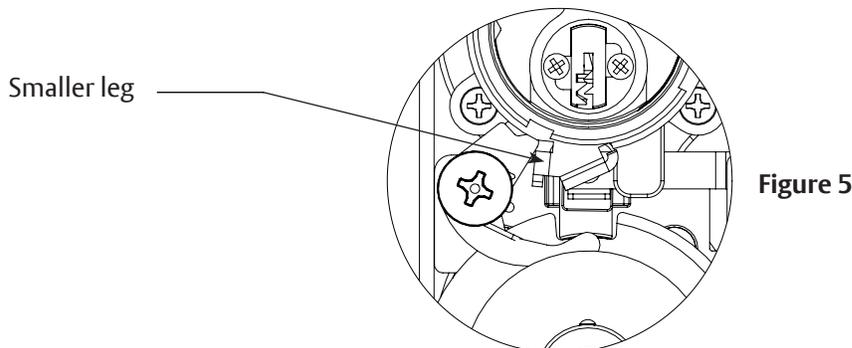


Figure 5

- c. Tighten cylinder nut into escutcheon, making sure stepped side of nut goes inside key override ring as shown in Figure 6.

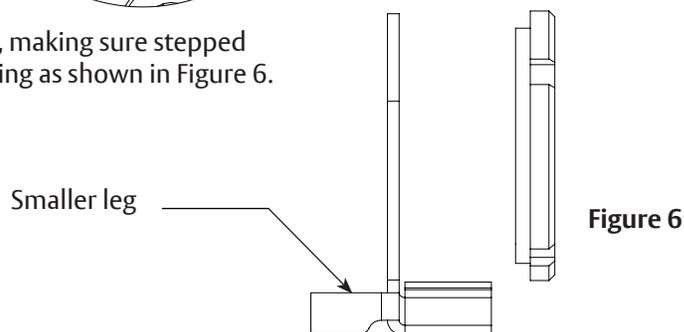


Figure 6

**5. Rim Exit Installation Instructions (continued)**

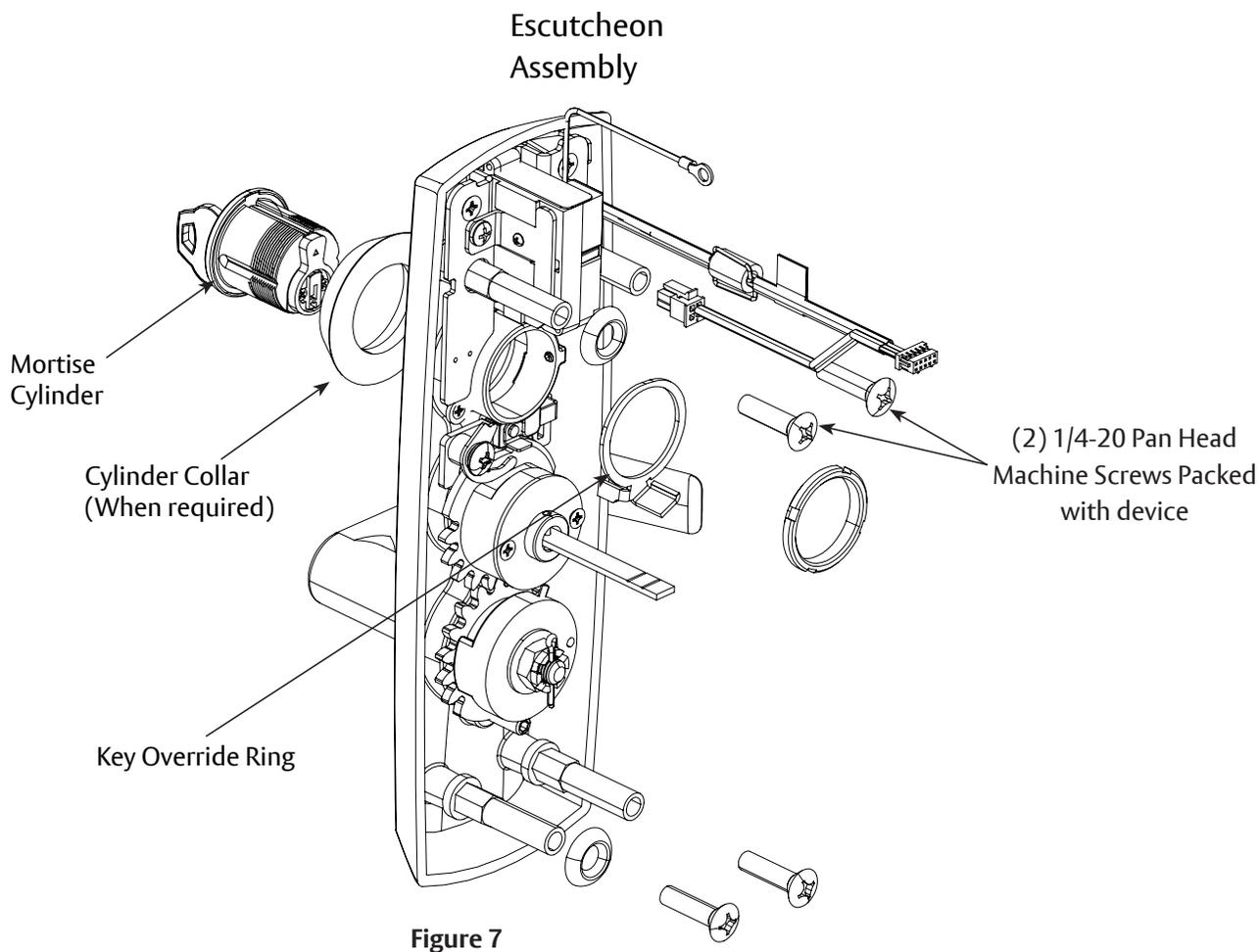
**Trim Assembly Instructions (continued)**

4. Escutcheon Assembly (Figure 7):

Lever is handed (LHR shown).

**Note:** Lever return spring handing can be identified by color of spring:

- LHR: Part Number 651F618 (Red)
- RHR: Part Number 651F628 (Blue)



**Figure 7**

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise



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## Installation Instructions

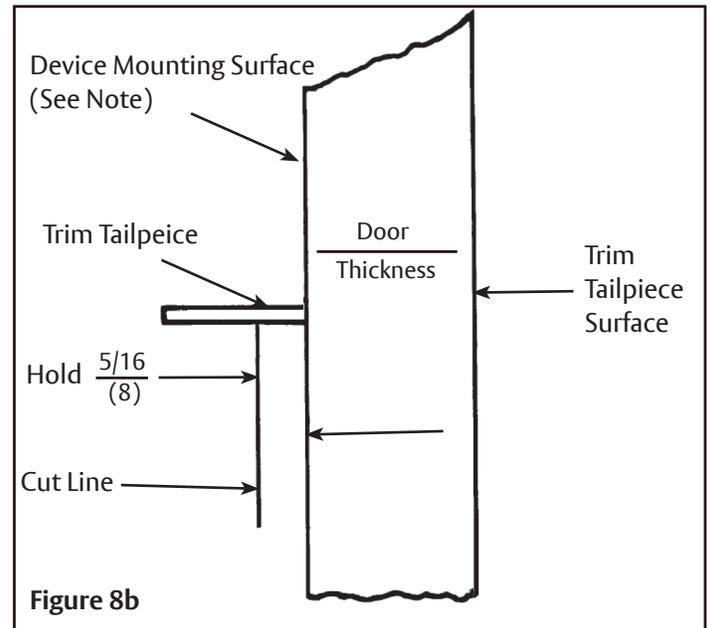
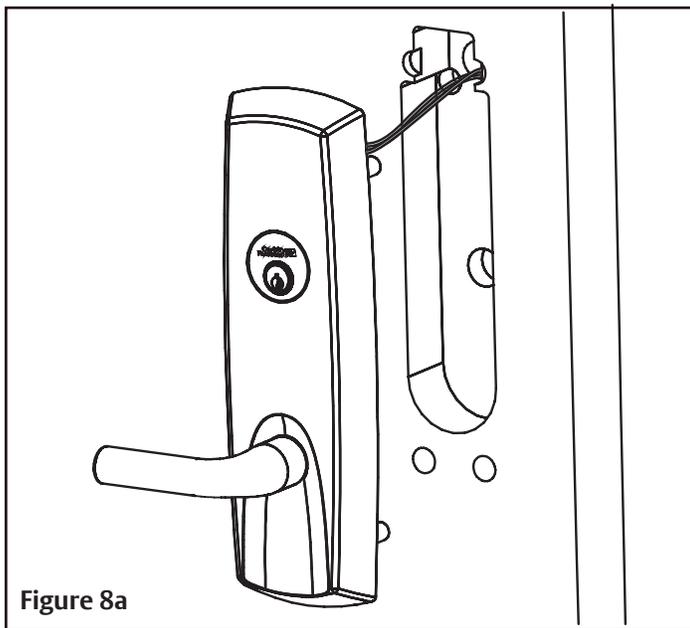
### 5. Rim Exit Installation Instructions (continued)

#### Install Exit Device

1. Feed trim harness and ground wire through upper hole in cutout (Figure 8a).
2. Ensure the tailpiece extends  $\frac{5}{16}$ " outside the door when the trim is installed (Figure 8b).



When installing trim, pull wires completely through door to avoid contacting motor assembly, as this may cause loss of function.

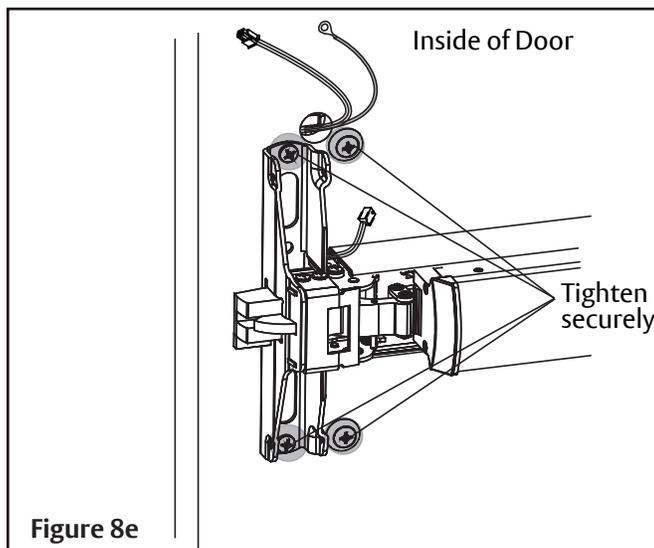
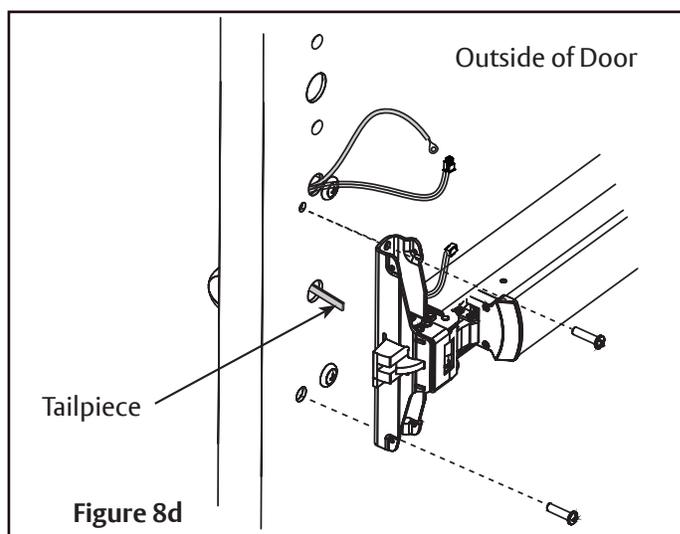
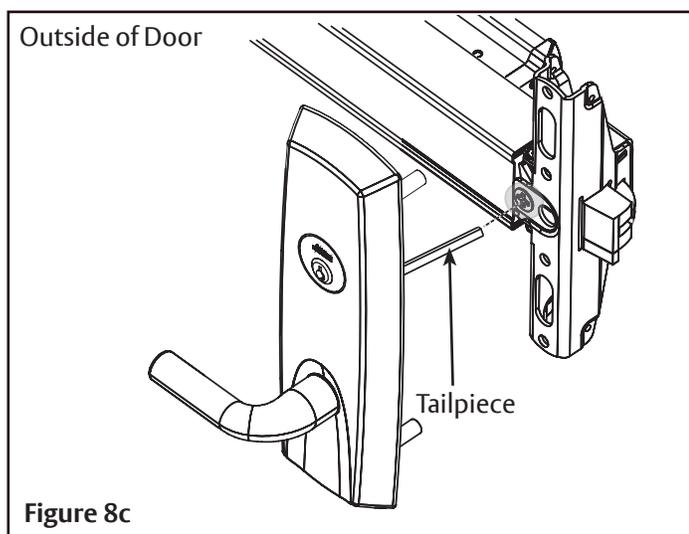


NOTE: Measure from device mounting surface (door face or shim surface).

**5. Rim Exit Installation Instructions (continued)**

**Install Exit Device (continued)**

3. Seat device against door being careful to align vertical trim tailpiece to engage with cross hole of device cam (Figure 8d).
4. Fasten device to trim assembly using two (2) 1/4-20 pan head screws (Figure 8e).
5. Follow instructions packed with device to secure device to door.
6. Tighten all four (4) screws (Figure 8e).



# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

## Installation Instructions

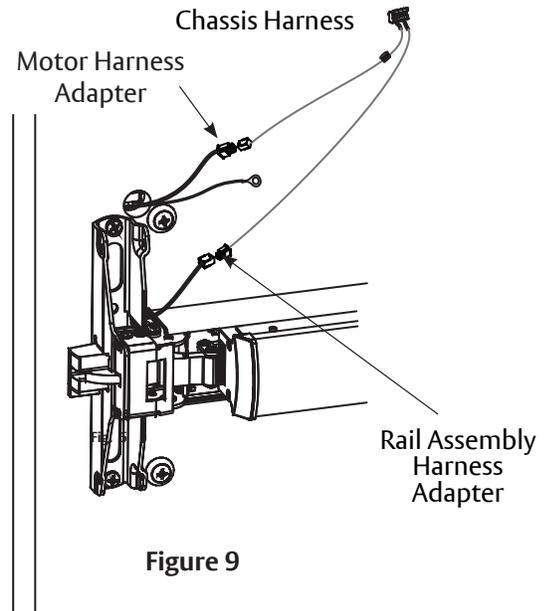
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### 5. Rim Exit Installation Instructions (continued)

#### Harness Connections (Figure 9)

1. Connect motor harness adapter to chassis harness connector.
2. Connect rail assembly harness adapter to chassis harness connector.



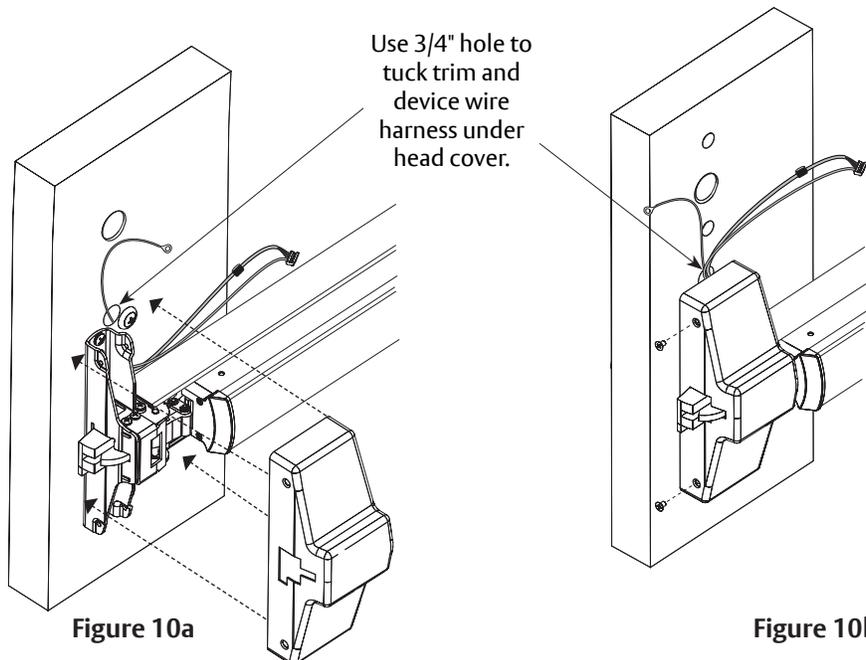
#### Install Head Cover

1. Lay device wire harnesses across 3/4" hole (Figure 10a).
2. Fold excess wires next to latch assembly.

**Note:** Avoid feeding excess wires back through the door as they may interfere with trim operation.

3. Attach head cover using two (2) #8-32 flat head screws (Figure 10b).

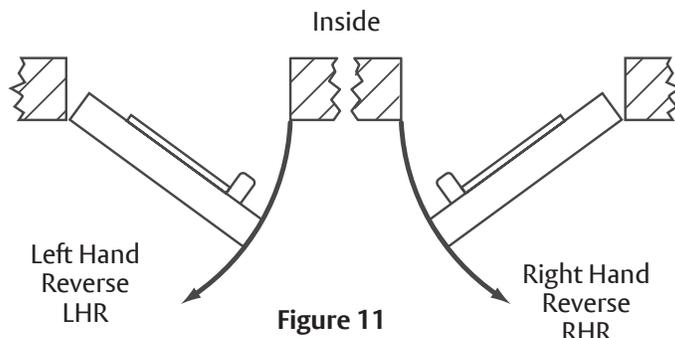
**Note:** Take care not to pinch wires between cover and door.



**6. Mortise Exit Installation Instructions**

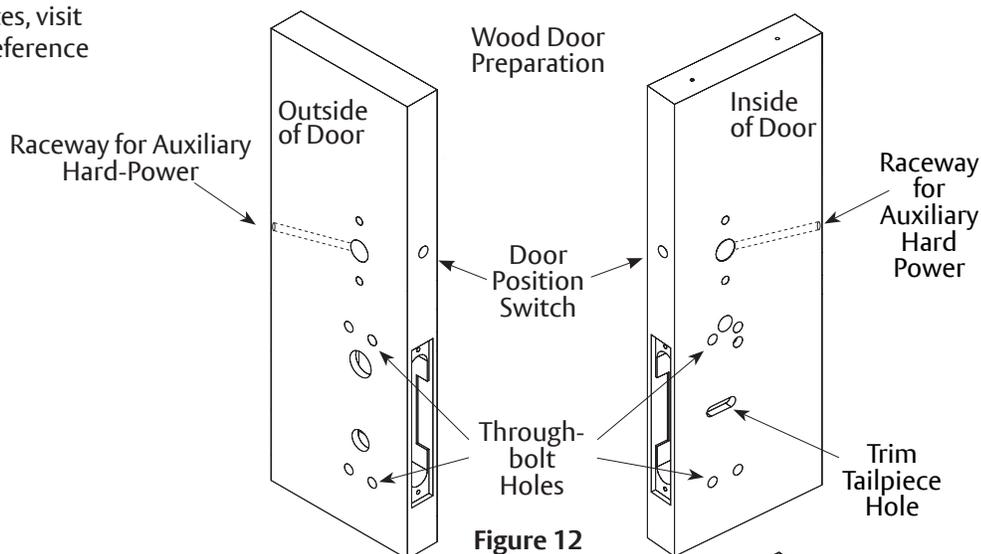
**Verify Hand and Bevel of Door (Figure 11)**

1. Door should be fitted and hung.
2. Verify box label for size of exit device, function and hand.



**Prep Door according to Door Marker FM430 (Figure 12)**

**Note:** For door manufacturer templates, visit [www.corbinrusswin.com](http://www.corbinrusswin.com) and reference template # T31237 (Wood).



**Install Door Position Switch (DPS) (Figure 13)**

1. Insert DPS into raceway on latch edge of door.
2. Push wires through raceway toward lock prep.
3. Push DPS firmly into place by hand.

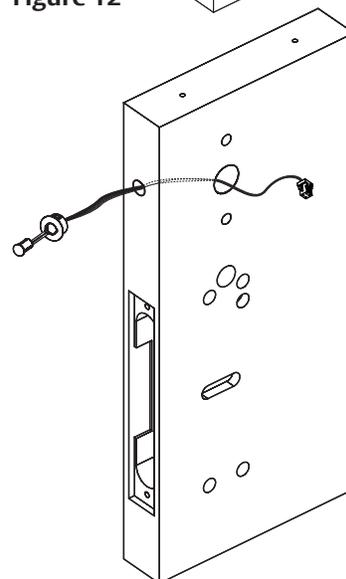


Do not tap switch with any tool.

4. Install magnet into door frame. Push firmly into place by hand. See instruction A7983.



If DPS is not installed or is installed improperly, door status monitoring features will not function.



**Figure 13**

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

## Installation Instructions

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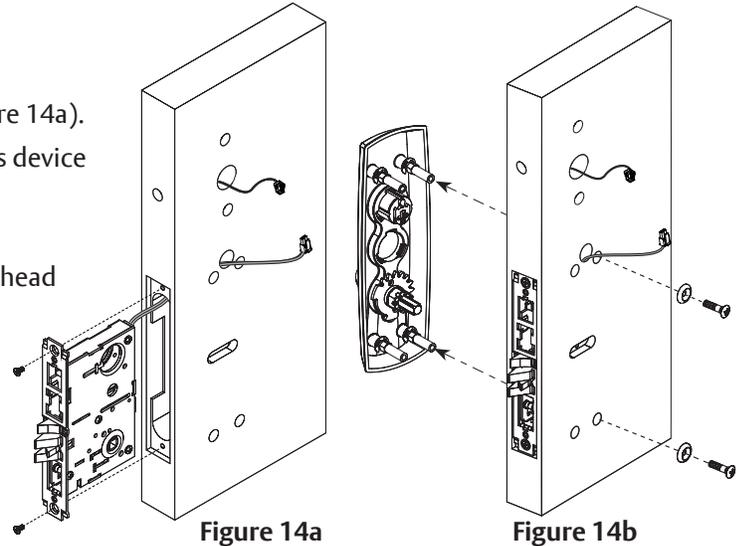
### 6. Mortise Exit Installation Instructions (continued)

#### Install Mortise and Outside Trim Assembly

1. Ensure tailpiece is oriented vertically.
2. Feed trim wire harness through wire harness hole (Figure 14a).
3. Mount trim assembly to door pulling slack wire towards device side of door.

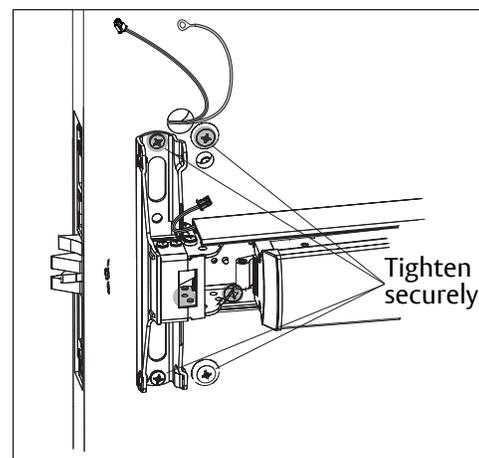
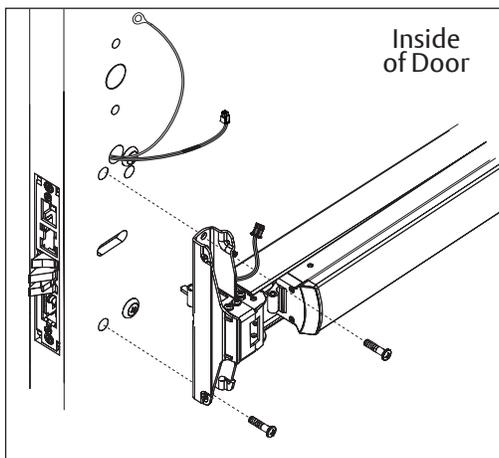
**Note:** Be careful not to pinch wire harness.

4. Fasten trim assembly to door using two (2) 1/4-20 oval head screws and two (2) finish washers (Figure 14b).



#### Install Exit Device

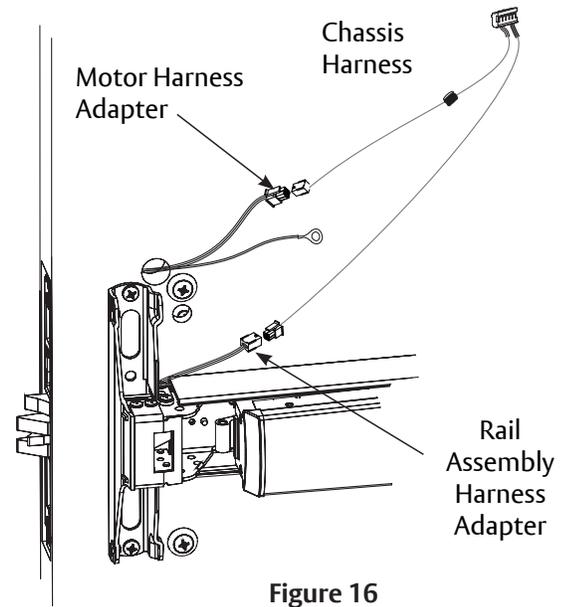
1. Seat device against door being careful to align vertical trim tailpiece to engage with cross hole of device cam (Figure 15a).
2. Fasten device to trim assembly using two (2) 1/4-20 pan head screws (Figure 15a).
3. Follow instructions packed with device to secure device to door.
4. Tighten all four (4) screws (Figure 15b).



**6. Mortise Exit Installation Instructions (continued)**

**Harness Connections (Figure 16)**

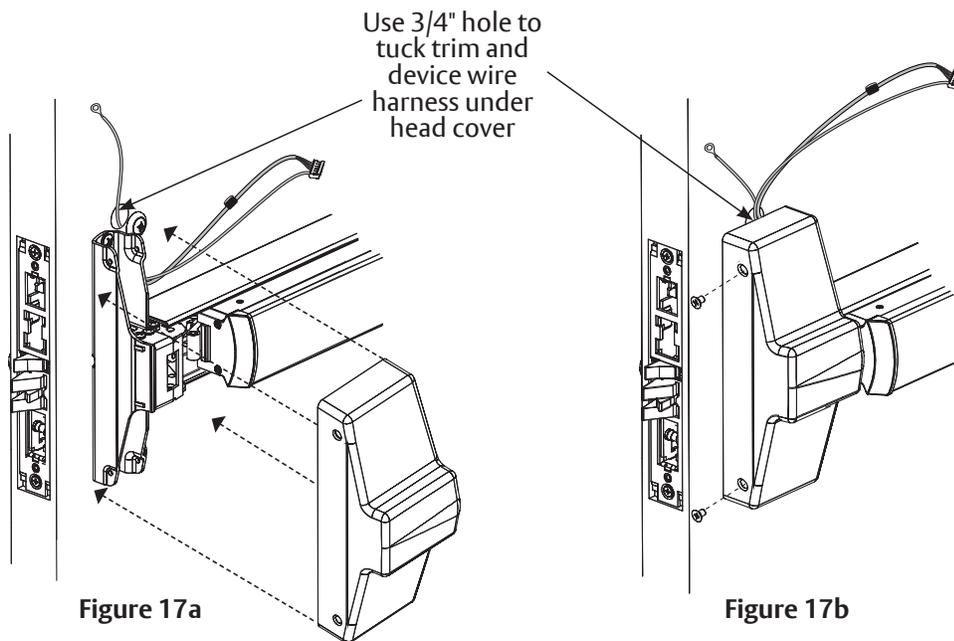
1. Connect motor harness adapter to chassis harness connector.
2. Connect rail assembly harness adapter to chassis harness connector.



**Figure 16**

**Install Head Cover**

1. Lay device wire harnesses across 3/4" hole (Figure 17a).
2. Attach head cover using two (2) #8-32 flat head screws (Figure 17b).
3. Take care not to pinch wires between cover and door.



**Figure 17a**

**Figure 17b**

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

## Installation Instructions

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### 7. IN100 Installation Instructions

#### Install Outside (Reader) Escutcheon and Inside Mounting Plate

1. Orient reader so LED lens is at top (Figure 18a).
2. Feed cable/connector through door from outside to inside.
3. Install reader to outside of door by aligning mounting posts with door preparation holes. Hold reader flush against door while ensuring proper alignment.
4. Feed reader harness and DPS connectors through inside mounting assembly and gasket if required\* (Figure 18b).

**Note:**

- Do not run wires through bottom flange hole in plate - it will damage wires and controller connector (Figure 18a), and (Figure 18c).
  - Route wires around flange, do not route wires through flange hole (Figure 18b).
5. Tuck excess cable into wire hole on inside of door.
  6. Begin to secure mounting assembly by partially tightening two (2) through-bolts on inside of door while ensuring proper alignment as reader is secured (Figure 18b).

**Note:** Cable lengths exaggerated for illustrative purposes.

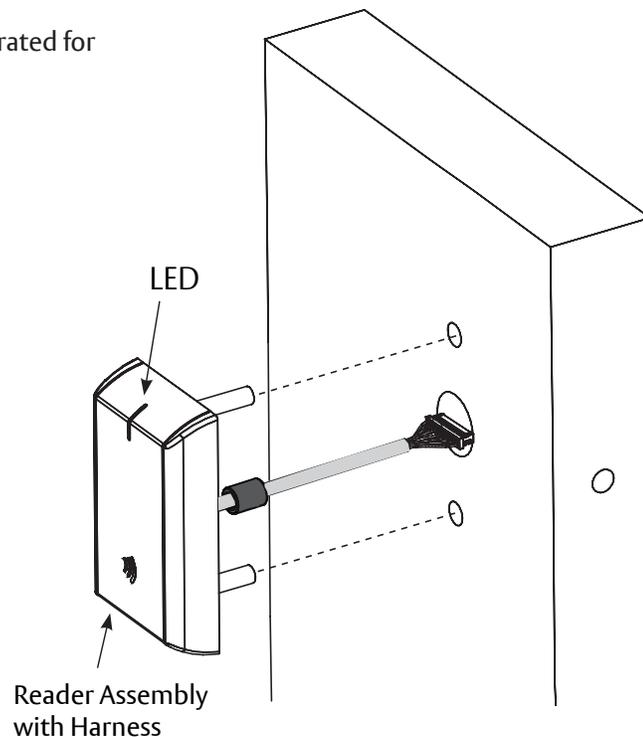


Figure 18a

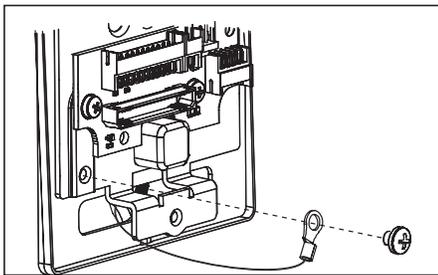
**7. IN100 Installation Instructions (continued)**

**Install Outside (Reader) Escutcheon and Inside Mounting Plate (continued)**

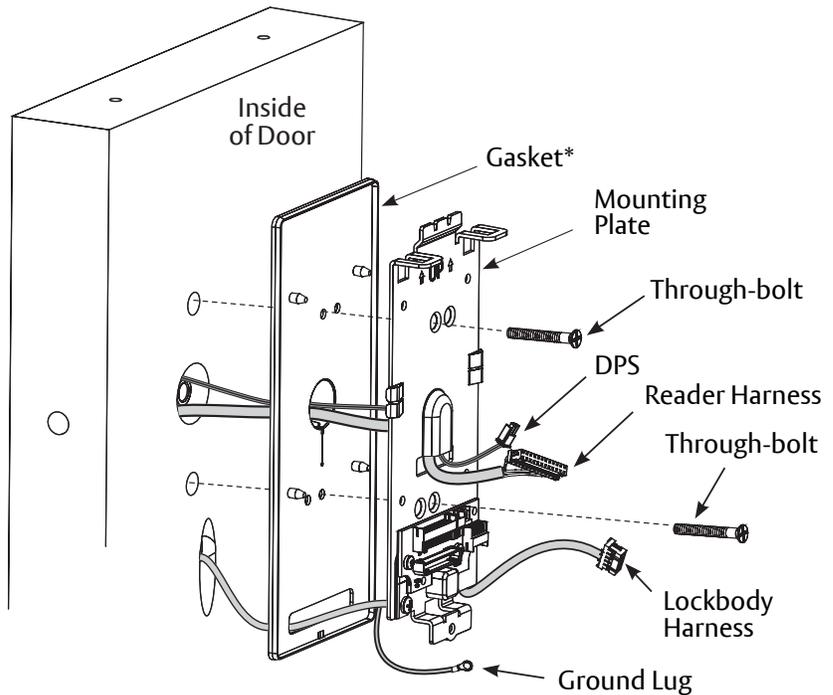
7. Secure ground lug with #6-32 machine screw (Figure 18c).

**Notes:**

- Gasket is required for outdoor installations
- Do not use gasket for fire-rated openings
- If installing with gasket, separate gasket from mounting plate to feed cables/connectors through holes as indicated (Figure 18c).
- Once cables/connectors are fed through, reattach gasket to mounting plate.



**Figure 18b**



**Figure 18c**

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

## Installation Instructions

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### 7. IN100 Installation Instructions (continued)

#### Installation of Connectors

1. Secure the following connectors to their respective terminals (Figure 19a).



Do not touch or allow debris to enter connector contacts.

- Secure 4-pin DPS connector.
- Secure 10-pin lock body assembly connector.

**Note:** Optional 2-pin external 12-24VDC power connector.



Do not run wires through bottom hole in plate - it will damage wires and controller connector.

Route wires around flange, do not route wires through flange hole (Figure 18c), (Figure 19c).

2. When all connections have been made, tuck excess cable into wire hole on inside of door.
3. Secure mounting assembly while ensuring proper alignment of outside reader and tighten two (2) through-bolts on inside of door to secure reader (Figure 19c).
4. Secure 24-pin card reader connector (Figure 19b).

Optional 12-24VDC Power*		
Remote Power Harness Wire Terminations		
2-pin Connector	Red	PS (-) Return
	Black	PS (+) 12-24VDC
Ring Terminal	Green	Earth Ground

\*Power Supply (PS) Required - UL Class 2 Filtered & Regulated, 12-24VDC, 1.0A

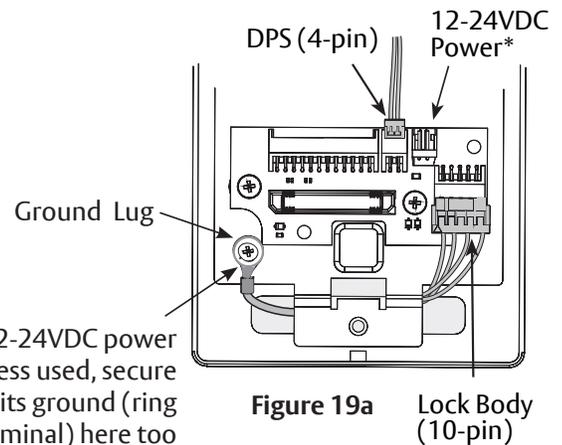


Figure 19a Lock Body (10-pin)

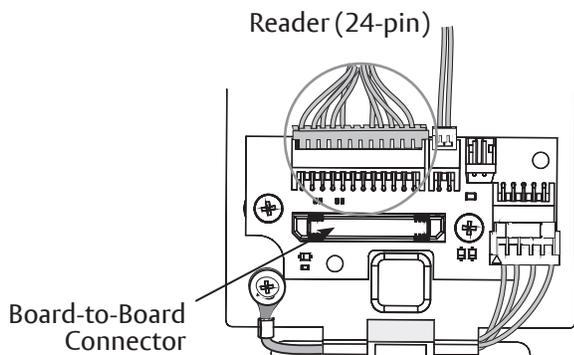


Figure 19b

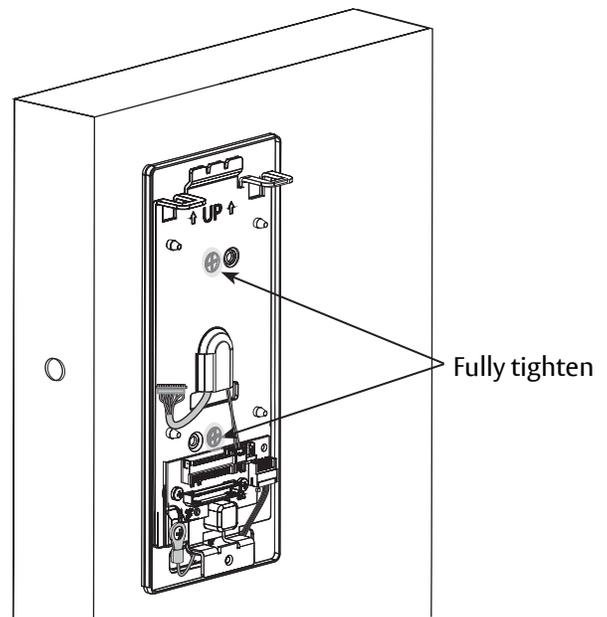


Figure 19c

**7. IN100 Installation Instructions (continued)**

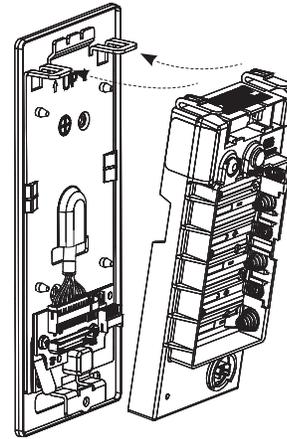
**Install Inside Module Component Assembly**

1. Insert bottom tab of controller (make sure path is clear) into slot on mounting plate (Figure 20a).
2. Ensure proper alignment of board-to-board connectors while pivoting controller toward door until two tabs on top snap securely into place on mounting plate (Figure 20b).

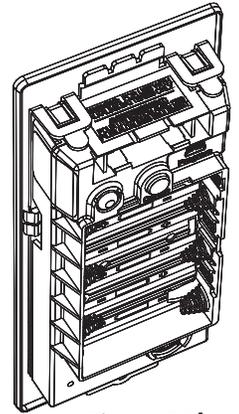


To avoid possible damage to board-to-board connectors, care should be taken when securing controller to mounting plate.

If there is resistance when securing, detach controller to determine cause before re-attaching controller.



**Figure 20a**

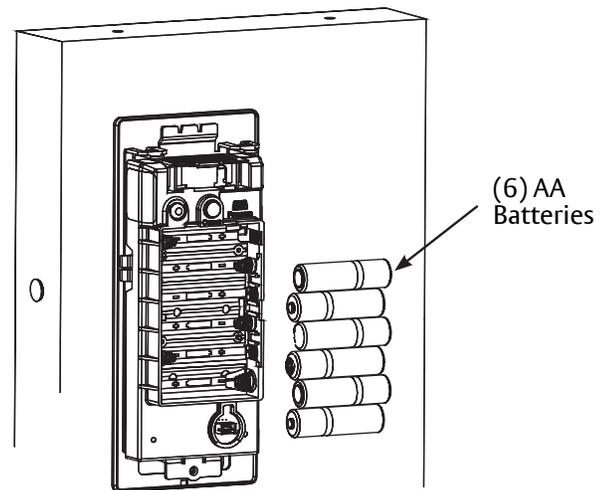


**Figure 20b**

**Battery Installation**

1. Place six (6) “AA” alkaline batteries in compartment, being careful to align polarity properly (Figure 21a).
2. After batteries are installed, there is a slight delay; then red and green flash\*, audible “beep” and lock motor will cycle.

\*See Section 9 - LED Indications for more information.



**Figure 21a**

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

## Installation Instructions

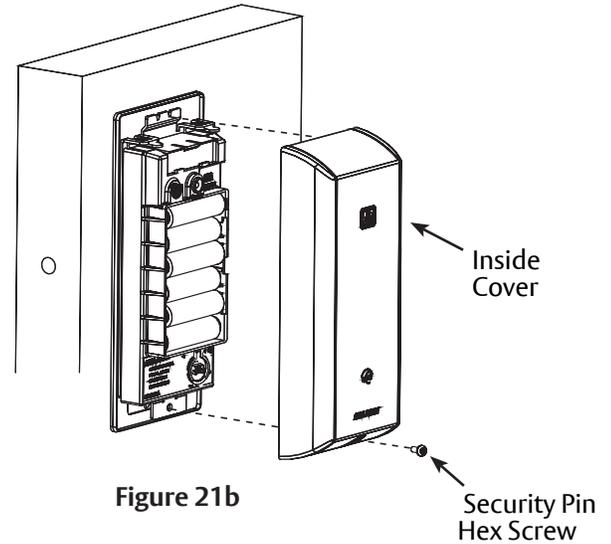
Corbin  
Russwin

ASSA ABLOY

### 7. IN100 Installation Instructions (continued)

#### Inside Cover Installation (Figure 21b)

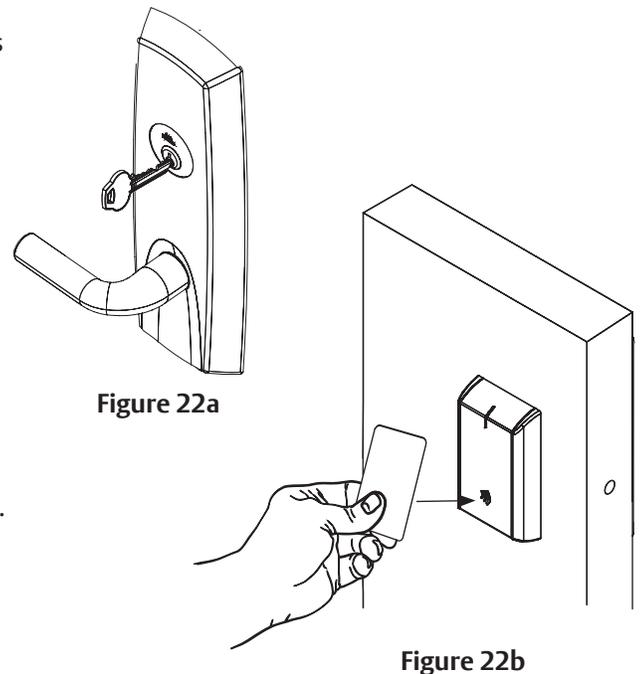
1. Assemble cover by hooking top edge on inside mounting plate.
2. Carefully press bottom of cover toward door without pinching or damaging wires.
3. Secure cover utilizing 1/8" security hex key.



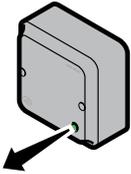
### 8. Operational Check

1. Insert key into cylinder and rotate (Figure 22a).  
**Note:** There should be no friction against lock case, wire harness or any other obstructions.
2. Check that key retracts latch.  
**Note:** Key should rotate freely.
3. Try inside lever; ensure it retracts latch.
4. Present a valid credential\* to unlock outside lever; turn lever handle to ensure latch retracts (Figure 22b).  
**Note:** Credential should approach inscription on reader as indicated to ensure credential is read properly. Do not wave credential (Figure 22b).

\*Depending upon availability of access control system either a (denied) red flash or a green and lock motor cycle (access granted).

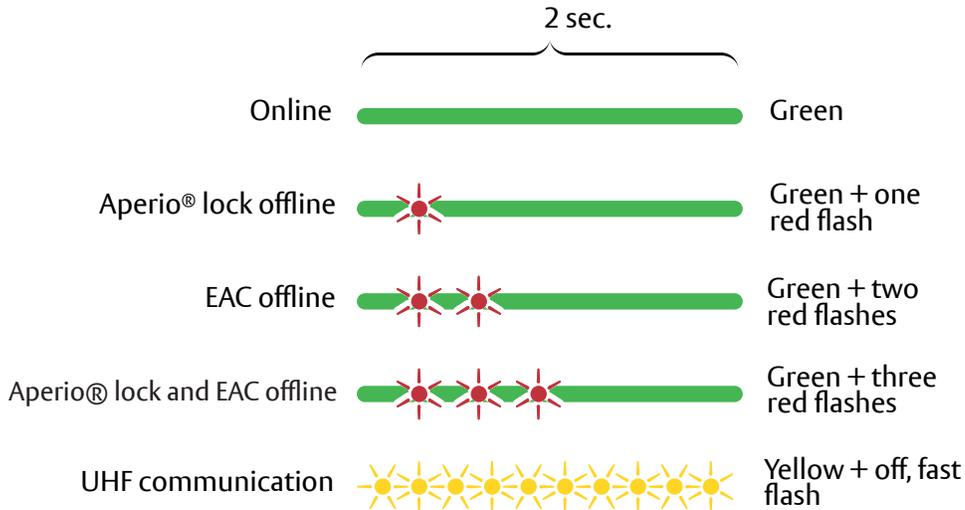


**9. Communication Hub LED Indications**



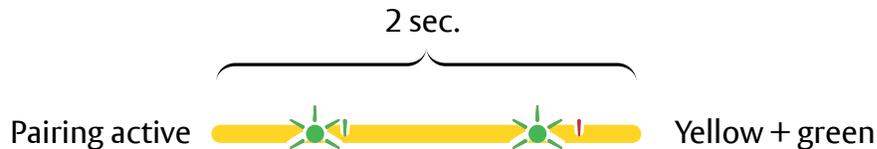
Communication hub has a single LED. It supports an optical scheme of red, green and yellow.  
Indication scheme is described by figures below:

Communication Hub NORMAL OPERATION LED indication



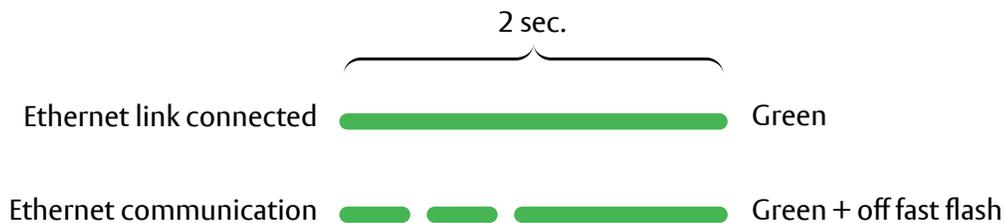
Some special LED indication schemes are used during lock maintenance actions:

Communication Hub MAINTENANCE LED indication



LED on AH40 communication hub indicates both status of Ethernet link level and ethernet communication:

AH40 Communication Hub ETHERNET LED indication



\*For more information, refer to Aperio Online Quick Installation Guide, Document No: ST-001322-PF

# IN100 (with Aperio™ Technology)

ED5200 (S)N & ED5600N Series Exit Devices, Rim and Mortise

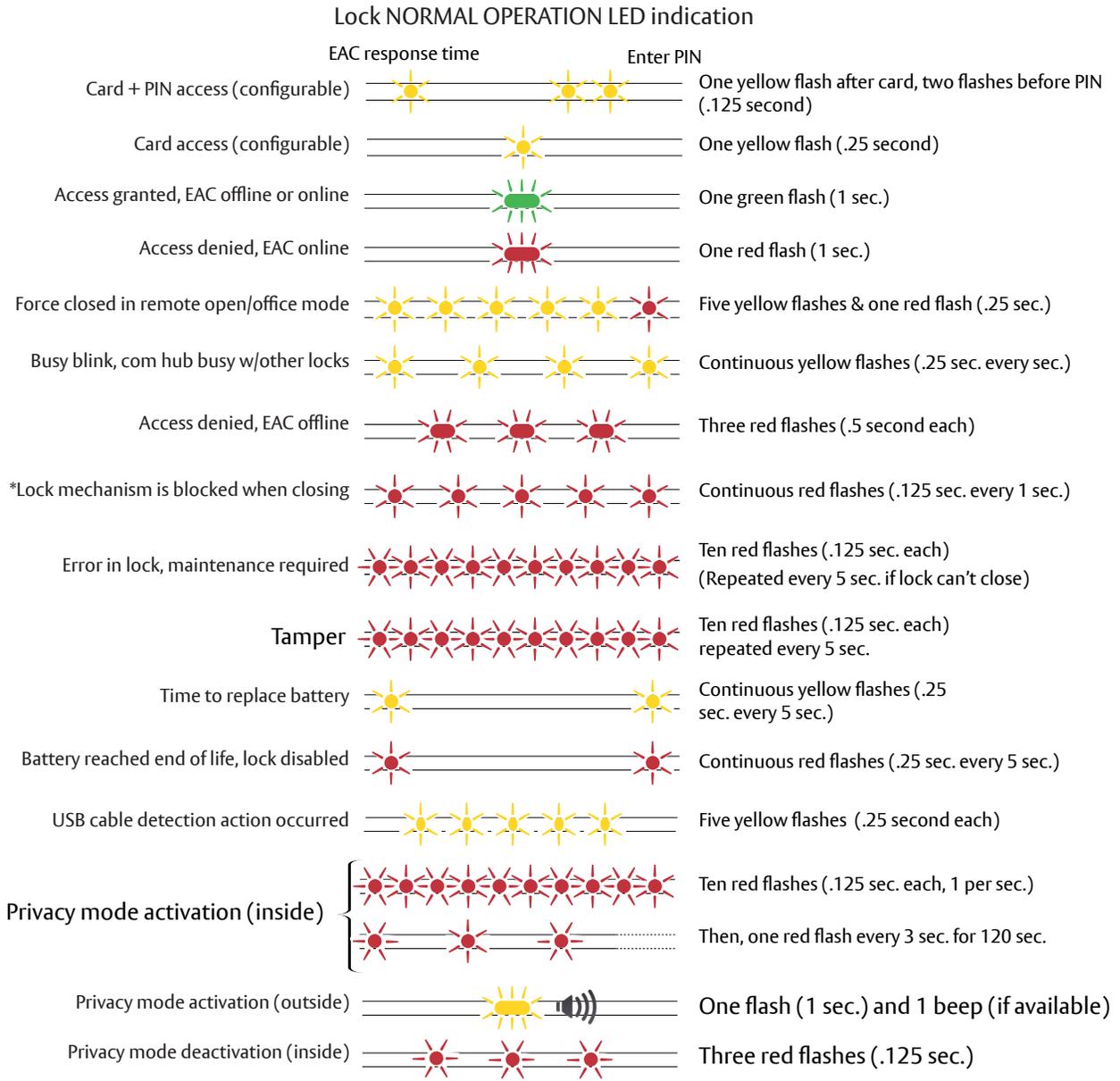


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## Installation Instructions

### 10. Lock LED Indications

Lock has three (3) LEDs. They support an optical scheme with red, yellow and green. Indication scheme described by figures below:



\*When lock mechanism is blocked (lock jammed) lever must be turned to release lock mechanism.



Some special LED indication schemes are used during lock maintenance actions:



## 11. Lock Self-Test LED Indications

After replacing batteries, a Power on Self Test (POST) is performed. The result is indicated using a series of red and green LED flashes as described by figures below:

### Battery Not Fully Charged

Error in lock is an indication -10 quick (125ms) red blinks, that either new batteries are not at right voltage or a backward battery has been installed; battery not fully charged; energy counter not reset or no Power on self-test performed.

Error in lock, maintenance required  Ten red flashes (.125 sec. each)  
(Repeated every 10 sec. if lock can't close)

### Test Pass

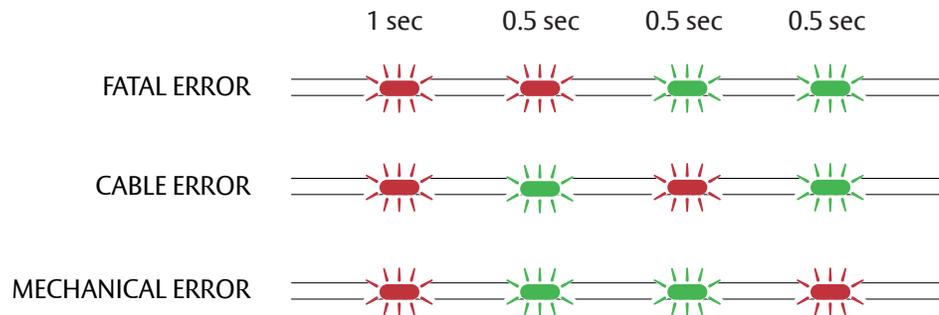
1 red (1s) + 1 green (1s), Power on self-test passed. See table below.

POST Successful  One red, one green flash (1 Second)

### Test Fail

1 red (1s) + 3 blinks (500ms, green or red), at least one test failed (red). (See table below)

If a fatal error is detected, lock will enter an Error state and continuously indicate fatal error. Lock will not read cards or unlock.



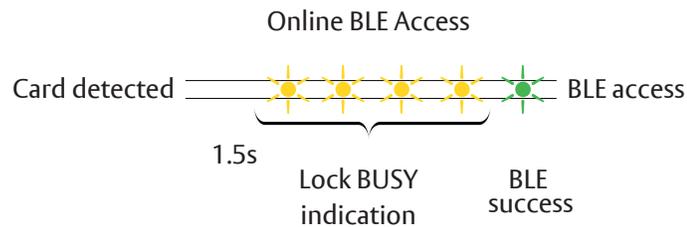
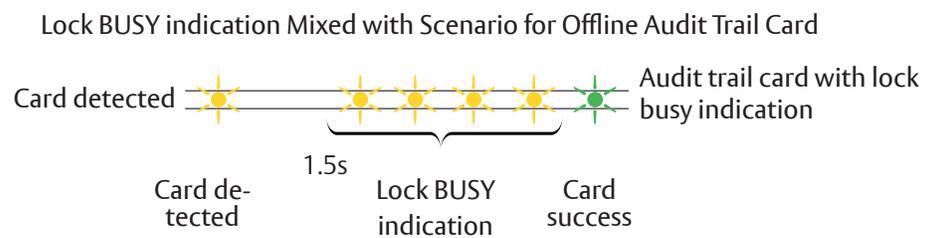
Fatal Error	Tests core functionality. MCUs, memory and internal communication, etc.
Cable Error	Tests communication between different parts in system, i.e. different boards connected with a wire.
Mechanical Error	Test related to moving parts of lock.

### Installation Instructions

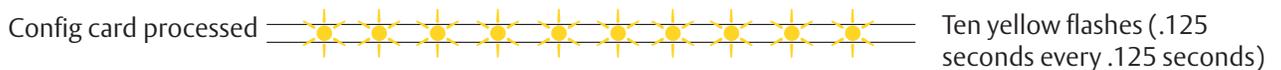
## 12. Lock Busy LED Indications

- Lock BUSY indicates lock is processing a card (such as a key configuration card for online SE processor or offline void list card with many entries). Card should be kept in close proximity to reader until end of process.
- Lock BUSY indication does not cancel or overwrite any other indications. Indications related to access permissions or setup card processing are still present.

Indication scheme is described by figures below:



\*Introduced with firmware version 3.8 - in prior firmware versions only  
 "Config card processed" LED indication is displayed.



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ASSA ABLOY Opening Solutions leads the development within door openings and products for access solutions in homes, businesses and institutions. Our offering includes doors, frames, door and window hardware, mechanical and smart locks, access control and service.

