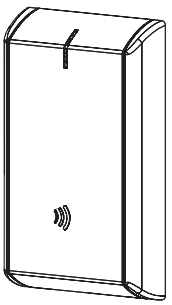
Installation Instructions

SARGENT®
ASSA ABLOY



IN100 Series
PE80 Series and 80 Series Exit Devices
includes Rim & Mortise (with Aperio® Technology)

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.

A8208-5 09/23

Experience a safer and more open world

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All images in document are 80 Series

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1 Warning

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.

Industry Canada:

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 necessary for successful communication.
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.

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). 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.
Cet appareil contient des émetteurs/réceptuers exemptés de licence conformes aux RSS d'Innovation, Sciences et Développment économique Canada. Cet appareil est conforme à la section 15 de la réglementation de la FCC.
L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

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.
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.

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and SARGENT Manufacturing 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

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

2 Product & Technical Specifications

Operating temperature: -13°F (-25°C) to 151°F (66°C) Humidity: < 85% non-condensing

Input Power: DC 9V, 1.5A (6 AA alkaline batteries)
Optional hard-power 12-24VDC, 1.0A

Reader with 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
- DESFire EV2/EV3 (EV1 Compatibility)

Low Frequency (125 kHz)
- AWID
- EM4102

PIV/PIV-I
- 40-bit BCD, 64-bit BCD, 75 bit, 128-bit or 200-bit outputs

NFC & BLE-enabled Mobile Phones:
- HID Mobile Access® (BLE and NFC)
- Apple Wallet Seos (NFC)
- Apple Wallet DESFire® (NFC)
- Google Wallet DESFire® (NFC)

NOTE: reference IN100 catalog for complete list of certifications

UL NOTES:
UL Listed to UL294 Indoor Dry Use, 32°F (0°C) to 120°F (49°C), 93% Relative Humidity at 90°F (32°C) installed in accordance with NFPA70, National Electrical Code.

ULC-60839-11-1 Listed Security Grade 2 Indoor Dry Use, 32°F (0°C) to 120°F (49°C), 93% Relative Humidity at 90°F (32°C), IP4X installed in accordance with CSA C22.1, Canadian Electrical Code.

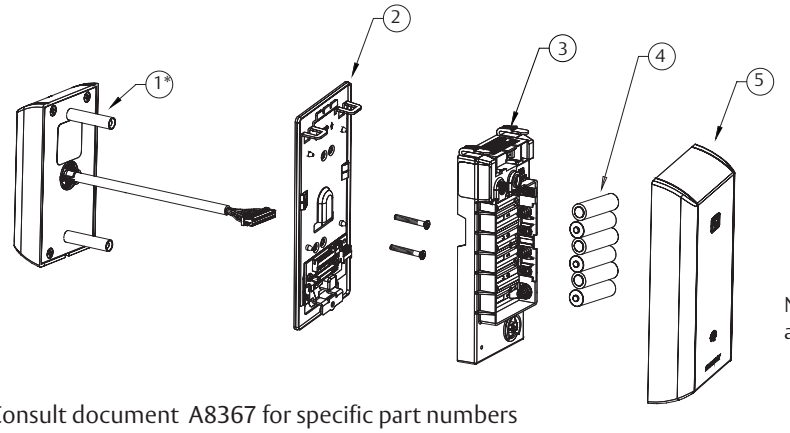
UL 294 Access Control Ratings:
Destructive Attack Level 1, Line Security Level 1, Endurance Level 4, Standby Power Level 1

Reader controller firmware version 3.14.x or greater

The electronic access control system shall not prohibit the free exit granted by other emergency systems (e.g. fire, environmental)

For use with the separately Listed Model AH20, AH30 and AH40 HUBs

3 Product Illustrations



NOTE: Escape Return functionality is not available with IN100 8800/PE8800 Series

Consult document A8367 for specific part numbers

ITEM No.	DESCRIPTION
1	Aperio Reader Assembly
2	Mounting Plate Assembly (includes gasket)
3	Aperio Controller
4	AA alkaline batteries (6)
5	Branded Battery Cover Assembly with Privacy Button

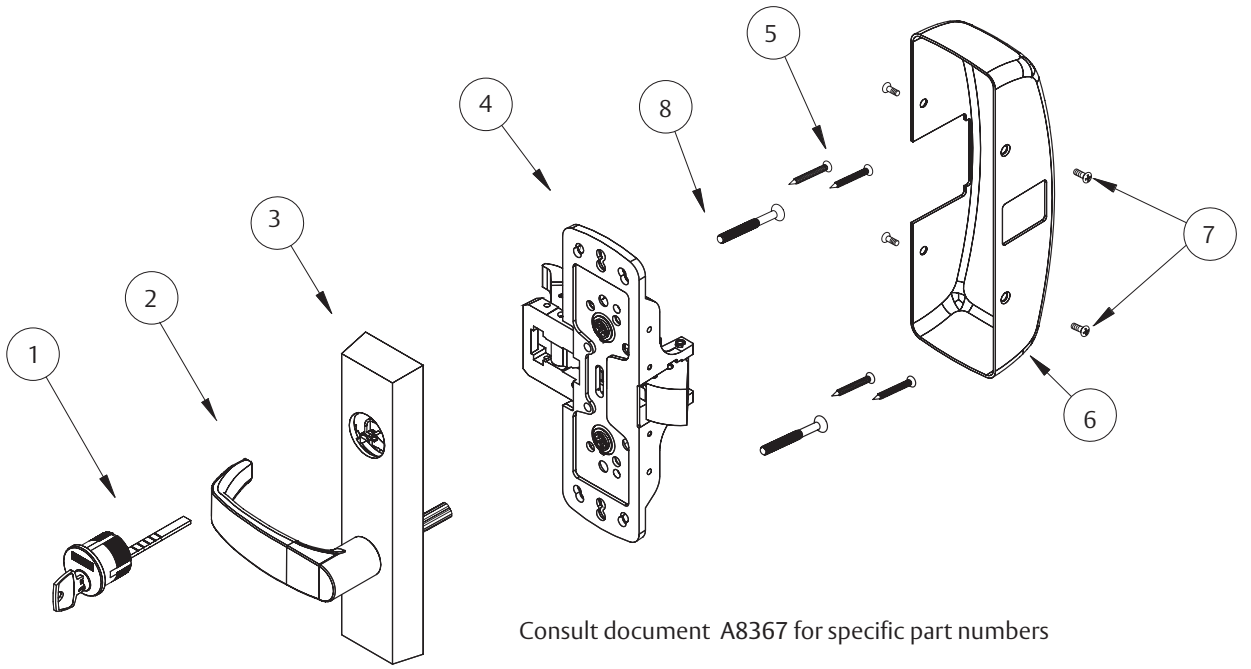
*8877/PE8877, 8878/PE8878, 8977/PE8977, 8978/PE8978 (example: IN-100-EM01PE8877-IP-B)

To comply with "Fire Listed" doors, the batteries must be replaced with alkaline batteries only.

Warning: SARGENT Mfg. Co. IN100 locksets utilizing a door position switch (DPS) are not rated for, or intended for use in life safety applications.

3 Product Illustrations (Continued)

77 / 78 Function x Trim x Lever Design IN100 Rim Exit Device



Consult document A8367 for specific part numbers

ITEM	DESCRIPTION		REQ'D
1	Cylinder Assembly (Reference Catalog for Available Cylinders)		1
2	Lever (Reference Catalog for Available Styles)		1
3	Exit Trim With Cylinder		1
	Exit Trim Without Cylinder		
	Motor Actuator Assembly		1
4	Chassis Assembly		1
	Chassis Assembly (Fire Rated)		
	Chassis Assembly (Latch Guarding)		
	Chassis Assembly (Fire Rated Latch Guarding)		
5	Chassis Screw Pack	(4) #10-24 x 3/4" (wood door)	1
		(4) #10 x 1-1/4"(metal door)	
6	Chassis Cover		1
	Chassis Cover (With Guarding)		
7	Chassis Cover Screw Pack - (4) #8-32 x 5/16" oval head machine screws		1
8	Trim Screw Pack - (2) 1/4 x 2-3/8" flat head machine screws		1

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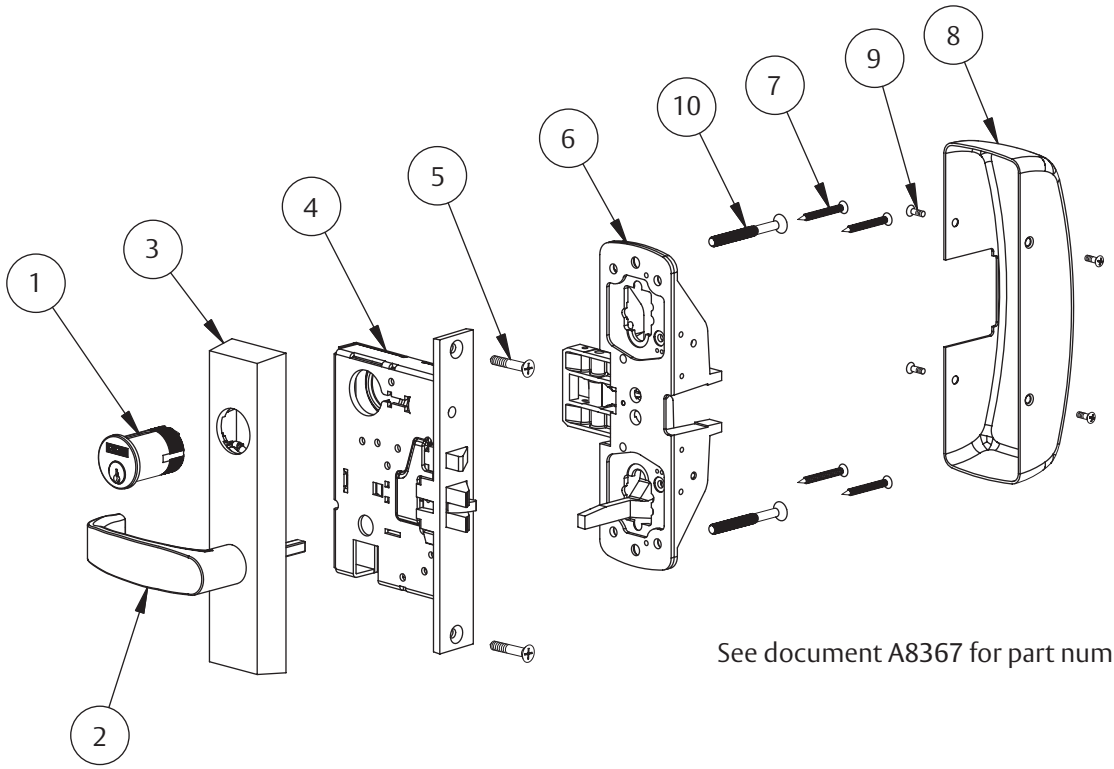
3 Product Illustrations (Continued)

77 / 78 Function x Trim x Lever Design IN100 Mortise Exit Device

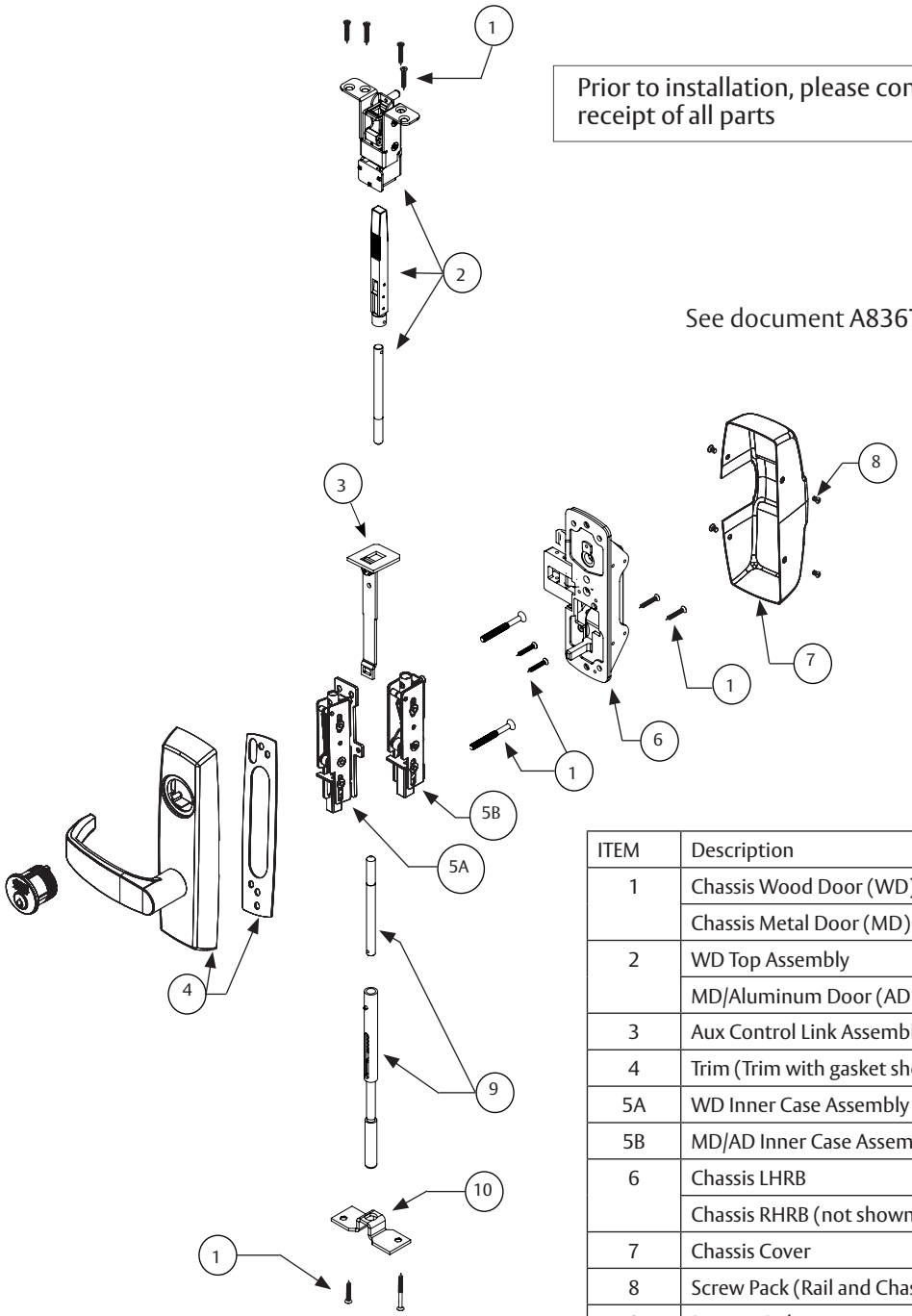


See document A8367 for part numbers

ITEM	DESCRIPTION		REQ'D
1	Cylinder Assembly (Reference Catalog for Available Cylinders)		1
2	Lever (Reference Catalog for Available Styles)		1
3	Exit Trim With Cylinder		1
	Exit Trim Without Cylinder		
	Motor Actuator Assembly		1
	Ecoflex Trim Harness		1
4	Lock Body Assembly LHR		1
	Lock Body Assembly RHR		
	Lock Body Assembly LHR (Non-Beveled Door)		
	Lock Body Assembly RHR (Non-Beveled Door)		
5	Lock Body Screw Pack		1
6	Chassis Assembly LHR		1
	Chassis Assembly RHR		
7	Chassis Screw Pack	(4) #10-24 x 3/4" (wood door)	1
		(4) #10 x 1-1/4"(metal door)	
8	Chassis Cover		1
9	Chassis Cover Screw Pack - (4) #8-32 x 5/16" oval head machine screws		1
10	Trim Screw Pack - (2) 1/4 x 2-3/8" flat head machine screws		1

3 Product Illustrations (Continued)

PE8600 Concealed Vertical Rod (CVR) Exit Device (78 Function)



Prior to installation, please confirm receipt of all parts

See document A8367 for part numbers

ITEM	Description	Req.
1	Chassis Wood Door (WD) Screw Pack	1
	Chassis Metal Door (MD) Screw Pack (not shown)	
2	WD Top Assembly	1
	MD/Aluminum Door (AD) Top Assembly (not shown)	
3	Aux Control Link Assembly	1
4	Trim (Trim with gasket shown)	
5A	WD Inner Case Assembly	1
5B	MD/AD Inner Case Assembly	1
6	Chassis LHRB	1
	Chassis RHRB (not shown)	
7	Chassis Cover	1
8	Screw Pack (Rail and Chassis Cover)	1
9	Bottom Bolt	1
10	Bottom Plate	1

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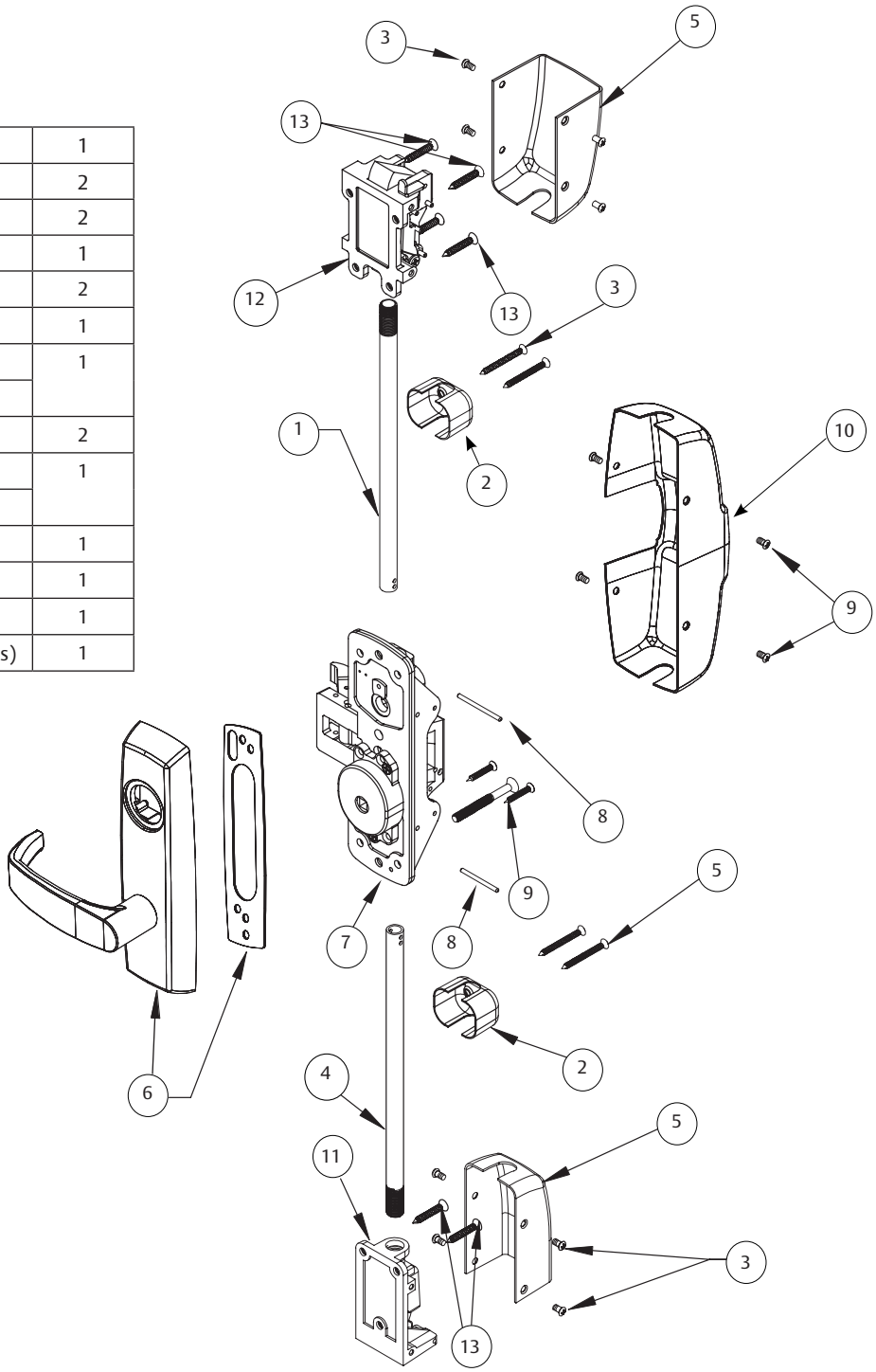
3 Product Illustrations (Continued)

PE8700 Surface Vertical Rod (SVR) Exit Device (78 Function)

1	Top Rod (consult factory)	1
2	Guide for Rod	2
3	Screw Pack for Guide and Covers	2
4	Bottom Rod (consult factory)	1
5	Case Assembly Cover	2
6	Trim (Trim with gasket shown)	1
7	Chassis Assembly LHRB	1
	Chassis Assembly RHRB	
8	Rod Adjustment Pin	2
9	Screw Pack "B"	1
	Screw Pack "A"	
10	Chassis Cover	1
11	Bottom Case Assembly	1
12	Top Case Assembly	1
13	Screw Pack (Top and Bottom Cases)	1



4 Installation Instructions Rim Exit Device

1. Prepare door.
   a. Verify hand and bevel of door. (Figure 1)

   NOTE: Stand on outside of locked door when determining door hand.

   b. Verify exit device is correct hand for door.

   c. Door should be fitted and hung.

   d. Verify product label.

   e. Mark and drill door. (Figure 2)

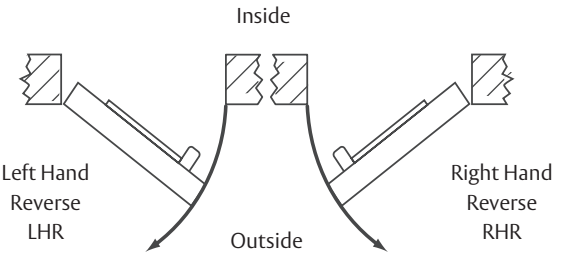


Fig. 1

- If mullion is used, install prior to installing hardware

Prior to installation, all holes must be free of burrs, debris and sharp edges.

Prepare door according to appropriate template (see website).

IN-Series template (ships with product):
A8214 (80 Series) or **MEFT18** (PE80 Series)
Exit installation instructions **A6770** (80 Series) or **A8301** (PE80 Series)

NOTE: Instruction examples show wood door installation.
For metal doors, route cables inside door.

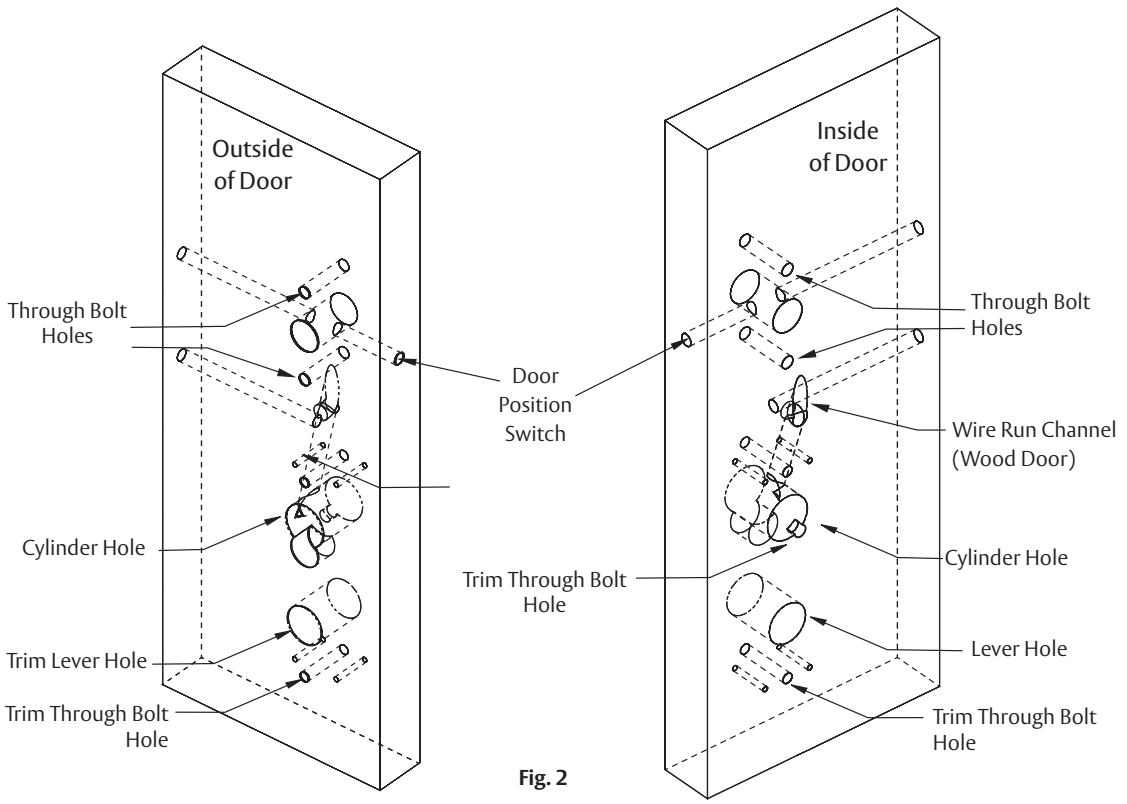


Fig. 2

4 Installation Instructions Rim Exit Device (Continued)

2. Install door position switch.

   NOTE: Wood doors have 3/8" raceway to controller cutout and metal doors have 3/4" raceway to controller cutout.

   a. Refer to template **A8214** (80 Series) or **MEFT18** (PE80 Series).

   b. Insert connector end of DPS through raceway on latch edge of door (Fig. 3)

   NOTE: For metal doors, use DPS collar.

   c. Push DPS firmly into place by hand.

CAUTION: DO NOT TAP SWITCH WITH ANY TOOL

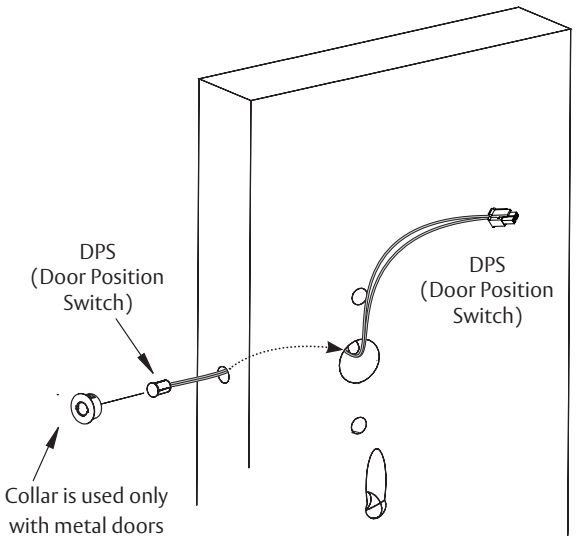


Fig. 3

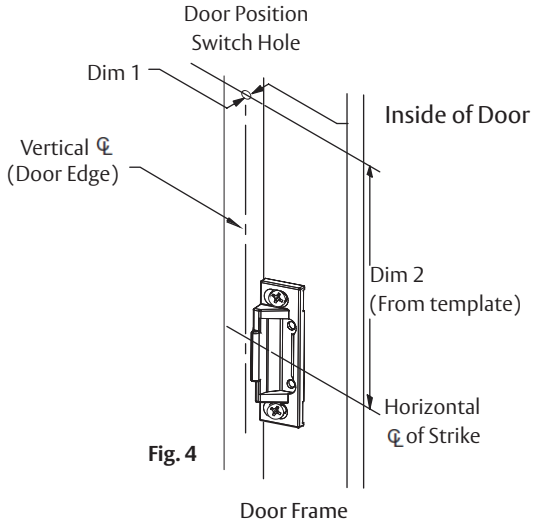


Fig. 4

	Wood Frame	Metal Frame
Dim 1	3/8" Ø	3/4" Ø
Dim 2	8-3/8"	8-3/8"

4 Installation Instructions Rim Exit Device (Continued)

3. Mount exit device chassis.

   NOTE: Exit chassis harness consists of a 6-pin female connector and ground wire/terminal. (Figure 5)

   a. Feed 6-pin connector and larger ground lug straight through to outside of door. (Figures 5,6)

4. Mount exit trim. (Figure 7)

   NOTE: For exterior applications, use trim gasket as seal between trim escutcheon and outside door surface.

   a. Connect motor harness adapter to chassis harness connector.

   b. For wood doors: Route trim wire harness connector through cylinder hole, up and through wire run channel to controller cutout.

   For metal doors: Route trim wire harness through cylinder hole out controller cutout.

   c. Pass top trim mounting post through chassis harness ground lug.

   d. Ensure trim spindle engages lower hub of exit chassis.

   e. Fully tighten two (2) chassis through bolts. (Figure 8)

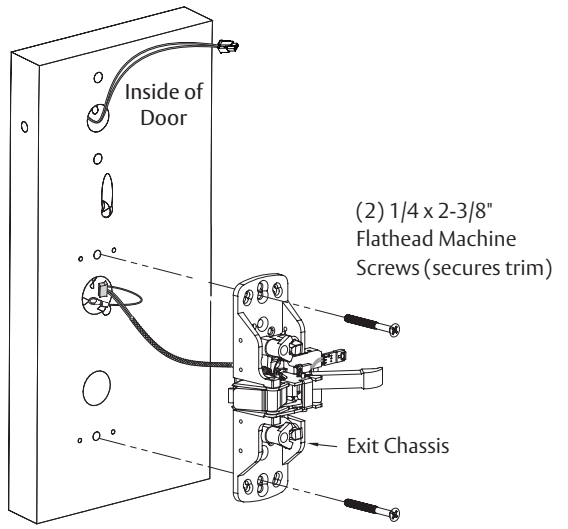


Fig. 5

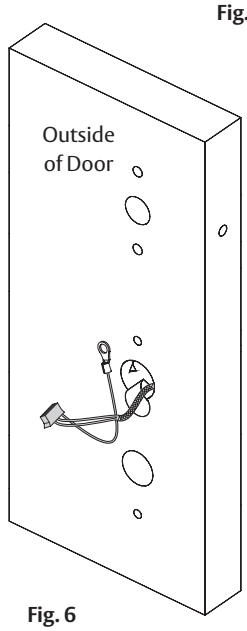


Fig. 6

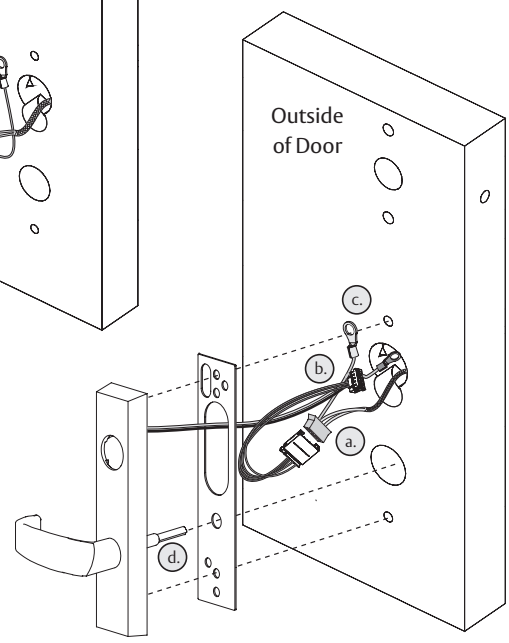


Fig. 7

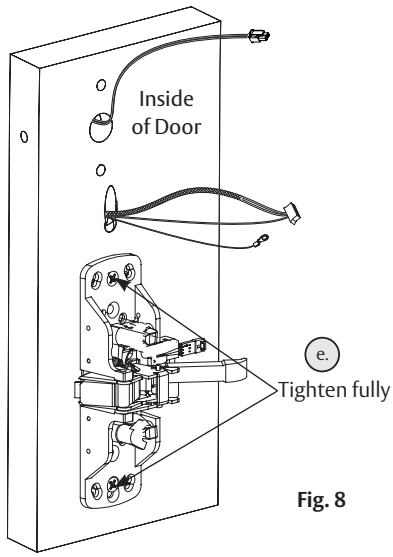


Fig. 8

4 Installation Instructions Rim Exit Device (Continued)

For devices without cylinder, go to Step 6.

5. Install cylinder. (Figures 9, 10)

   a. While installing rim cylinder, support tail piece of cylinder, verifying its engagement with top hub of exit chassis.

   NOTE: Be sure trim harness is clear of cylinder and tailpiece.

   b. Secure cylinder by through-bolting cylinder through exit chassis using two (2) #12-24 x 1-7/8" connecting screws. (Figure 10)

   c. Verify that key retracts latchbolt.

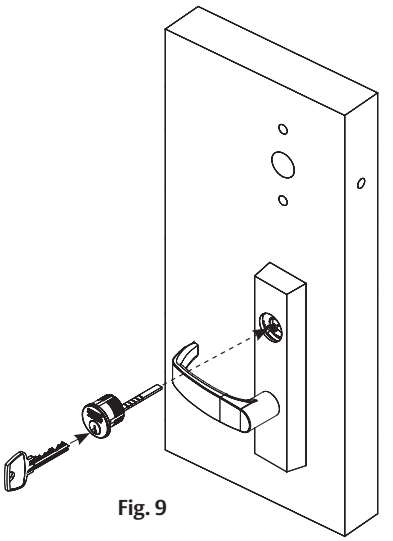


Fig. 9

6. Secure exit chassis.

   To comply with UL certifications and for security:

   Fasten exit chassis to door using four (4) #10 wood screws (for wood door) or four (4) #10-24 machine screws (for metal door). (Figure 10)

7. Secure chassis cover to chassis using four (4) #8-32 x 5/16" oval head machine screws. (Figure 10)

NOTE: Cable lengths exaggerated for illustrative purposes.

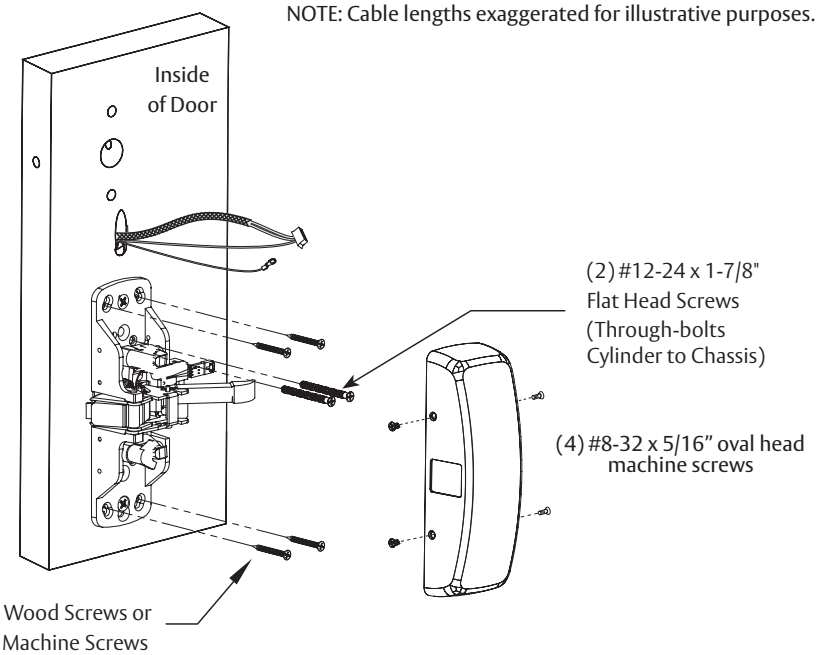


Fig. 10

4 Installation Instructions Rim Exit Device (Continued)

8. Install rail assembly. (Figure 11)
   a. Retrieve harness from end of rail. Harness has limited travel and can be damaged.
   b. Attach harness to female connector on chassis.
   c. Install rail and screws per exit device instructions.

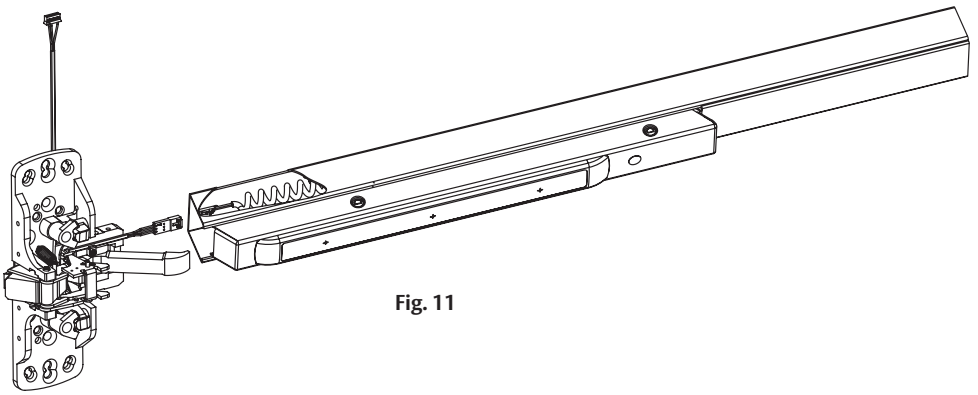


Fig. 11

Important Note:
IN100 Rim Exit Installation Continues With Section 8

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5 Lock Installation for Mortise Exit Device

1. **Prepare door.**
   a. Verify hand and bevel of door. (Figure 12)

   NOTE: This exit device is handed and is not reversible.

   b. Door should be fitted and hung.

   c. Verify product label.

   d. Mark and drill door. (Figure 13)
   - If mullion is used, install prior to installing hardware
   - Doors should be pre-prepped (recommended)

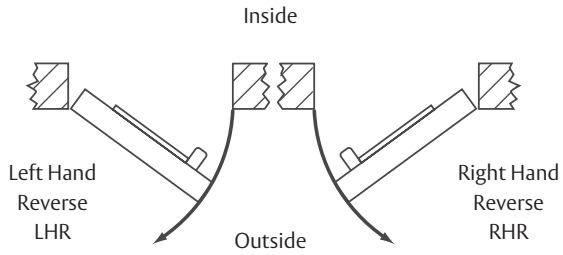


Fig. 12

NOTE: Instruction examples show wood door installation. For metal doors, route cables inside door.

Field template (ships with product): **A8215 (**80 Series) or **MEFT10** (PE80 Series)
Exit installation instructions **A6705 (**80 Series) or **A8304** (PE80 Series)

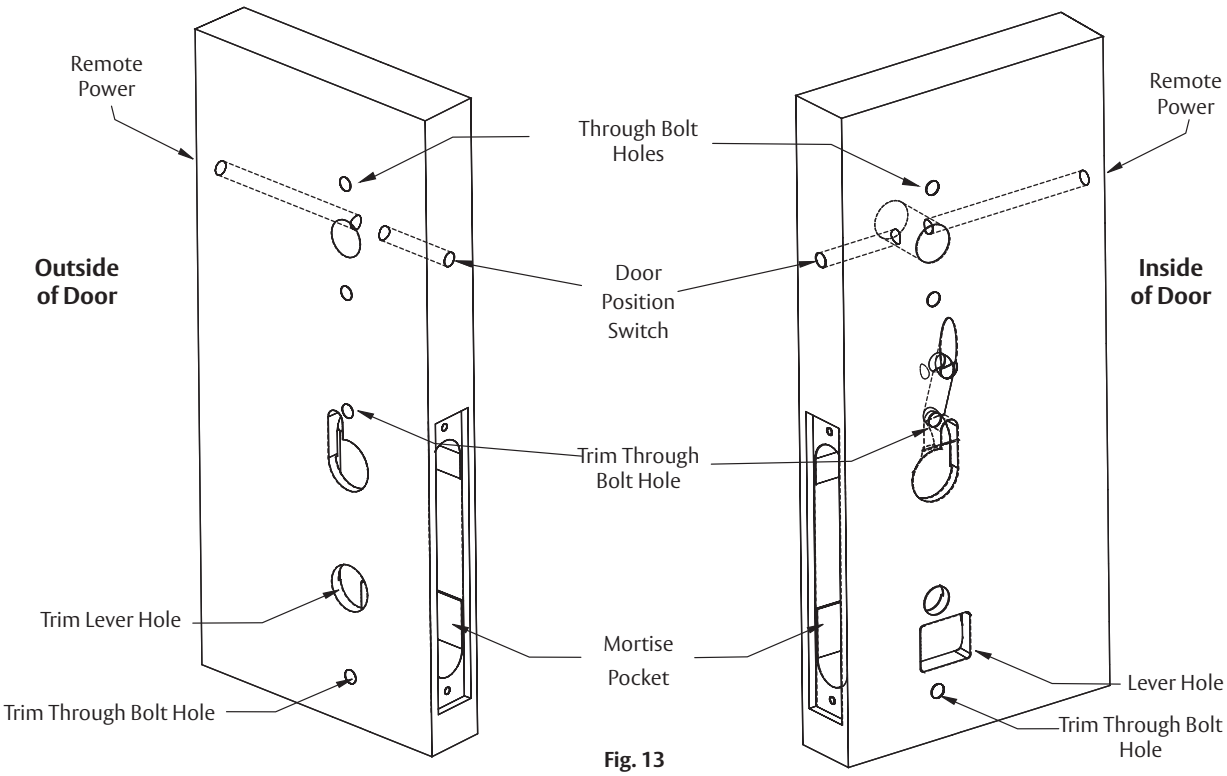


Fig. 13

5 Lock Installation for Mortise Exit Device (Continued)

2. Install door position switch.

NOTE: Wood doors have 3/8" raceway to controller cutout and metal doors have 3/4" raceway to controller cutout.

a. Refer to template **A8215** (80 Series) or **MEFT10** (PE80 Series).

b. Insert connector end of DPS through raceway on latch edge of door. (Figure 14)

NOTE: For metal doors, use DPS collar.

c. Push DPS firmly into place by hand.

CAUTION: DO NOT TAP SWITCH WITH ANY TOOL.

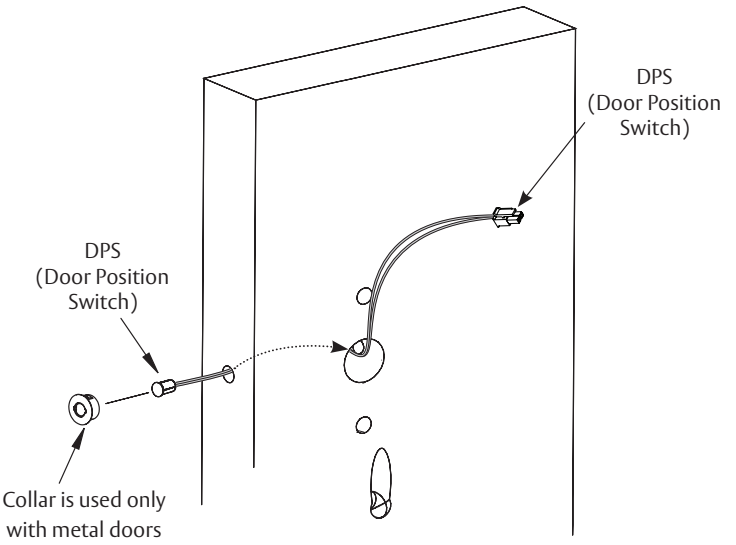
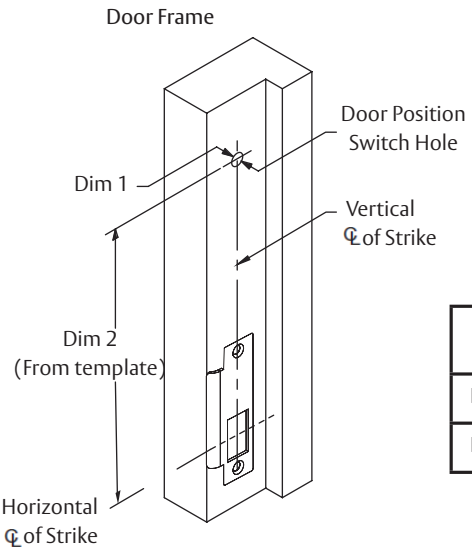


Fig. 14



	Wood Frame	Metal Frame
Dim 1	3/8" ∅	3/4" ∅
Dim 2	8"	8"

Fig. 15

5 Lock Installation for Mortise Exit Device (Continued)

3. Mount mortise and exit device chassis.

a. Slide mortise lock into door and loosely secure with two (2) flat head screws.

NOTE: Exit chassis harness consists of a 6-pin female connector and ground wire/terminal. (Figure 16)

b. Feed 6-pin connector and larger ground lug straight through to outside of door (Figure 16), while feeding smaller ground lug into wire hole, up through wire channel and out through inside of door.

CAUTION: Do not pinch wire harness.

c. Begin to secure exit chassis with through bolts to trim using two (2) 1/4 -20 x 2-3/8" flat head machine screws.

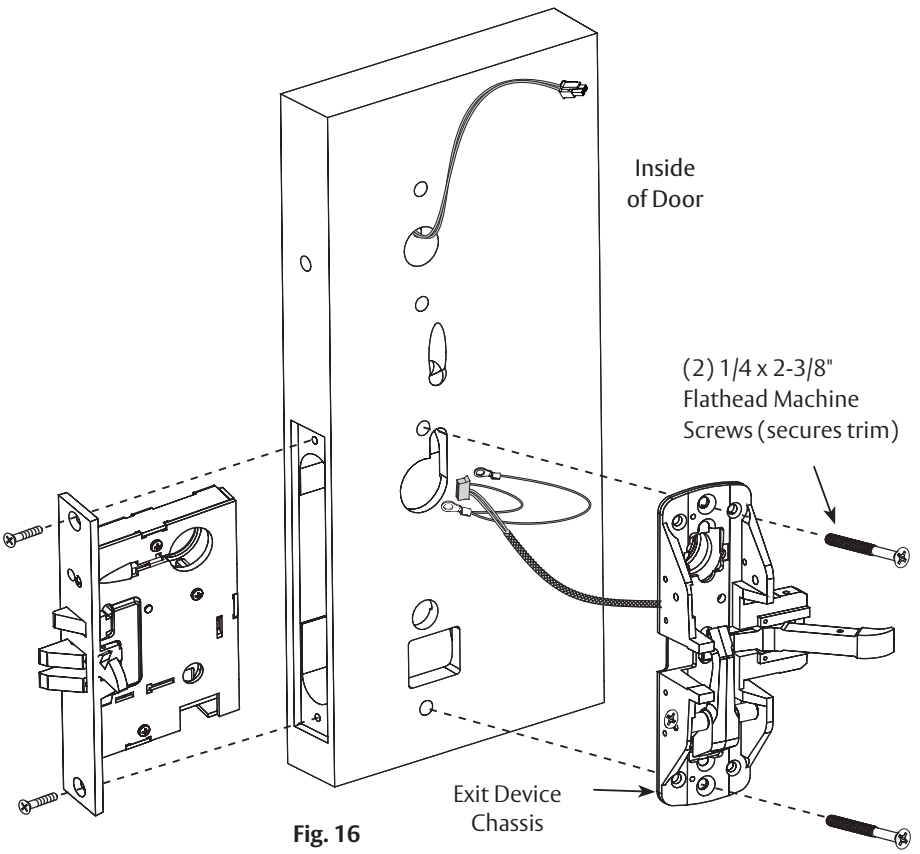


Fig. 16

5 Lock Installation for Mortise Exit Device (Continued)

4. Position exit trim. (Figure 17)

NOTE: For exterior applications, use trim gasket to seal between trim escutcheon and outside door surface.

a. Connect motor harness adapter to chassis harness connector.

b. For wood doors: Route trim wire harness connector through cylinder hole, up and through wire run channel to controller cutout.

For metal doors: Route trim wire harness through cylinder hole out controller cutout.

c. Pass top trim mounting post through chassis harness ground lug.

d. Ensure trim spindle engages lower hub of exit chassis.

e. Begin to secure chassis to trim by partially tightening two (2) chassis through bolts. (Figure 18)

NOTE: Do not fully tighten at this time.

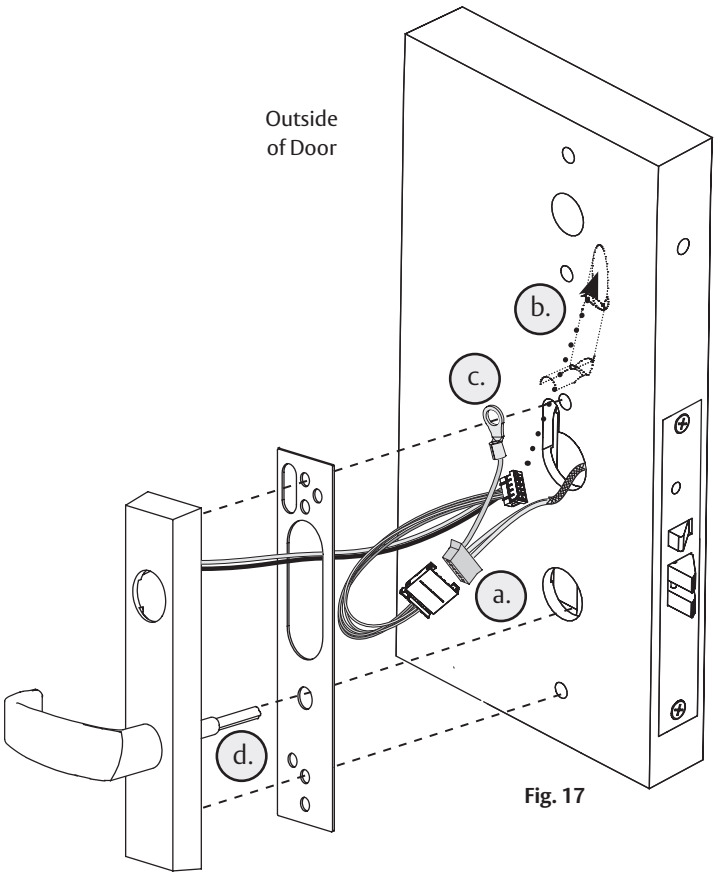


Fig. 17

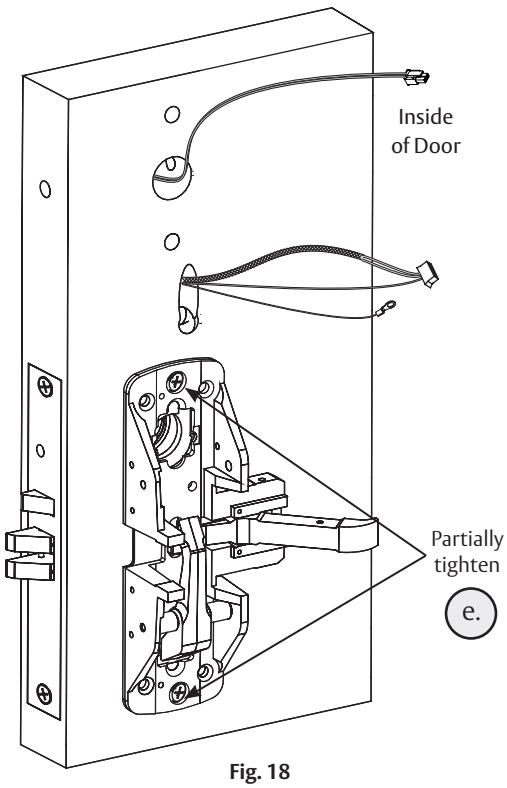


Fig. 18

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5 Lock Installation for Mortise Exit Device (Continued)

5. For devices without cylinder, go to Step 6.

a. Secure cylinder by threading into lockbody.

b. After cylinder is installed, tighten cylinder lock screw (clockwise) through front of mortise lock.

c. Verify that key retracts latchbolt.

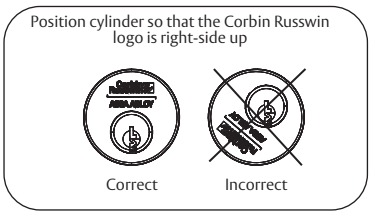

Fig. 19A

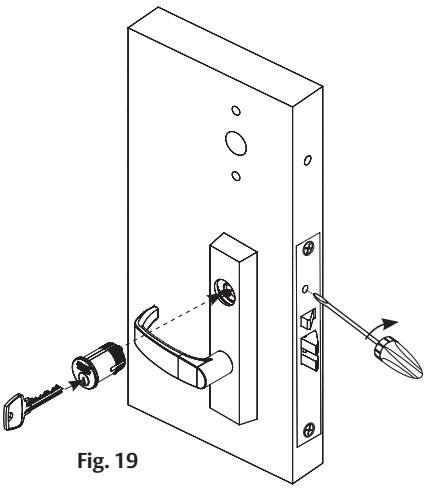

Fig. 19

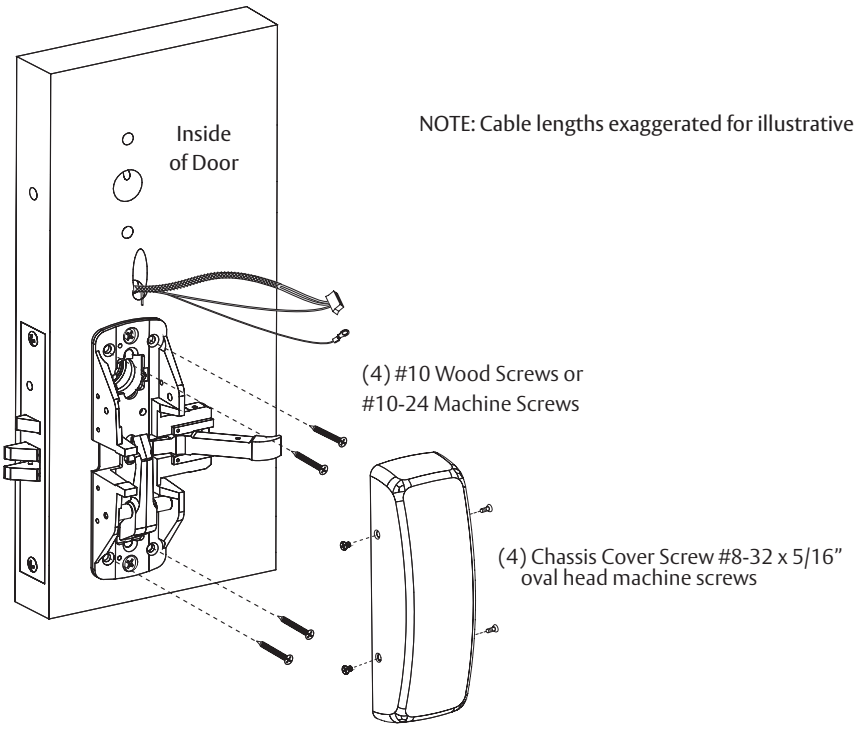

Fig. 20

NOTE: Cable lengths exaggerated for illustrative purposes.

5 Lock Installation for Mortise Exit Device (Continued)

6. Install rail assembly. (Figure 21)

a. Retrieve harness from end of rail. Harness has limited travel and can be damaged.

b. Attach harness to female connector on chassis.

c. Install rail and screws per exit device instructions.

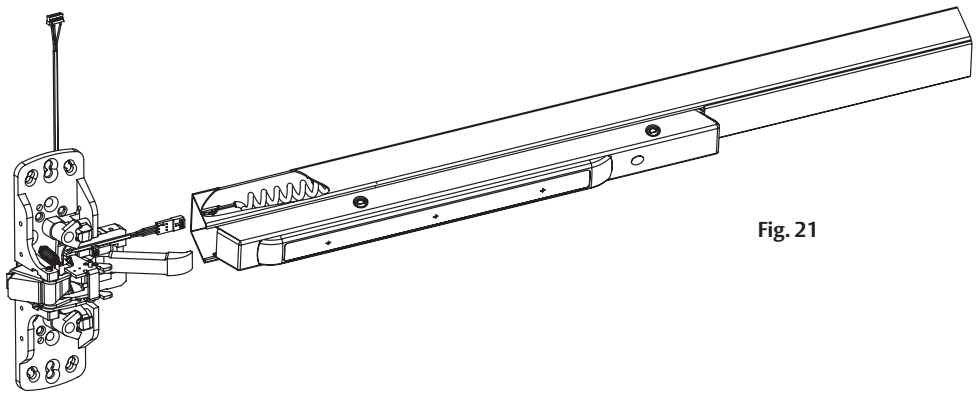

Fig. 21

Important Note:
IN100 Mortise Exit Installation Continues With Section 8

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6 Installation Instructions for PE8600 Concealed Vertical Rod (CVR) Exit Device (EA Option)

1. Prepare door

a. Verify hand and bevel of door. (Fig. 1)

NOTE: Stand on outside of locked door when determining door hand.

b. Verify exit device is correct hand for door.

c. Door should be fitted and hung.

d. Verify product label.

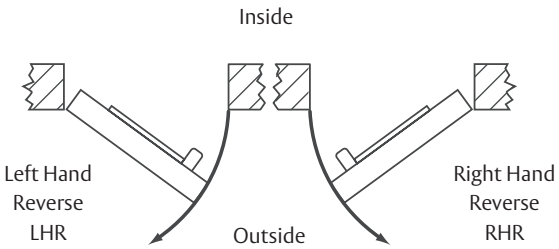

Fig. 1

e. Mark and drill door. (Fig. 2)

- If mullion is used, install prior to installing hardware
- Doors should be pre-prepped (recommended)

Prior to installation, all holes must be free of burrs, debris and sharp edges.

Prepare door according to appropriate template (see website).

- Door Manufacturer's Template (online): **MEDT68**
- Exit Device Installation Instructions: **A8305 (MD)** or **A8315 (WD)**

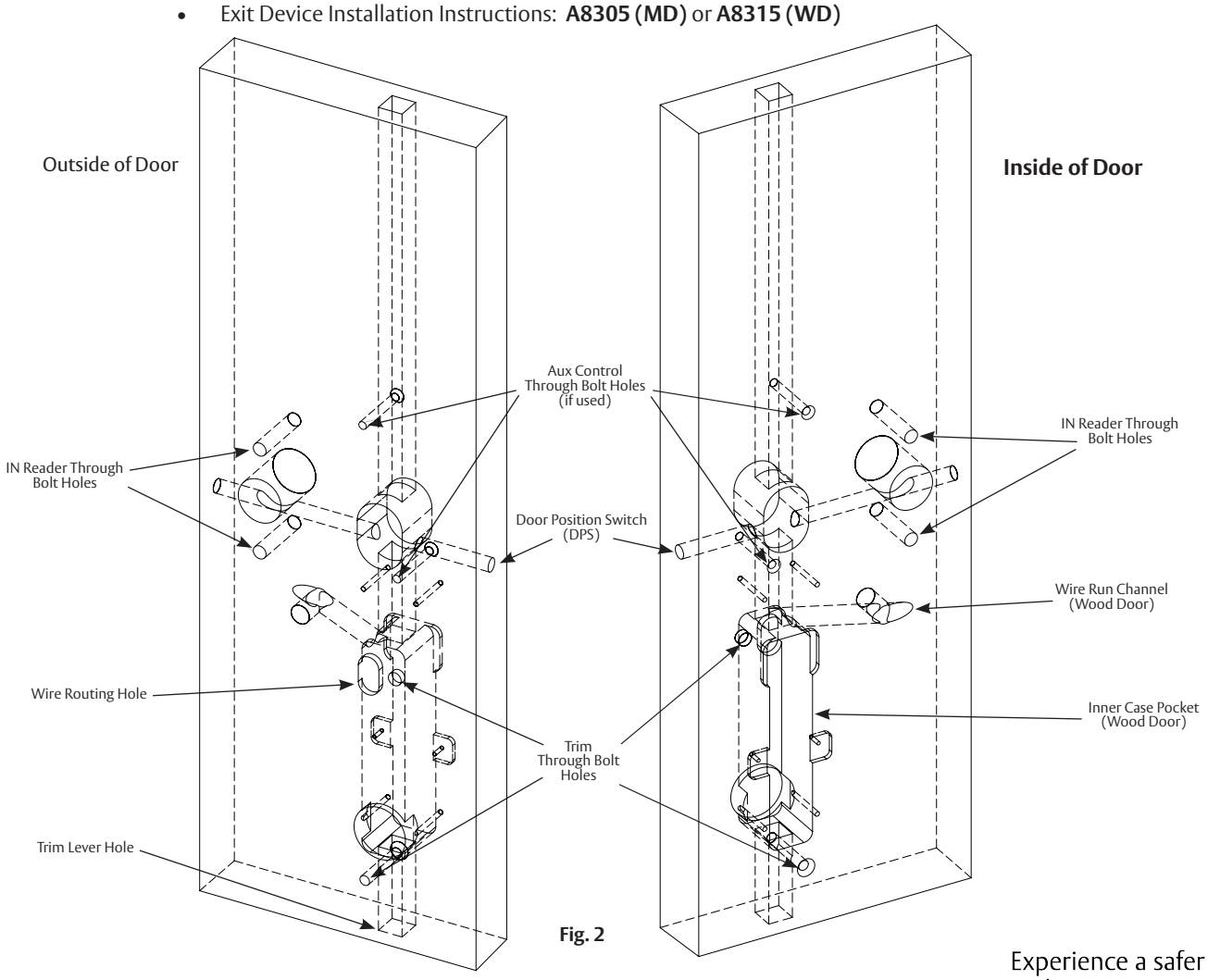

Fig. 2

2. Install door position switch* (DPS).

NOTE: Wood doors have 3/8" raceway to controller cutout and metal doors have 3/4" raceway to controller cutout.

a. Insert connector end of DPS through raceway on latch edge of door. (Fig. 3)

b. Push DPS firmly into place by hand.

CAUTION: DO NOT TAP SWITCH WITH ANY TOOL

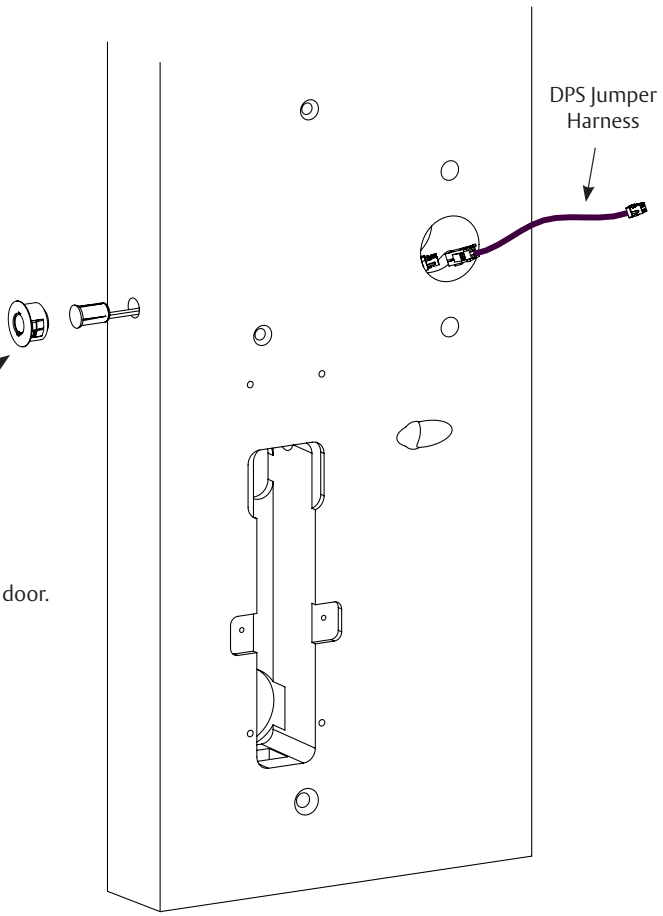

Fig. 3

*For double door applications (unless second door is inactive), an alternative for this DPS must be used.
Options (sold separately) include a hinge DPS or a DPS at top of door.

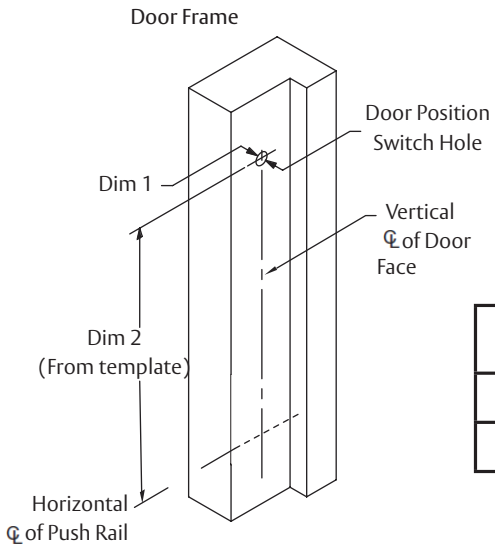

Fig. 4

	Wood Frame	Metal Frame
Dim 1	3/8" Ø	3/4" Ø
Dim 2	4-7/8"	4-7/8"

6 Installation Instructions for PE8600 Concealed Vertical Rod (CVR) Exit Device (EA Option)

3. Install Inner Case Assembly

A. Wood Door (WD)

1. Install the inner case assembly with (2) #12 x 1" Phillips flathead screw (Fig. 5A).

B. Metal Door (MD/AD)

1. Assemble rods to inner case.
2. Slide rod assembly into door and secure with #10-24 x 3/8" screw for top inner case assembly and #10-24 x 1/2" screw for bottom inner case assembly (Fig. 5B).

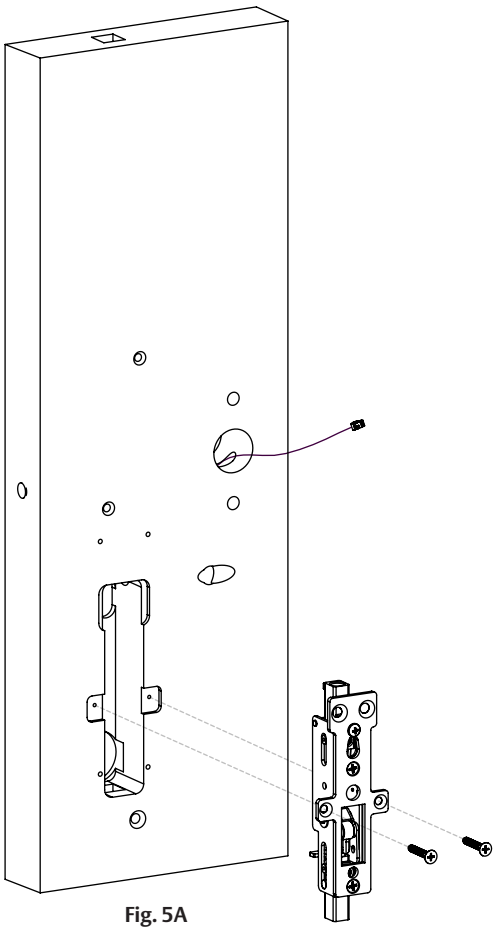

Fig. 5A

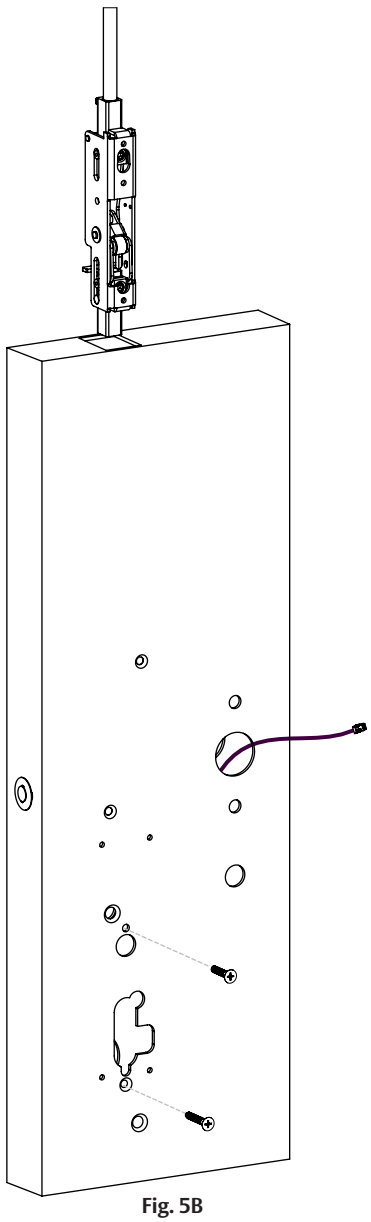

Fig. 5B

4. Mount exit device chassis.

a. Mount exit chassis loosely, using only the top left mounting screw. Screw should support the weight of the chassis but allow it to move freely while routing the wiring and mounting exit trim.
NOTE: Exit chassis harness consists of a 6-pin female connector and (2) ground wire terminals (Fig. 6B).

b. Feed 6-pin connector and larger ground wire terminal straight through to outside of door. (Fig. 6B, 7)

c. Insert (2) trim mounting screws (Fig. 6A).

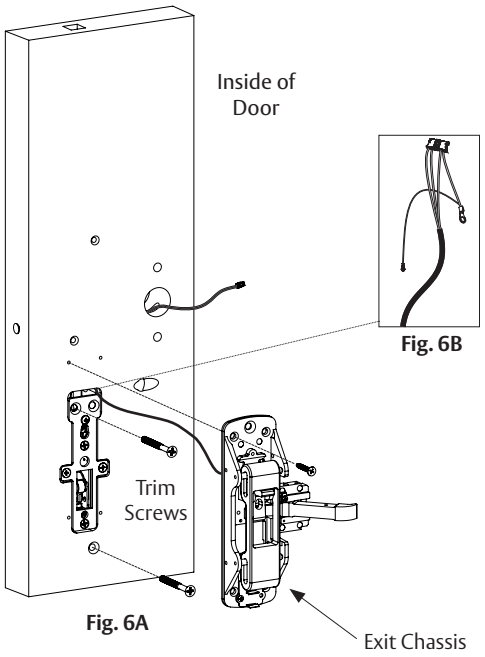

Fig. 6A

Fig. 6B

5. Mount exit trim. (Fig. 8)

NOTE: For exterior applications, use trim gasket as seal between trim escutcheon and outside door surface.

a. Connect motor harness adapter to chassis wire harness connector.

b. For wood doors: Route trim wire harness connector through oval wire routing hole, up and through wire run channel to controller cutout.

For metal doors: Route trim wire harness through oval wire mounting hole and out controller cutout.

c. Pass top trim mounting post through chassis harness ground lug.

d. Fully tighten (2) trim mounting screws. (Fig. 9)

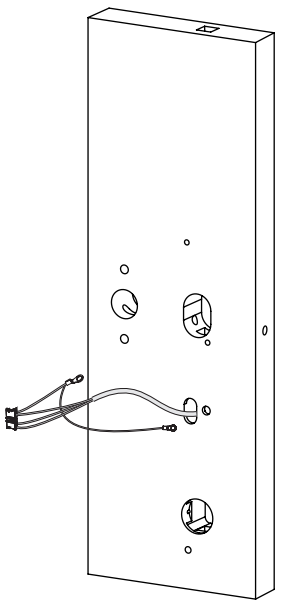

Fig. 7

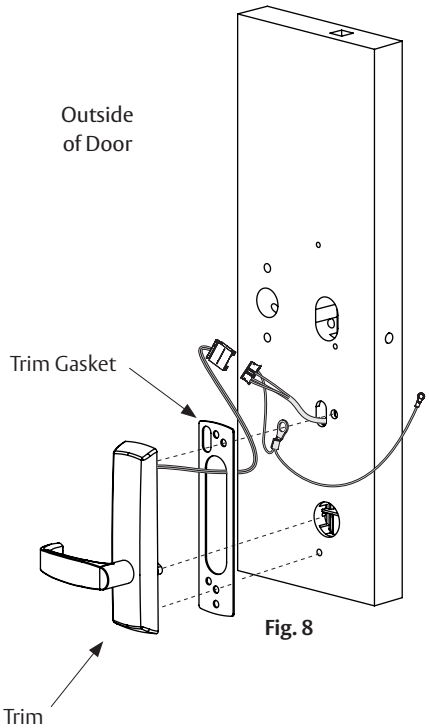

Fig. 8

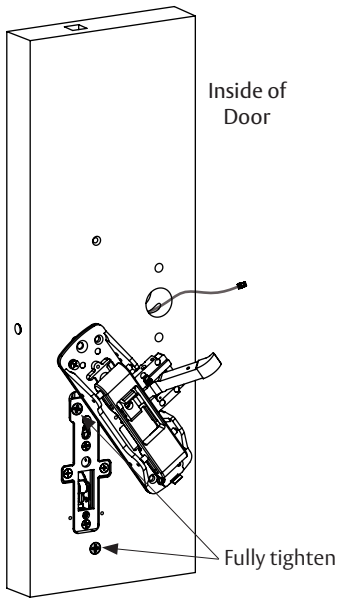

Fig. 9

6. Secure exit chassis. (Fig. 10)

To comply with UL certifications and for security:

a. Fasten exit chassis to door using three (3) remaining #10 wood screws (for wood door) or four (4) #10-24 machine screws (for metal door).

NOTE: Cable lengths exaggerated for illustrative purposes.

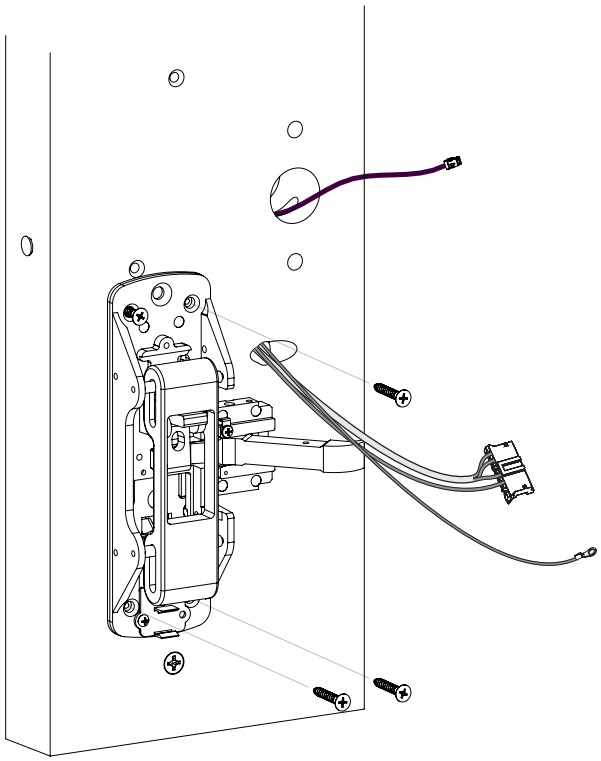

Fig. 10

7. Install rail assembly. (Fig. 11)

a. Retrieve harness from end of rail. Harness has limited travel and can be damaged.

b. Attach harness to female connector on chassis.

c. Install rail and screws per exit device instructions.

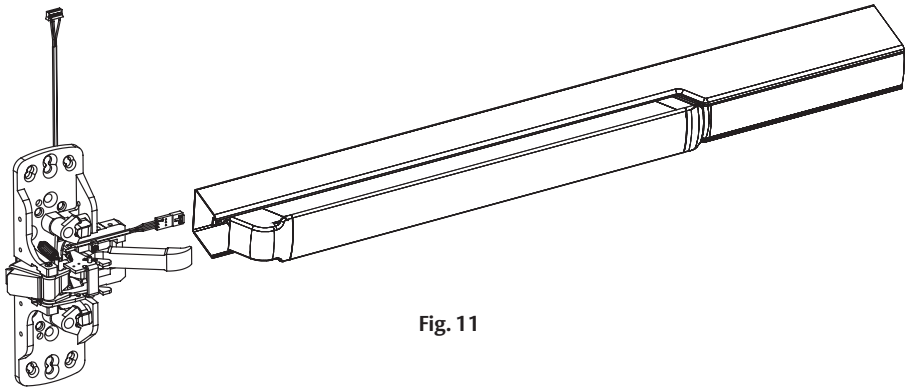

Fig. 11

Important Note:
IN100 CVR Exit Installation Continues With Section 8

7 Installation Instructions for PE8700 Surface Vertical Rod (SVR) Exit Device (EA Option)

1. Prepare door

a. Verify hand and bevel of door. (Fig. 1)

NOTE: Stand on outside of locked door when determining door hand.

b. Verify exit device is correct hand for door.

c. Door should be fitted and hung.

d. Verify product label.

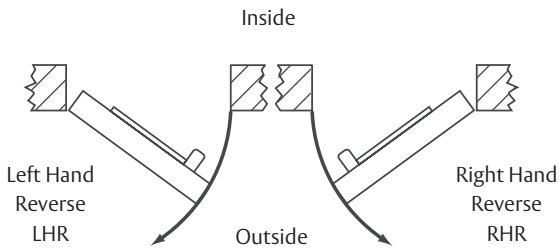

Fig. 1

e. Mark and drill door. (Fig. 2)

- If mullion is used, install prior to installing hardware
- Doors should be pre-prepped (recommended)

Prior to installation, all holes must be free of burrs, debris and sharp edges.

Prepare door according to appropriate template (see website).

- Field Template (ships with product): **MEFT25**
- Door Manufacturer's Template (online): **MEDT69**
- Exit Device Installation Instructions: **A8307**

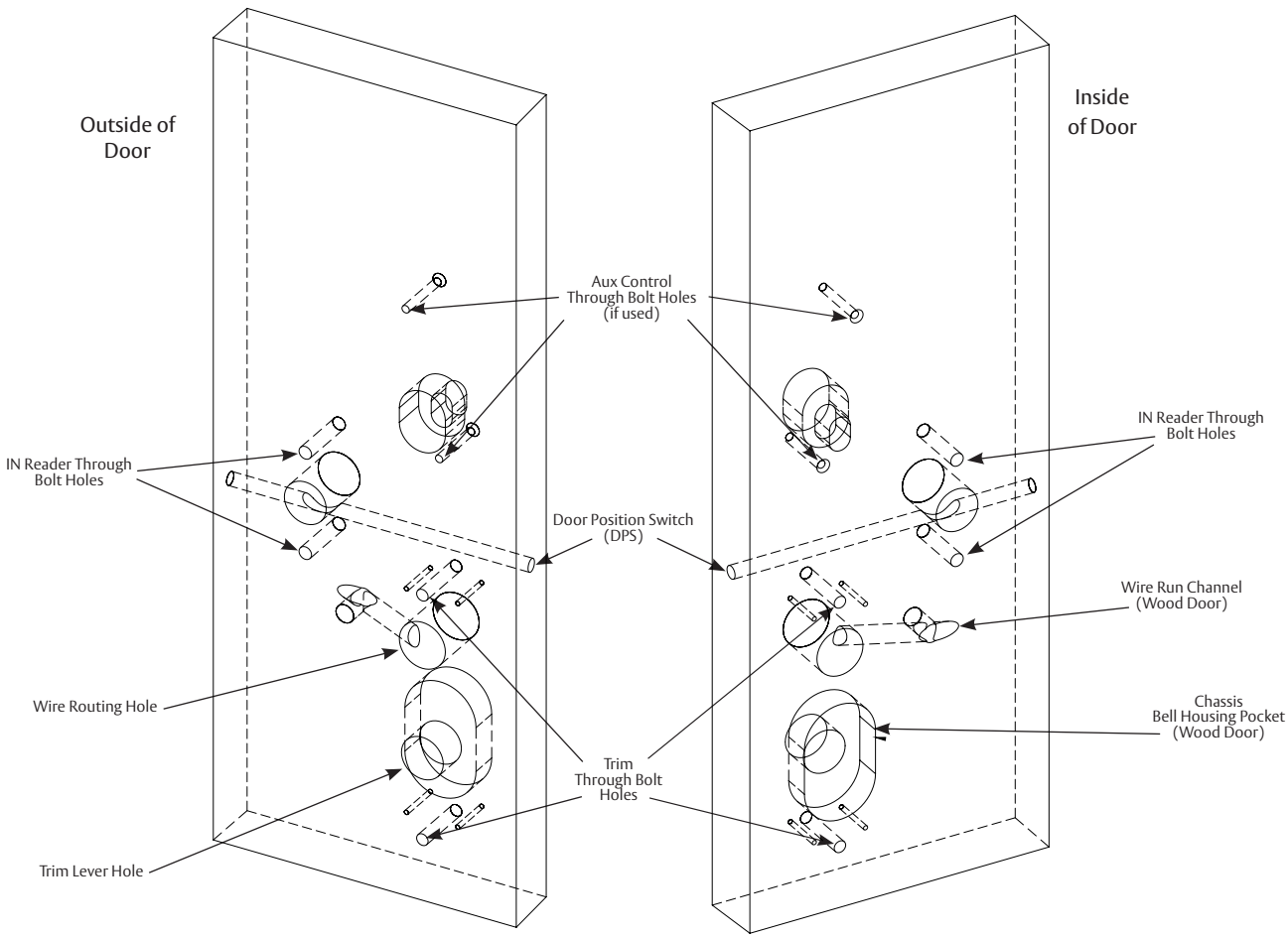

Fig. 2

7 Installation Instructions for PE8700 Surface Vertical Rod (SVR) Exit Device (EA Option)

2. Install door position switch* (DPS).

a. Insert connector end of DPS through raceway on latch edge of door. (Fig. 3)

NOTE: For metal doors, use DPS collar.

b. Push DPS firmly into place by hand.

CAUTION: DO NOT TAP SWITCH WITH ANY TOOL

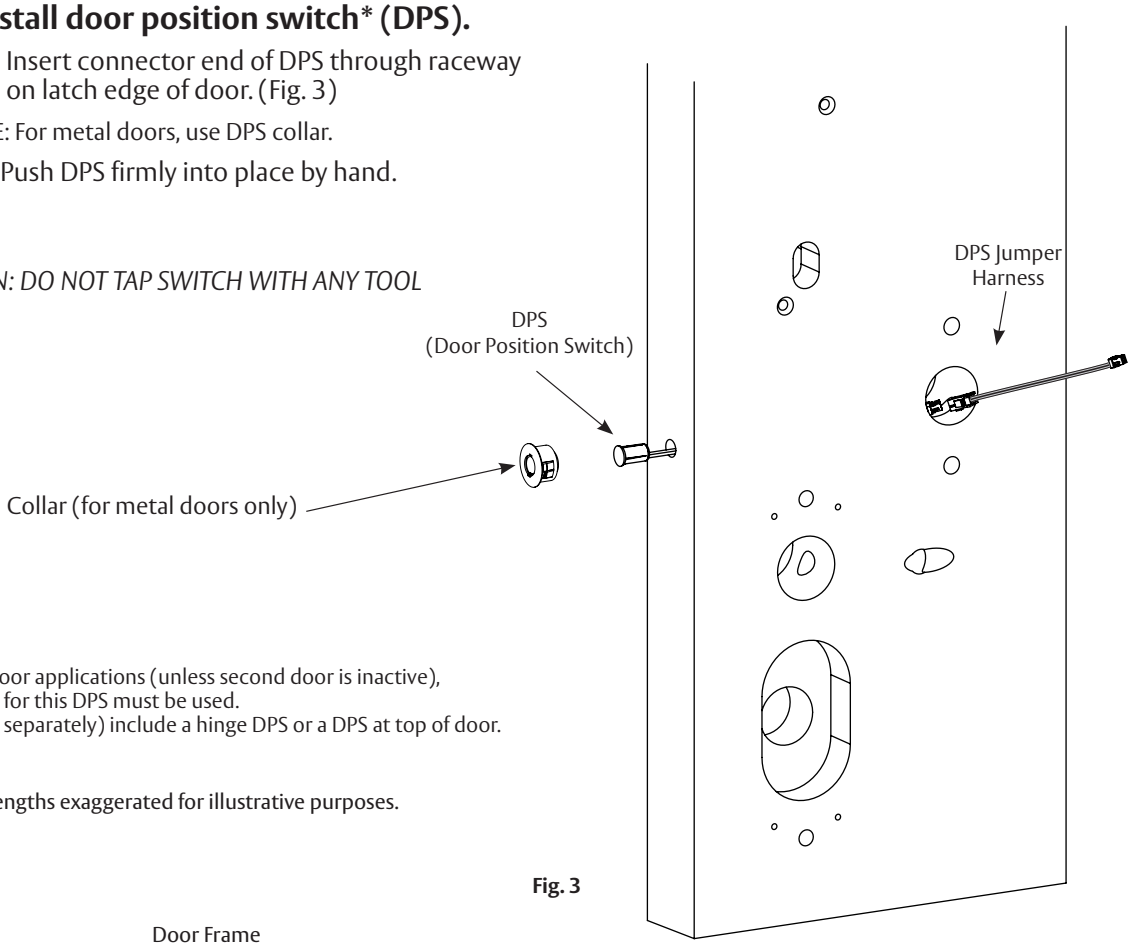

Fig. 3

*For double door applications (unless second door is inactive), an alternative for this DPS must be used.
Options (sold separately) include a hinge DPS or a DPS at top of door.

NOTE: Cable lengths exaggerated for illustrative purposes.

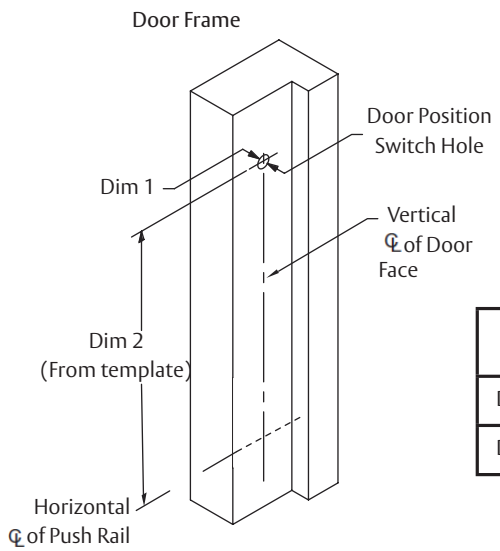

Fig. 4

	Wood Frame	Metal Frame
Dim 1	3/8" Ø	3/4" Ø
Dim 2	4-7/8"	4-7/8"

3. Install Outside Trim and Exit Chassis

Align exit trim and gasket (if required) with through-holes:

a. For exterior application, use trim gasket to seal between trim escutcheon and outside door surface (Fig. 5).
NOTE: For MELR install, skip Step 2

b. For wood doors: Route trim wire harness connector through cylinder hole, up and through the wire run channel to controller cutout.

For metal doors: Route trim wire harness through the cylinder hole out the controller cutout.

c. Trim spindle will engage hub of chassis.

d. Position chassis carefully onto the inner case assembly from inside of door. Feed wires up through the routed channel as shown (Fig. 6).

Note: Keep wires in routed channel. DO NOT pinch.

e. Mount chassis to trim using (2) # 1/4 -20 x 2-3/8" flat head machine screws.

Do not fully tighten chassis screws until after rail installation

f. Secure exit chassis. (Fig.7)

To comply with UL certifications and for security:

Fasten exit chassis to door using four (4) #10 wood screws (for wood door) or four (4) #10-24 machine screws (for metal door).

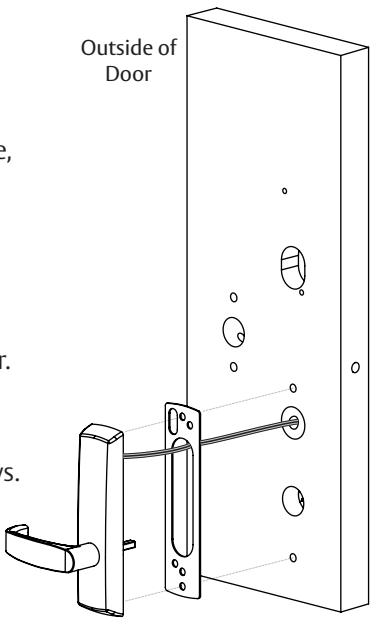

Fig. 5

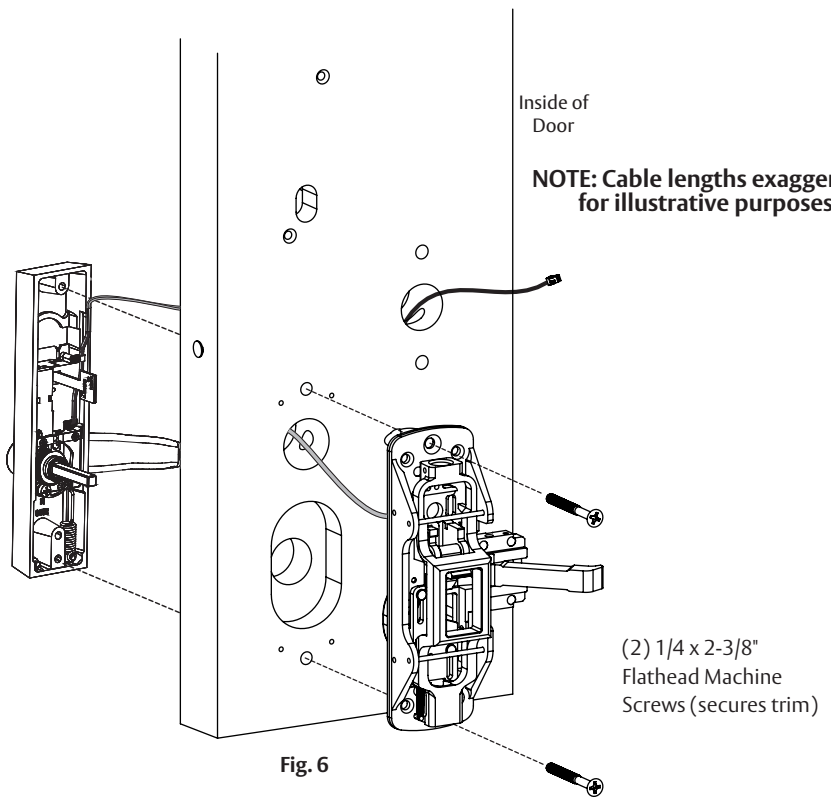

Fig. 6

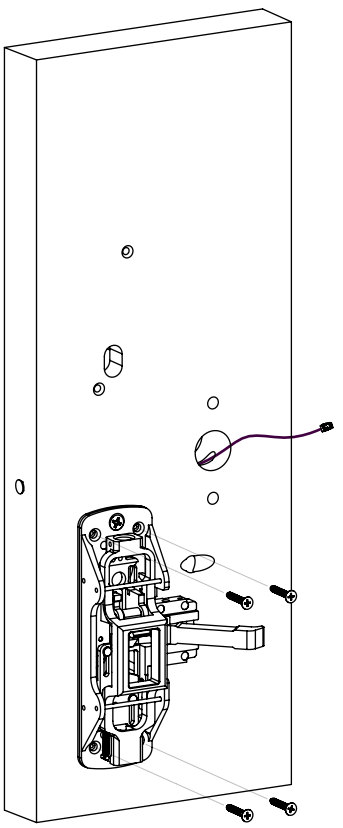

Fig. 7

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7 Installation Instructions for PE8700 Surface Vertical Rod (SVR) Exit Device (EA Option)

4. Install rail assembly. (Fig. 8)

a. Retrieve harness from end of rail. Harness has limited travel and can be damaged.

b. Attach harness to female connector on chassis.

c. Install rail and screws per exit device instructions.

d. Tighten trim and chassis screws.

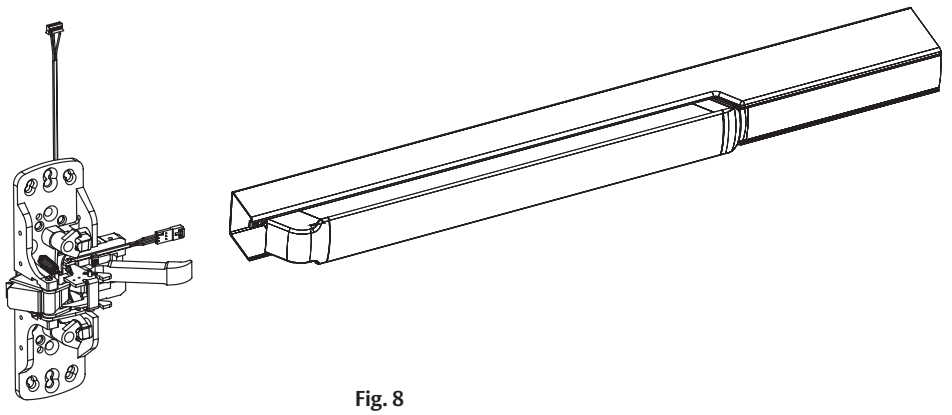

Fig. 8

e. Install top and bottom cases and pin vertical rods to chassis per exit device instructions.

f. Attach covers.

Important Note:
IN100 SVR Exit Installation Continues With Section 8

8 IN100 Installation

1. Install outside reader.

a. Orient reader so LED lens is at top. (Figure 22)

b. Feed cable/connector through door from outside to inside.

c. Install reader to outside of door by aligning mounting posts with door preparation holes. Hold reader flush against door while ensuring proper alignment.

d. Feed reader harness and DPS connectors through inside mounting assembly and gasket if required*. (Figure 23)

e. Secure mounting assembly while ensuring proper alignment of outside reader and tighten two (2) through-bolts on inside of door to secure reader. (Figure 23)

f. Secure ground lug with #6-32 machine screw. (Figure 24)

*NOTE:

- 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 23)
- Once cables/connectors are fed through, reattach gasket to mounting plate

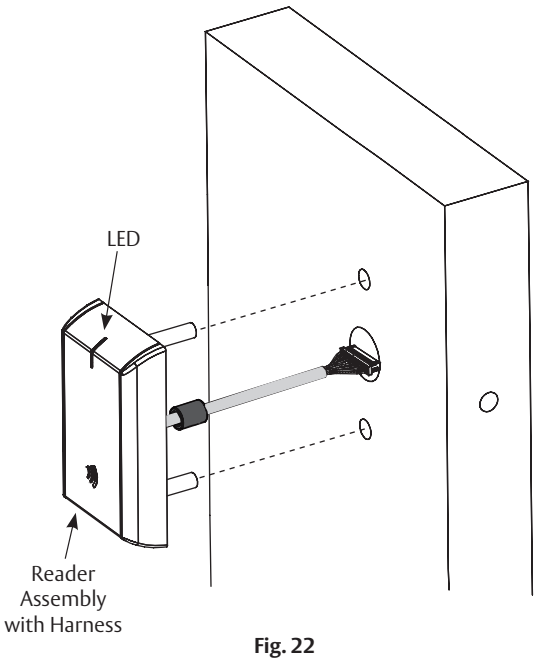

Fig. 22

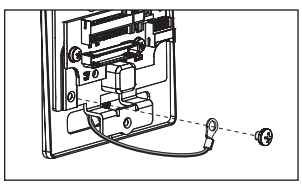

Fig. 24

NOTE: Cable lengths exaggerated for illustrative purposes.

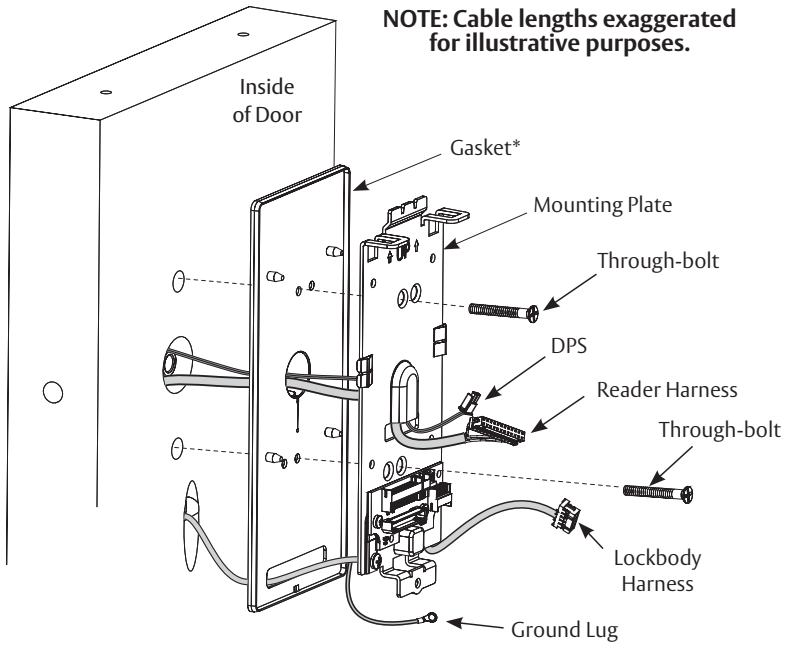

Fig. 23

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8 IN100 Installation (Continued)

g. Secure the following connectors to their respective terminals (Figure 25):

CAUTION: Do not touch or allow debris to enter connector contacts

- Secure 4-pin DPS connector
- Secure 10-pin lock body assembly connector
- Secure (*optional) 2-pin external 12-24VDC power connector.
- Secure (*optional) external 12-24VDC power supply ground ring terminal to Ground Lug

NOTE: For UL294 applications, the power supply shall be UL294 Listed, Class 2 Power Limited

NOTE: For ULC-60839-11-1 applications, the power supply shall be ULC-60839-11-1 (Security Grade Level 2 or better) Listed Class 2, or ULC-S319 (Security Grade Level 2 or better) Listed Class 2, or ULC-S318 Listed, Class 2 Power Limited

NOTE: For ULC-60839-11-1 applications the power supply wiring shall be a maximum length of 3 meters (9.8 feet)

IMPORTANT: Do not run wires through bottom flange hole in plate - it will damage wires and controller connector. Route wires around flange. (See Figures 25 - 27)

h. When all connections have been made, tuck excess cable into wire hole on inside of door.

i. Secure mounting assembly while ensuring proper alignment of outside reader and tighten two (2) through-bolts on inside of door to secure reader. (Figure 26)

j. Secure 24-pin card reader connector. (Figure 27)

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

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

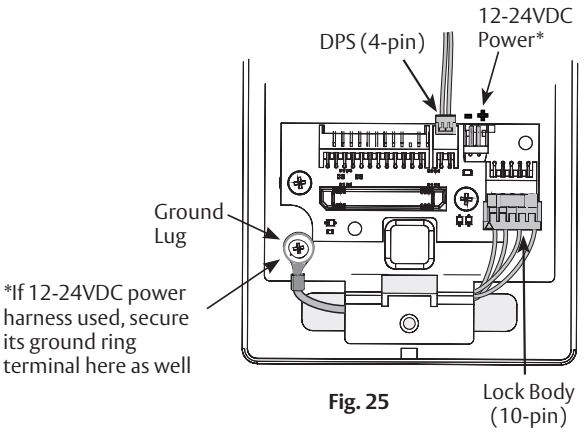


Fig. 25

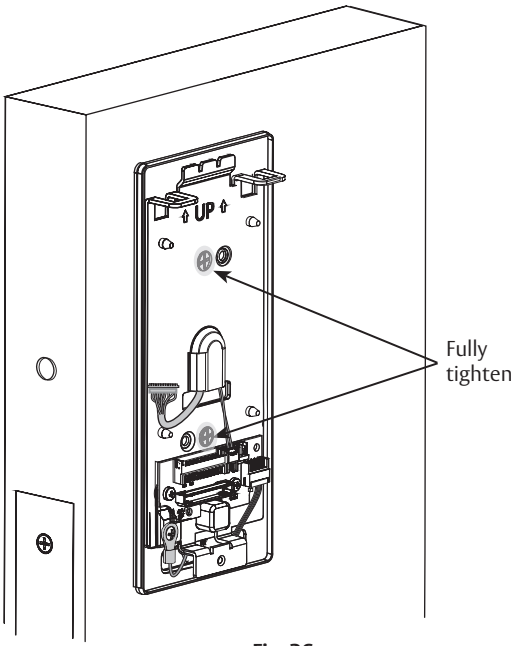


Fig. 26

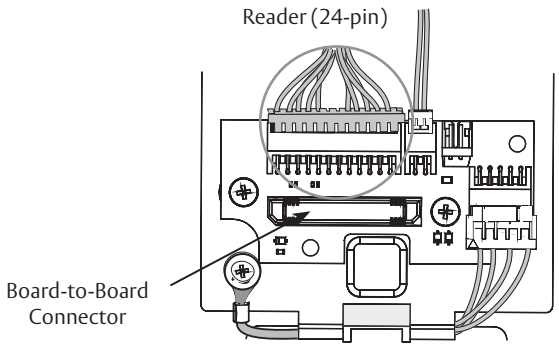


Fig. 27

8 IN100 Installation (Continued)

2. Install inside component assembly (controller).`

a. (Making sure path is clear) insert bottom tab of controller into slot on mounting plate. (Figure 28)

b. 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 29)

CAUTION: 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.

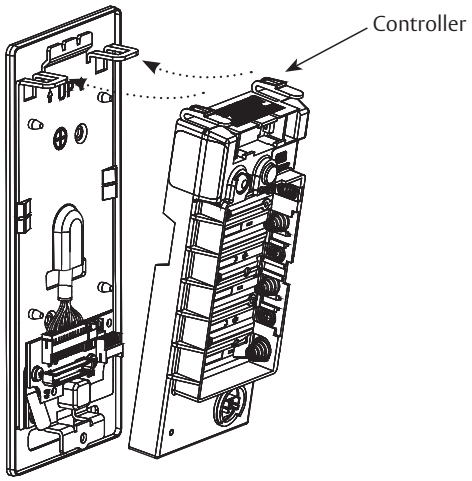


Fig. 28

3. Install batteries.

a. Place six (6) "AA" alkaline batteries in compartment, being careful to align polarity properly. (Figure 30)

b. After batteries are installed, there is a slight delay; then red and green flash*, audible "beep" and lock motor will cycle.

*See Section 10 - LED Indications for more information.

Note: It is recommended to put batteries on a replacement schedule of no more than 2 years

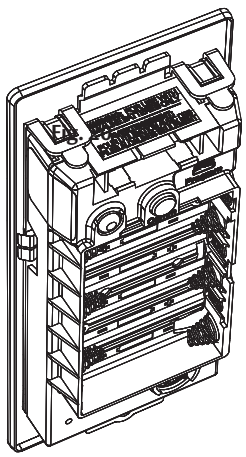


Fig. 29

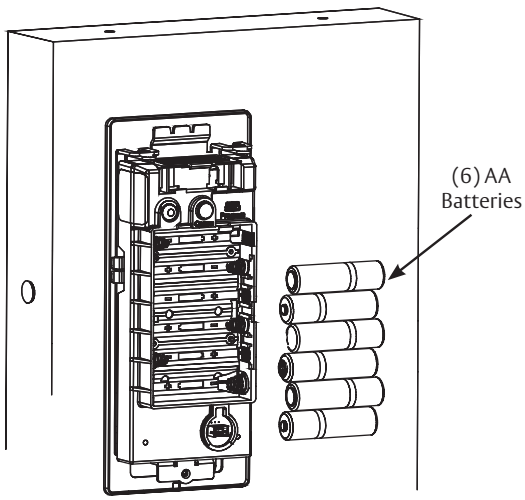


Fig. 30

8 IN100 Installation (Continued)

4. Install inside cover. (Figure 31)

a. Assemble cover by hooking top edge on inside mounting plate.

b. Carefully press bottom of cover toward door without pinching or damaging wires.

c. Secure cover utilizing security hex key.

NOTE: Use of power tools on this step is strongly discouraged. Over-torquing security pin hex screw will result in battery cover damage.

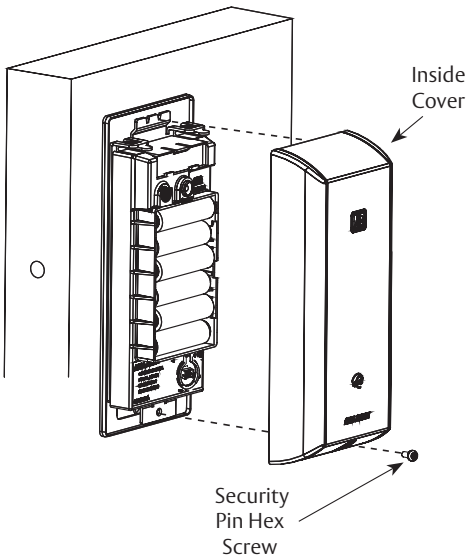


Fig. 31

9 Operational Check

When lock is fully installed, perform following steps.

1. Insert key into cylinder and rotate. (Figure 32)

   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.

NOTE: Consult premises access control system for use of RX function and verification of signal.

3. Depress exit rail; ensure it retracts latch.
4. Present a valid credential* to unlock outside lever; turn lever handle to ensure latch retracts. (Figure 33)

   NOTE: Credential should approach inscription on reader as indicated to ensure credential is read properly. Do not wave credential. (Figure 33)

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

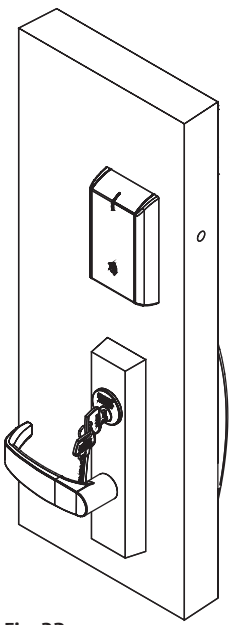


Fig. 32

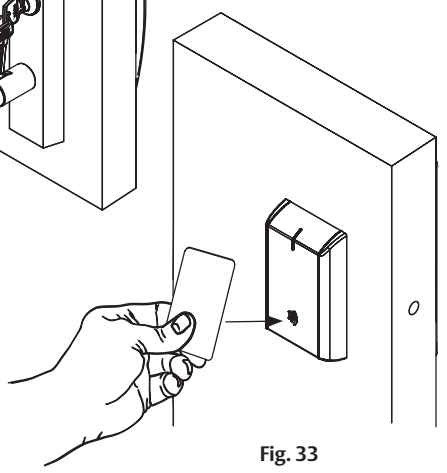
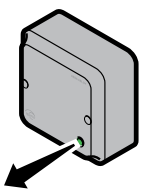


Fig. 33

09/30/23

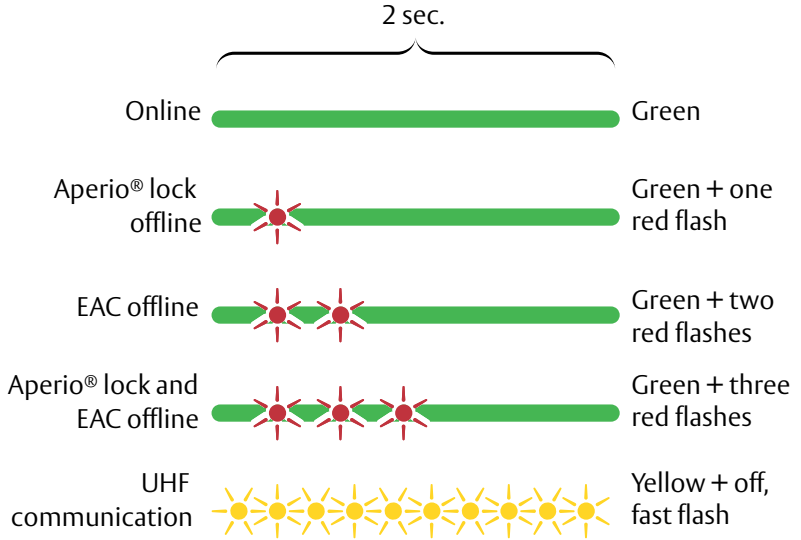
8 Communications Hub Indications



Communications hub has a single LED. It supports an optical scheme of red, green and yellow.

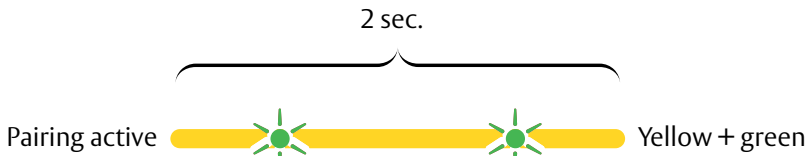
Indication scheme is described by figures below:

Communications Hub NORMAL OPERATION LED indication



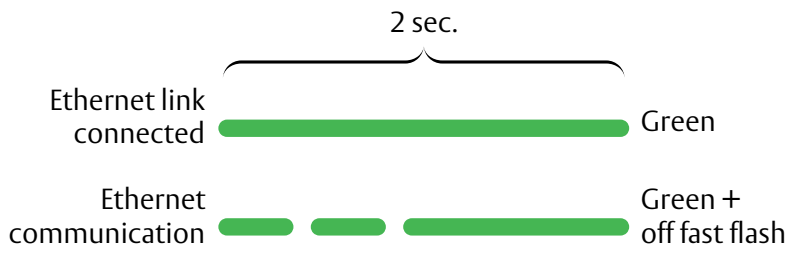
Some special LED indication schemes are used during lock maintenance actions:

Communication Hub MAINTENANCE LED indication



LED on AH40 communications 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

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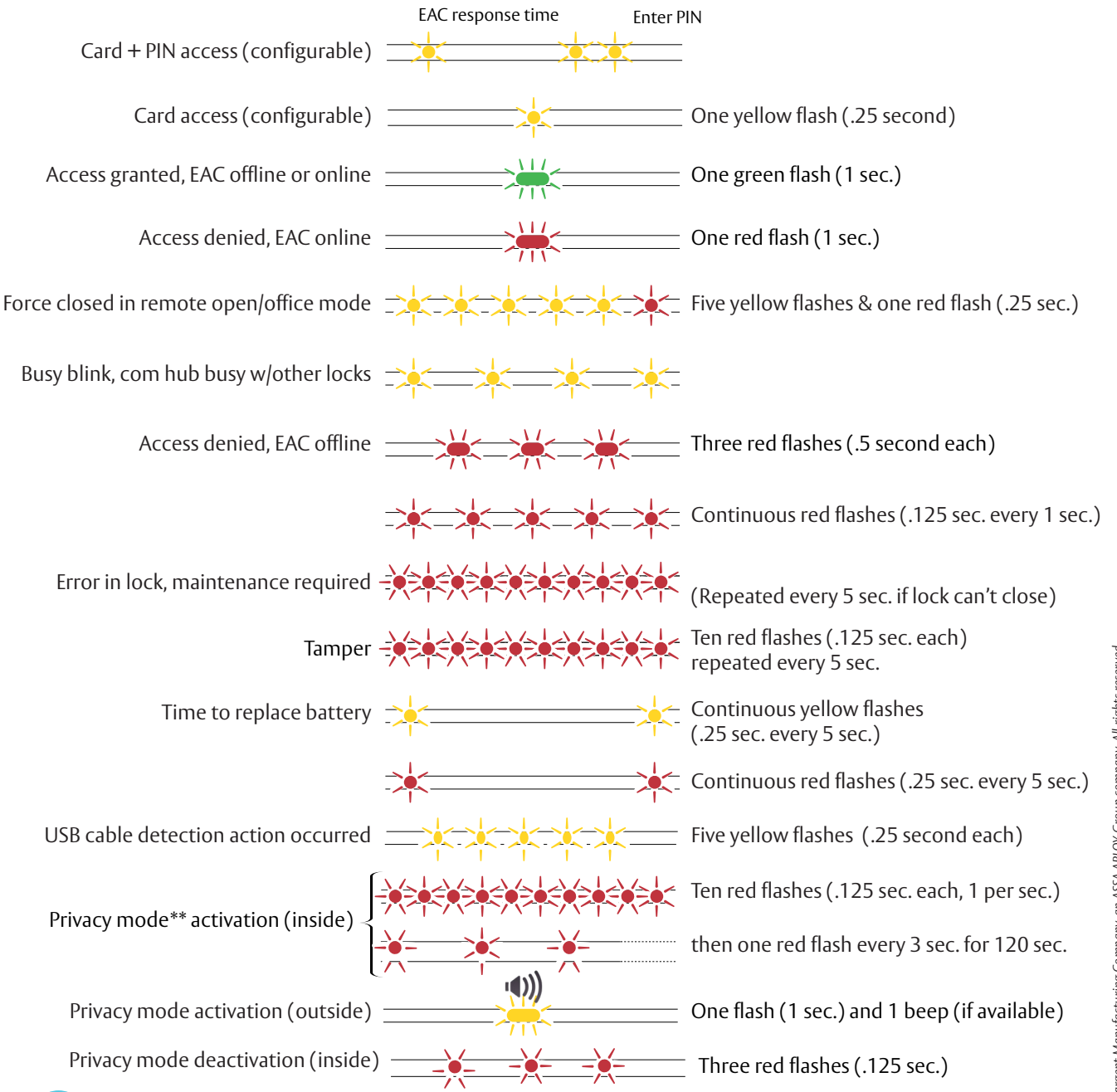
9 Lock LED Indications

Lock NORMAL OPERATION LED indication



*When lock mechanism is blocked (lock jammed) lever must be turned to release lock mechanism.
** Ensure Privacy mode button configuration in lock matches access control system configuration settings.

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

Lock MAINTENANCE OPERATION LED indication

Enter configuration mode — Five yellow flashes (.125 sec. each)

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10 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:

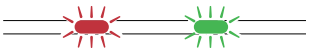
Battery Not Fully Charged

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

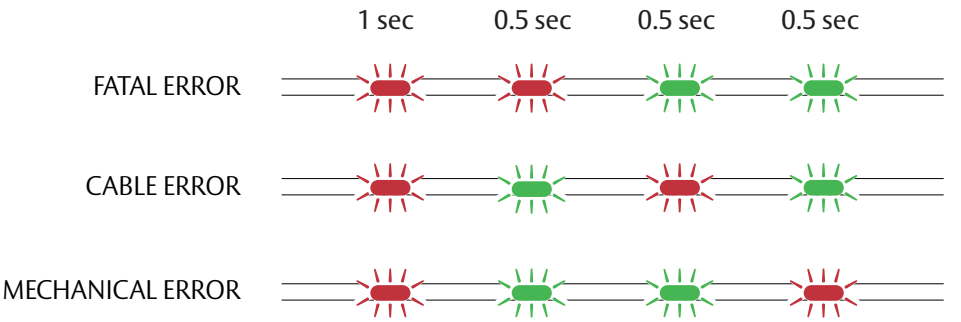
1 red (1s) + 1 green (1s), Power on self-test passed. See table below.

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.



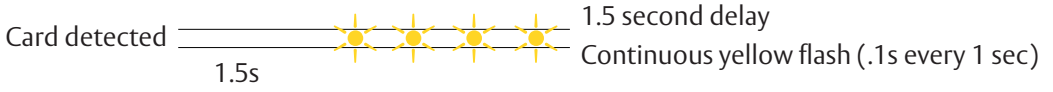
FATAL ERROR	Tests core functionality. MCUs, memory and internal communication, etc.
CABLE ERROR	Tests communication between different parts in system, i.e. different boards connected with a wire.
MECHANICAL ERROR	Test related to moving parts of lock.

11 Lock Busy LED Indications

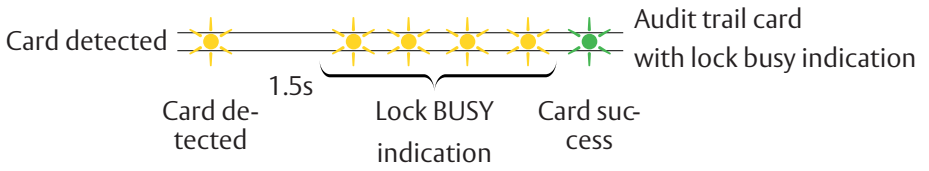
Lock BUSY indicates lock is processing a card (such as a key configuration card for online SE processor or offline void list card with many entries). Card should be kept in close proximity to reader until end of process. Lock BUSY indication does not cancel or overwrite any other indications. Indications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

Indication scheme is described by figures below:

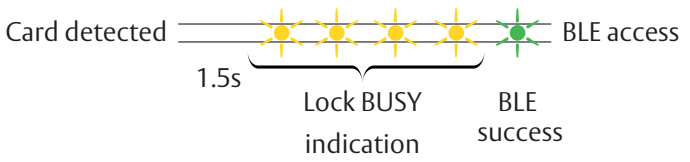
Lock BUSY indication



Lock BUSY indication Mixed with Scenario for Offline Audit Trail Card

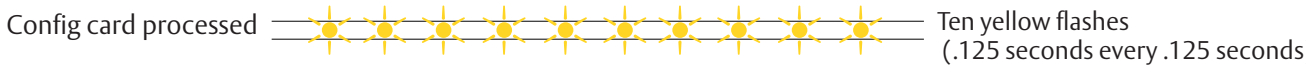


Online BLE Access



Online SE Keys Setup Card (Configuration)

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



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