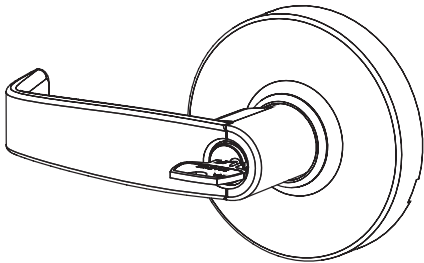
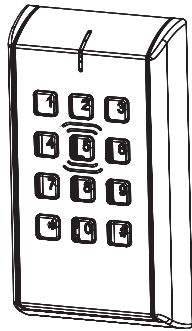


Installation Instructions

Bored Lock

SARGENT
ASSA ABLOY



Series
IN120 Wi-Fi
IN220 PoE
10X Line

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-WIRE.

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A8356A 02/23

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- 6** Operational Check 23

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/récepteurs exempts de licence conformes aux RSS d'Innovation, Sciences et Développement 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.



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

2 Regulatory and Power Specifications

Electronic Authentication Specifications (Mobile Credentials)

For Mobile Credential-Enabled versions of this electronic lock
(Indicated by the credential code in the product order string):

- Mobile Credentials are transmitted to the lock via Bluetooth Smart or NFC ISO/IEC14443 and must use a mobile device enabled with these technologies.
- Credential and mobile device versions are specified by the credential provider.
- User must acquire the latest HID “Mobile Access” application available from Apple iStore or Android PlayStore.

This product is not intended for outside wiring as covered by Article 800 in the National Electrical Code, NFPA 70.

Compliance with IEEE 802.3 (at or af) specifications was not verified as part of UL 294/B.


The system shall not be installed in the fail-secure mode unless permitted by the local authority having jurisdiction and shall not interfere with the operation of Listed panic hardware.

- UL Listed - UL 294 Indoor Use
- CUL Listed - ULC-60839-11-1, Grade 1
- UL 294 Access Control Ratings:

Destructive Attack	Level 1
Line Security	Level 1
Endurance	Level 4
Standby Power	Level 1

Power Supply Specifications

IN120 (Wi-Fi version)

- Battery Power:
Alkaline AA Batteries (6): 9V, 300mA
-  (To comply with “Fire Listed” doors, batteries must be replaced with alkaline batteries only)
- Optional Hard Power (UL 294 Listed Power Supply Required):
9-24VDC, 300mA

IN220 (PoE version)

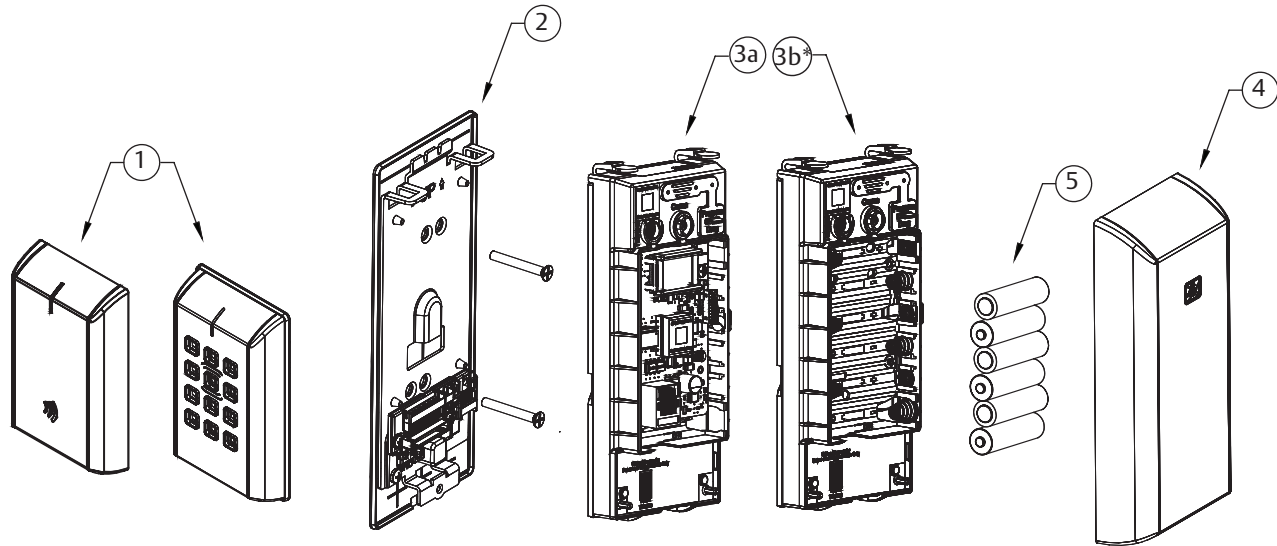
- Power over Ethernet:
Use UL 294 Listed, PoE Injector or Class 2 power limited power supply (55VDC, 90mA)
- UL testing was conducted on product powered by UL listed model POE20U-560(G) PoE Injector, manufactured by Phihong

Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), CSA 22.1, Canadian Electrical Code (CEC), Part I, Safety Standard for Electrical Installations, local codes and the authorities having jurisdiction.

3 Parts Breakdown

Tools Required:

- #2 Phillips screwdriver
- Flat head screwdriver
- 1/8" Security hex key

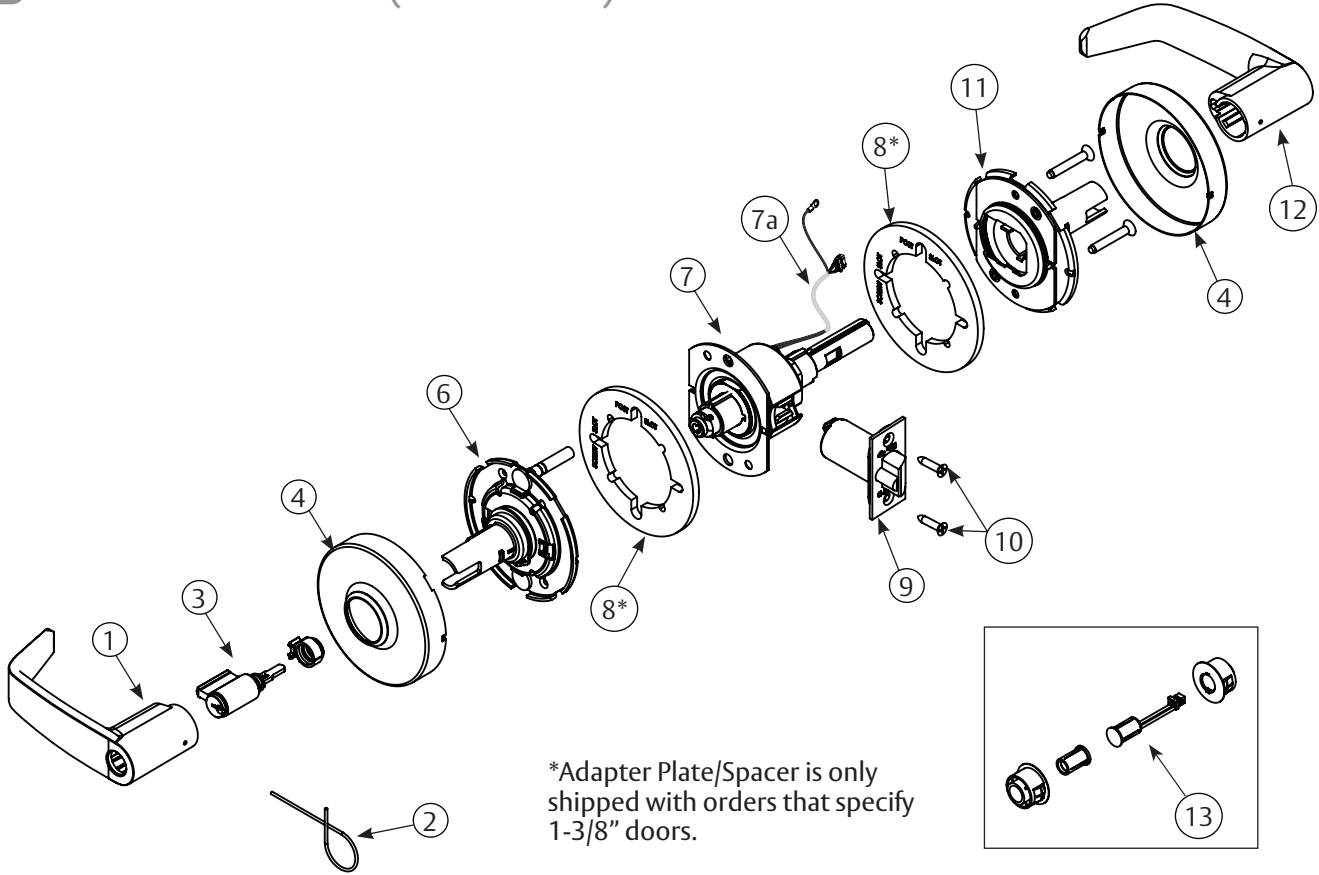


ITEM No.	DESCRIPTION
1*	Outside Escutcheon Assembly
2	Inside Mounting Plate Assembly (includes Gasket)
3a	PoE Controller Assembly
3b	Wi-Fi Controller Assembly* (batteries included)
4	Inside Escutcheon Assembly with Privacy Button
5	AA alkaline batteries (6)

*Consult catalog for electronic replacement part numbers.

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3 Parts Breakdown (Continued)



*Adapter Plate/Spacer is only shipped with orders that specify 1-3/8" doors.

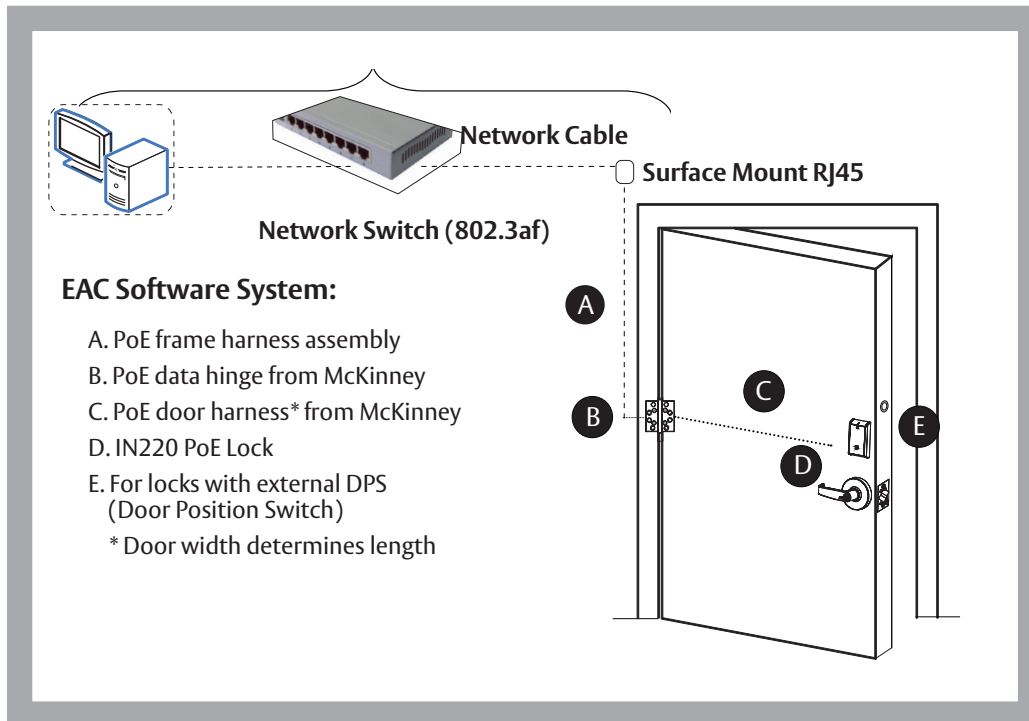
ITEM	DESCRIPTION	REQ'D
1	Outside Lever (Reference Catalog for Available Styles)	1
2	Push Pin	1
3	Cylinder Assembly (Reference Catalog for Available Cylinders)	1
4	Rose (Reference Catalog for Available Styles)	2
6	Outside Rose Spring Assembly	1
7	Lockbody Assembly 10XG77	1
7a	Lockbody Harness	1
8*	Adapter Plate/Spacer (*Only Included With 1-Option)	2
9	Latch Assembly	1
10	Screw Pack	2
11	Inside Rose Spring Assembly	1
12	Inside Lever (Reference Catalog for Available Styles)	1
13	Door Position Switch Kit	1

*For 1 3/8" door, install (1) adapter plate between door and rose assemblies (both sides). Refer to (mechanical) instruction A8286 for installation.

4 Installation Wiring for IN220 Power over Ethernet (PoE) Installation Wiring Overview

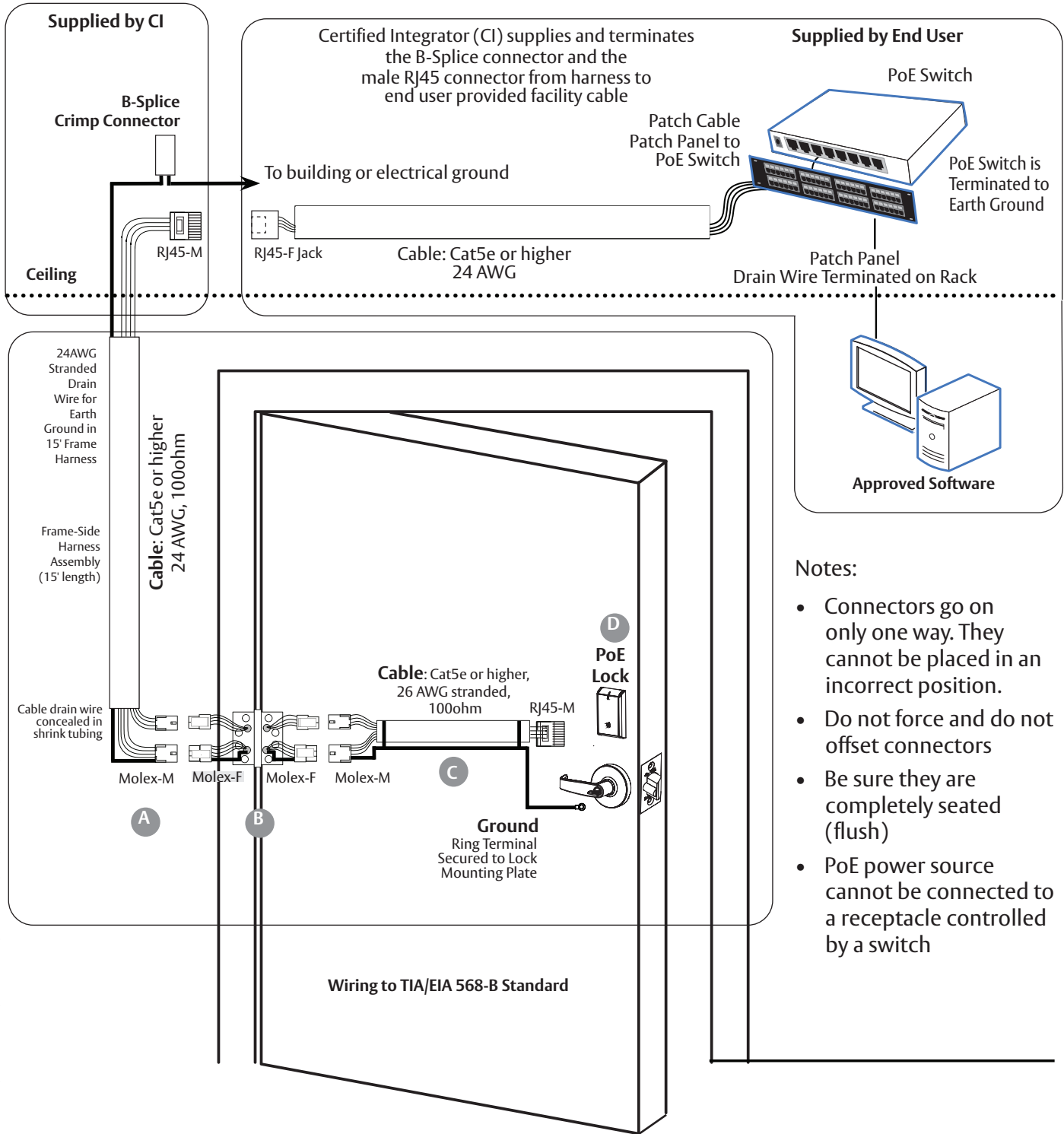
IMPORTANT: If you are installing IN220 (PoE) please read this section before installing the IN220 (PoE) bored lock.

SARGENT IN220 PoE Typical Application



Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), CSA 22.1, Canadian Electrical Code (CEC), Part I, Safety Standard for Electrical Installations, local codes, and the authorities having jurisdiction.

IN220 (PoE) Installation Wiring (Continued)

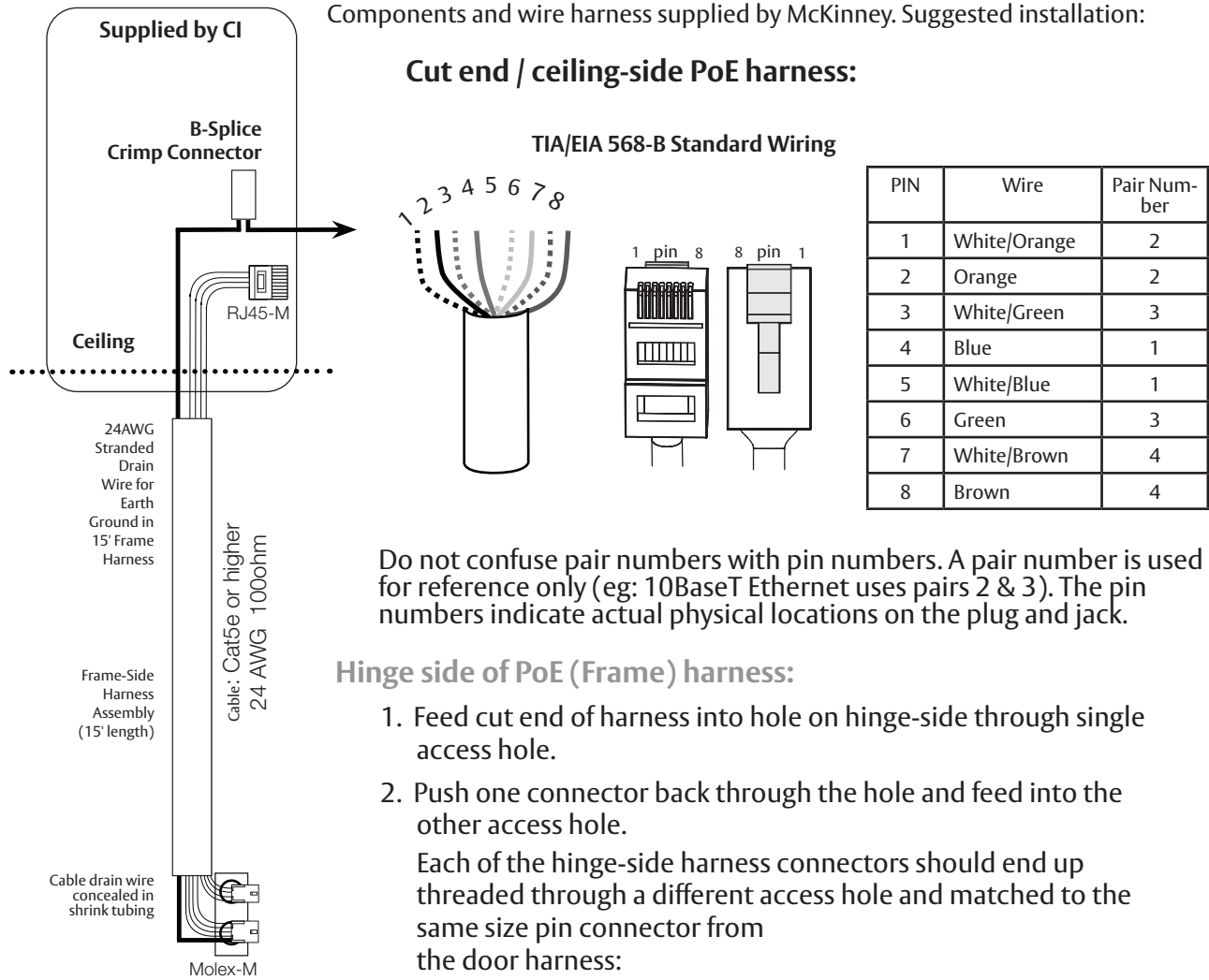


Notes:

- Connectors go on only one way. They cannot be placed in an incorrect position.
- Do not force and do not offset connectors
- Be sure they are completely seated (flush)
- PoE power source cannot be connected to a receptacle controlled by a switch

IN220 (PoE) Installation Wiring (Continued)

A Frame Harness Installation



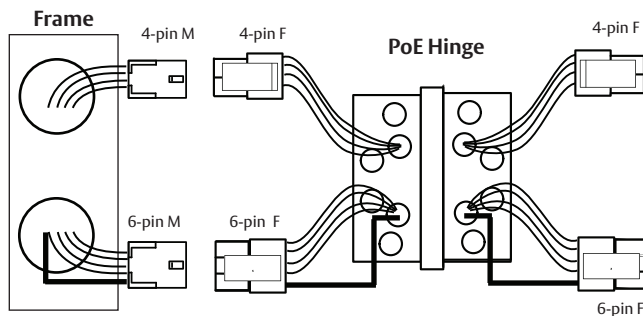
Hinge side of PoE (Frame) harness:

1. Feed cut end of harness into hole on hinge-side through single access hole.
2. Push one connector back through the hole and feed into the other access hole.

Each of the hinge-side harness connectors should end up threaded through a different access hole and matched to the same size pin connector from the door harness:

- 4-pin male molex connector
- 6-pin male molex connector with ground wire

B PoE Data Hinge



Hinge-side harness connectors:

- 4-pin female molex connector
- 6-pin female molex connector with ground wire

Lock-side harness connectors:

- 4-pin female molex connector
- 6-pin female molex connector with ground wire

IN220 (PoE) Installation Wiring (Continued)

C PoE Door Harness

Order of installation may vary. Refer to appropriate sections for instructions.

Hinge-side harness connectors:

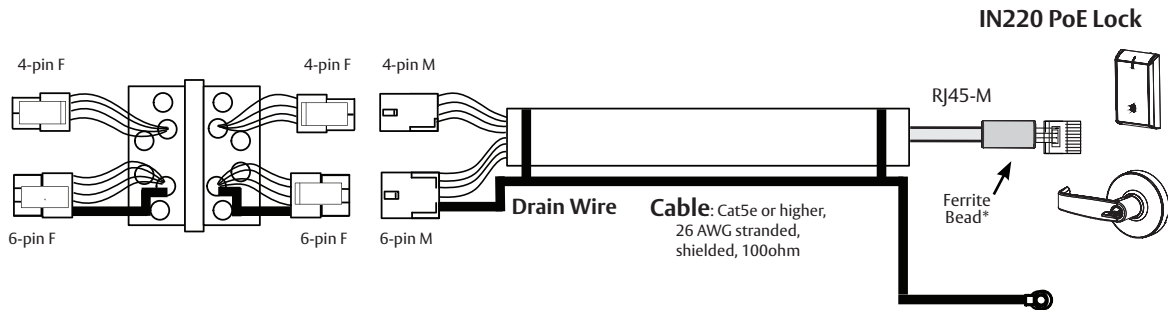
- 4-pin male Molex connector
- 6-pin male Molex connector with ground wire

Lock-side harness connectors:

- Ring terminal
- Male RJ45 connector (crimped after cable is fed through door)

Notes:

- Connectors go on only one way. They cannot be plugged to incorrect position.
- Do not force and do not offset connectors.
- Be sure they are completely seated (flush).

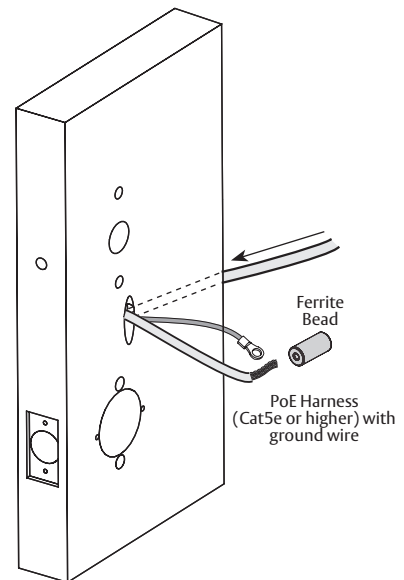


D PoE Lock

Order of installation may vary. Refer to appropriate sections for instructions.

1. Prop door open.
2. Using the ring terminal, carefully route the assembly through the door channel toward lock.

***Do not terminate PoE harness (with RJ45 M) until cable has been routed through door and inside mounting plate assembly. See Section 5, STEP 13 - Installation of Connectors.**



5 Lock Installation

1 Prepare Door

A. Verify Hand and Bevel of Door

Stand on outside of locked door when determining door hand.

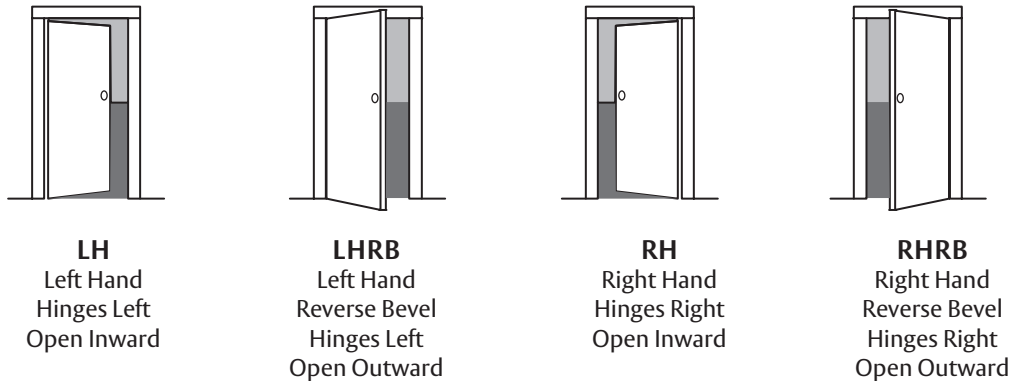


Fig. 1A

B. Door Preparation

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

Prepare door according to appropriate template (see website).

Field Template: A8361 (ships with product)

Door Manufacturer's Template: 4712

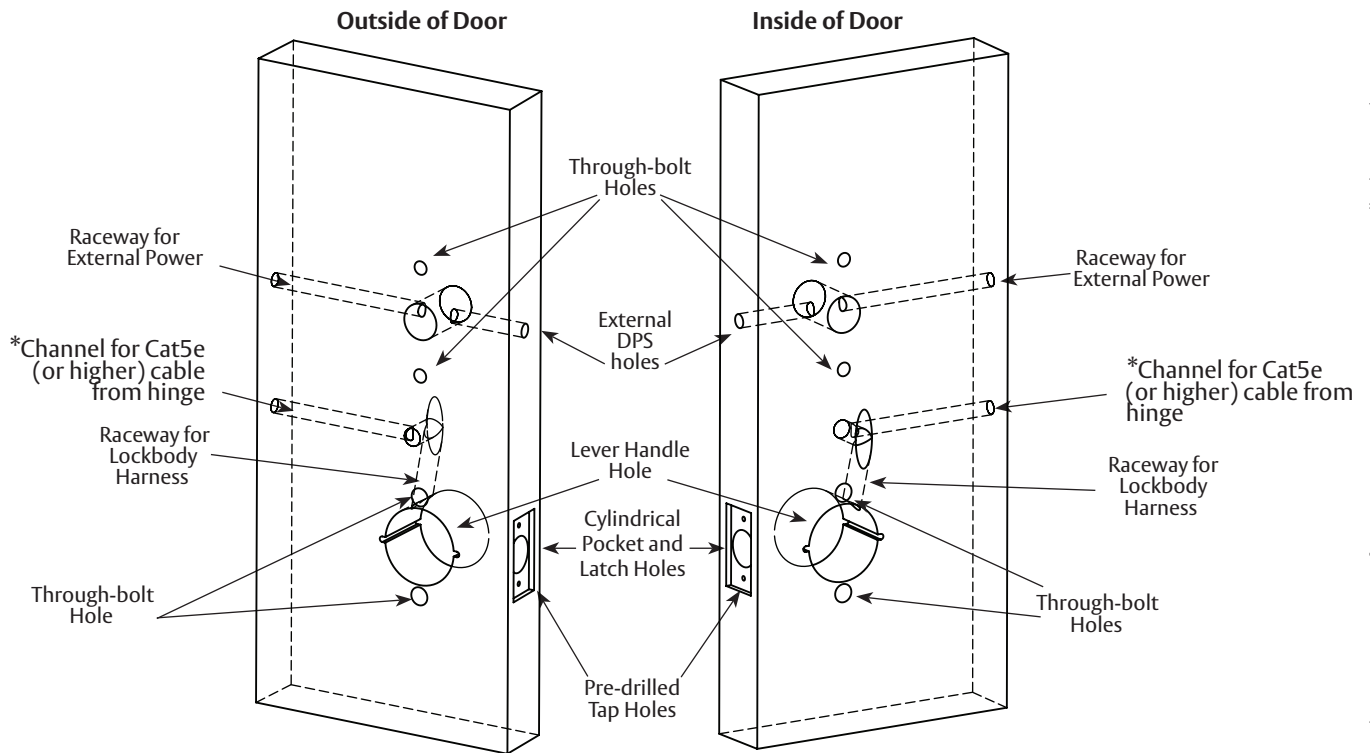


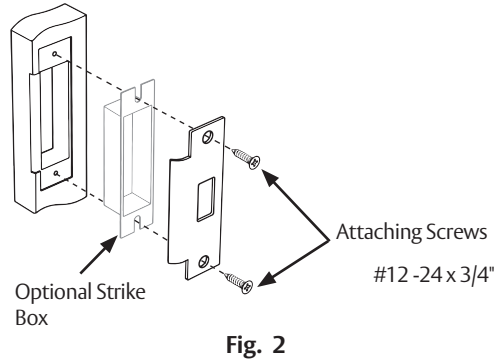
Fig. 1B Wood Door Preparation

***See Section 4 - IN220 (PoE) Wiring and Installation**

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2 Install Strike

Install strike in the door frame (Fig. 2).



3 Install Latchbolt

1. Install latch with beveled bolt facing the strike.
2. Attach with two #8-32 x 3/4" screws but DO NOT tighten completely at this time.

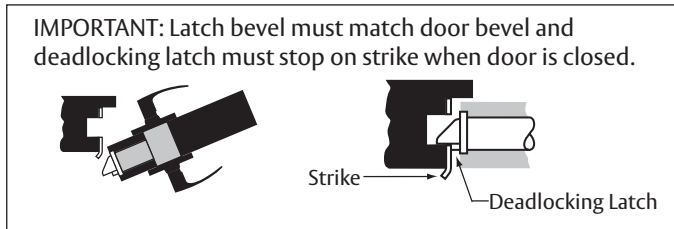
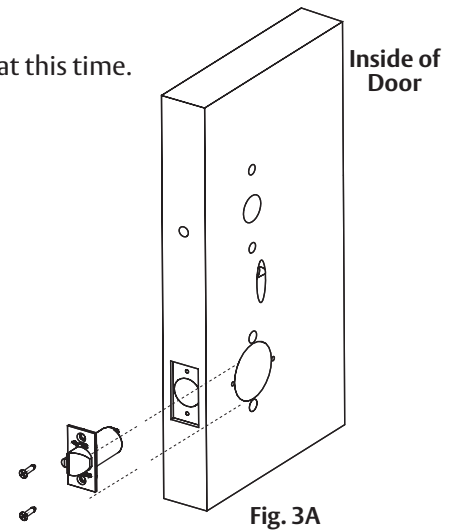


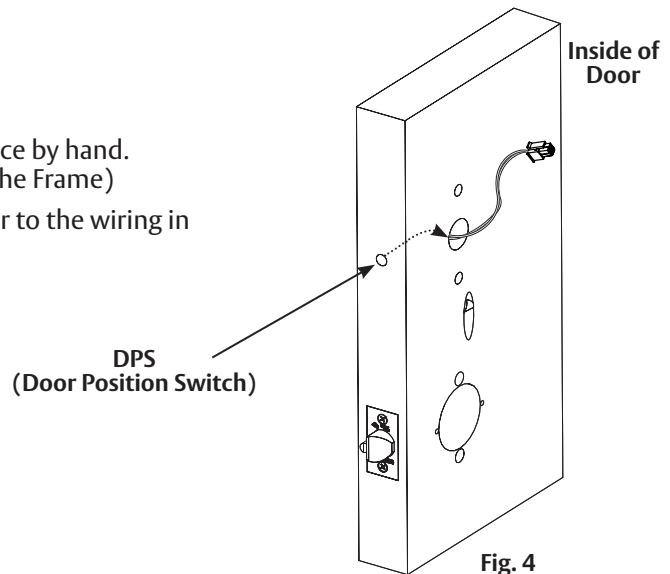
Fig. 3B



4 Install Door Position Switch (DPS)

1. Push wires through raceway toward lock prep.
2. Push DPS firmly into place by hand.
Note: DO NOT TAP SWITCH WITH ANY TOOL.
3. Install magnet into door frame. Push firmly into place by hand.
(See A7983B Drilling Door Postion Switch Hole in the Frame)
4. To connect DPS to lock controller per diagram, refer to the wiring in Step #13.

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

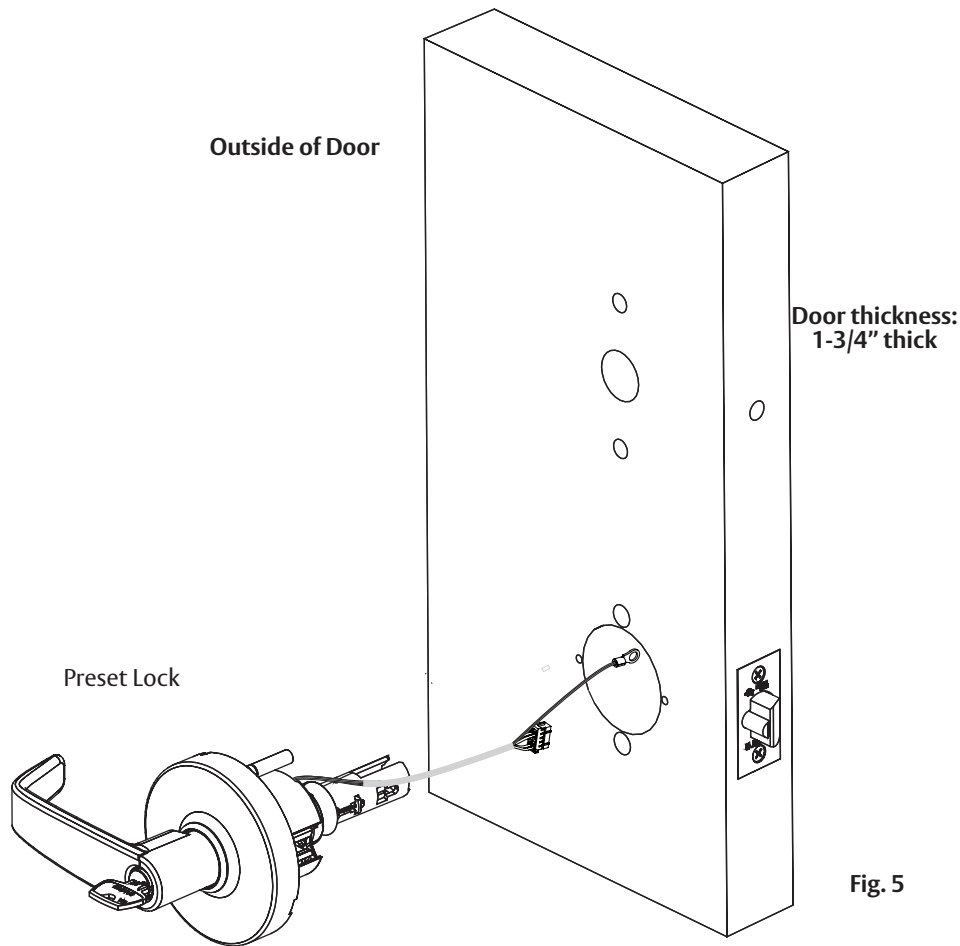


5 Lock Adjustments

A. Lock Preset:

- Lockbody holes: 12 and 6 o'clock (Fig. 5).

The lock is shipped “preset” and does not require adjustment for 1-3/4" thick doors*.



***NOTE:**

If installing a 1 3/8" door, insert (1) adapter plate between door and rose assemblies on both sides. For installation, reference (mechanical) instruction sheet **A8286**.

Adjusting for a thicker door requires removal of the outside lever and scalp; see the following sections.

If preset lock does not require adjustment, proceed to Step 7 - Install Lock

6 Door Thickness Adjustment (If Required)

Lock Preset to:

- Door thickness– 1-3/4" thick- see below for other door conditions

Adjustment for different door thickness:

Lock is factory preset for 1-3/4" (44mm) doors unless specified. To adjust lock to door thickness if other than 1-3/4" (44mm):

1. Remove trim assembly from the lockbody. (See Figure 6).
2. Rotate mounting plate to adjust for proper door thickness.
 - For 2" thick door the inside face of the mounting plate should be flush with the face of the bearing. (See Figure 6a).
 - Verify correct position from the markings on the through-bolt stud, or by measuring from inside surface of the mounting plate to the centerline of the retractor (See Figure 6b).
3. Reassemble the outside trim assembly to the lockbody.

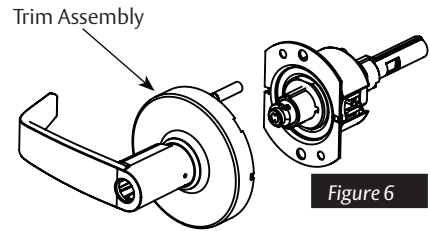


Figure 6

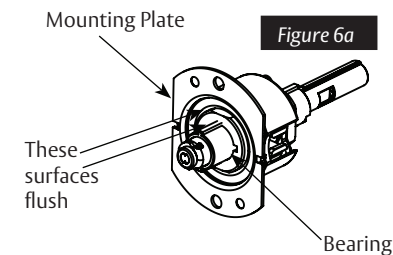


Figure 6a

Door Thickness	Dimension A
1-3/4" (44 mm)	7/8" (22 mm)
2" (50 mm)	1" (25 mm)
2-1/4" (57 mm)	1-1/8" (29 mm)

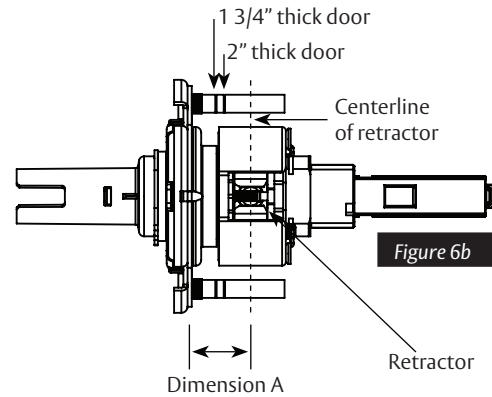


Figure 6b

Refer to (mechanical) instruction A8286 for installation.

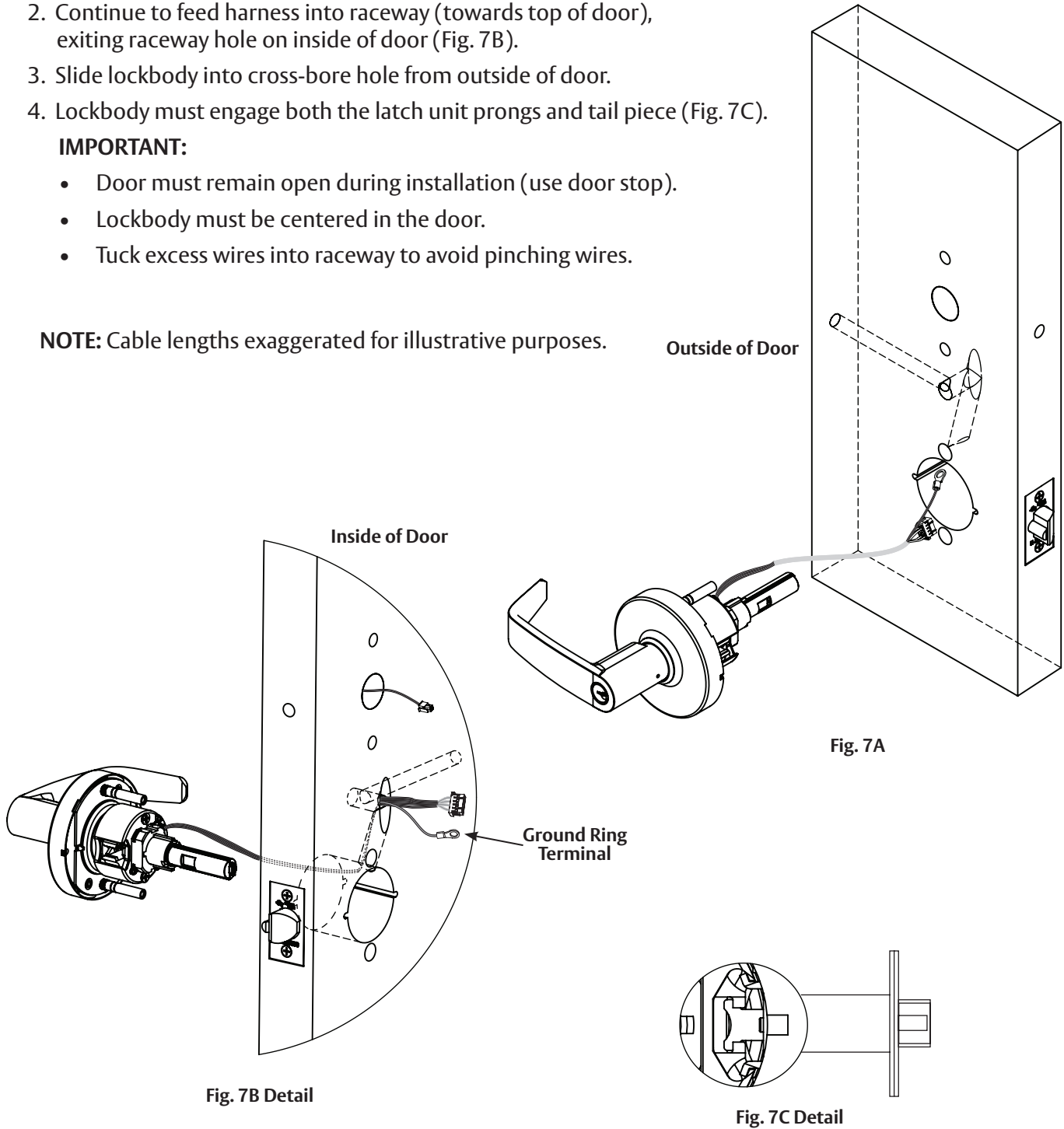
7 Install Lock

1. From outside of door feed lockbody harness into the lockbody hole (Fig. 7A).
For metal door: Feed harness through inside of door (not shown).
2. Continue to feed harness into raceway (towards top of door), exiting raceway hole on inside of door (Fig. 7B).
3. Slide lockbody into cross-bore hole from outside of door.
4. Lockbody must engage both the latch unit prongs and tail piece (Fig. 7C).

IMPORTANT:

- Door must remain open during installation (use door stop).
- Lockbody must be centered in the door.
- Tuck excess wires into raceway to avoid pinching wires.

NOTE: Cable lengths exaggerated for illustrative purposes.

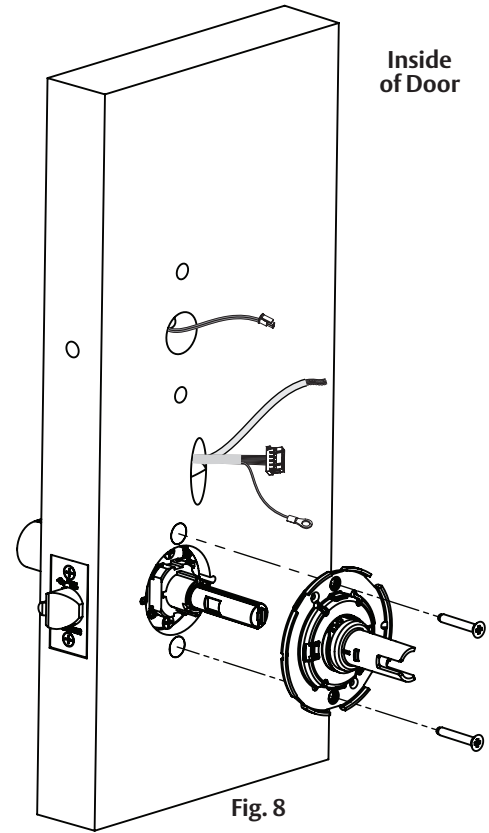


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8 Secure Lock To Door

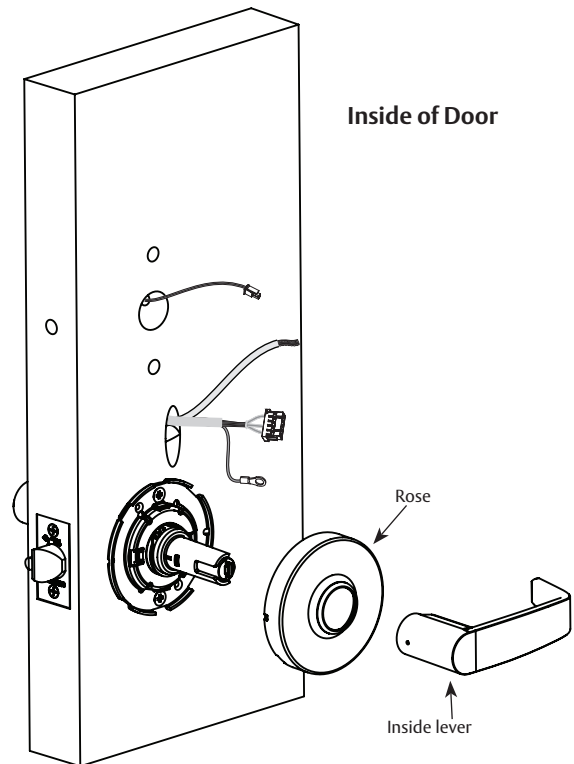
1. Feed wire and connector:
 - For wood door, feed connectors and wires through the door and up the wire run channel (Fig. 8).
 - For metal door (not shown), feed connectors and wires into the lockbody hole and out the controller hole.
3. Secure rose assembly with (2) #10-32x1-1/4" through-bolts.
4. Secure latch by fully tightening (2) #8 x 3/4" self-tapping screws (refer to previous step 3 - Install Latchbolt).

NOTE: Cable lengths exaggerated for illustrative purposes.



9 Assemble Inside Trim

1. Place rose over shaft of lock body against the surface of the door; hand-tighten, turning clockwise.
2. Attach lever. Push until engaged.



10 Install IN120 / IN220 Outside Reader

1. Orient the reader (keypad) so the LED lens is at the top.
2. Feed the reader harness through the door (from outside to inside).
3. Install the reader to the outside of door by aligning the mounting posts with the door preparation holes. Hold the reader flush against door while ensuring proper alignment.

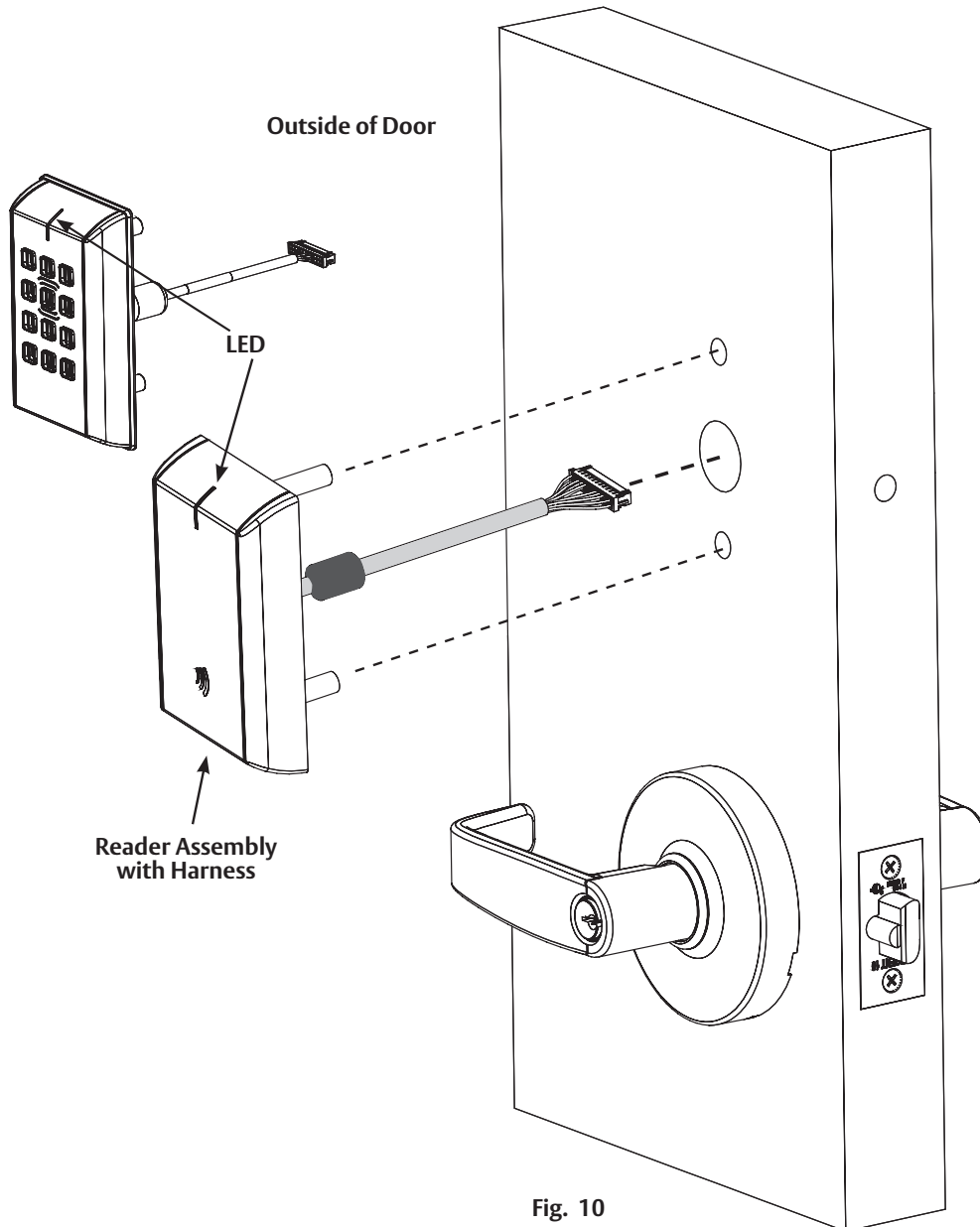
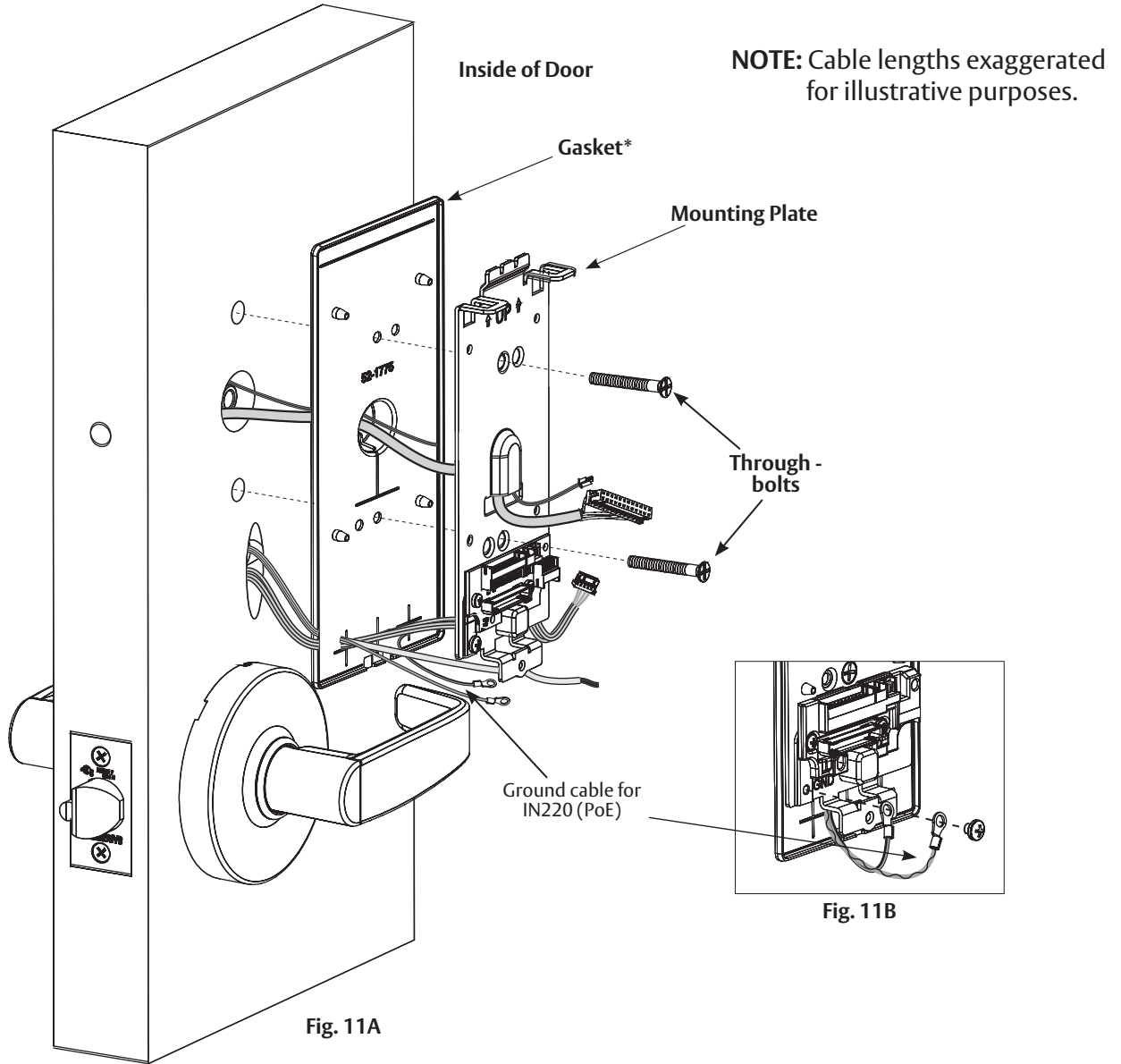


Fig. 10

11 Install Inside Mounting Plate Assembly

1. Next feed the cables/connectors through the inside mounting assembly and gasket.
2. Secure the mounting assembly while ensuring proper alignment of outside reader and partially tighten the (2) through-bolts on the inside of the door to secure the reader (Fig. 11A).



3. Secure ground lug(s) with #6-32 machine screw (Fig.11B).

*Gasket is appropriate for use on interior and exterior facing door applications. If installing with gasket; separate gasket from mounting plate to feed cables/connectors through holes as indicated (Fig. 11A).

Once cables/connectors are fed through, reattach gasket to mounting plate.

12 Preparation of Connectors

Important Note: Before you secure the connectors

CAUTION - Do not touch or allow debris to enter connector contacts.

Ensure connectors are covered with silicone dielectric compound (grease)*



- Snip end of packet to dispense grease
- Ensure all connector pins and contacts (Fig. 12) are covered - do not overfill or over-apply**

*Supplied tube contains 5 grams of silicone dielectric compound (grease)

**Evenly distribute grease, wiping away excess; full application requires approximately 2.5 grams

IMPORTANT: Do not run wires through bottom flange hole in plate (Fig. 12) - it will damage wires and the controller connector. Route wires around flange.

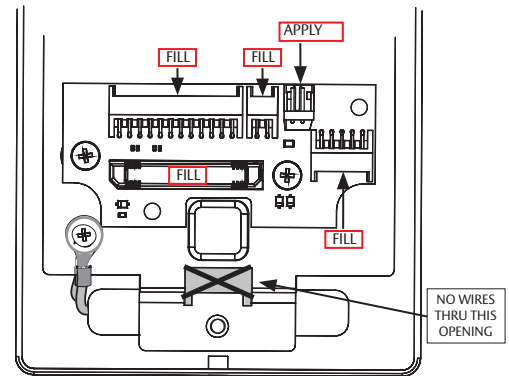


Fig. 12

13 Installation of Connectors

Secure the following connectors (Fig. 13A, B):

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

Secure Mounting Plate

- Tuck excess cable into wire hole on inside of door
- Secure the mounting assembly while ensuring proper alignment of outside reader and fully tighten the (2) through-bolts on the inside of the door to secure the reader and plate to the door

C. Secure the 24-pin card reader connector (Fig. 13A, B)

D. Ensure all openings on back of secured connectors are covered completely with grease (Fig. 13B).

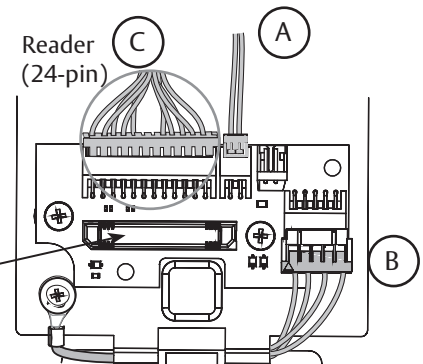


Fig. 13A

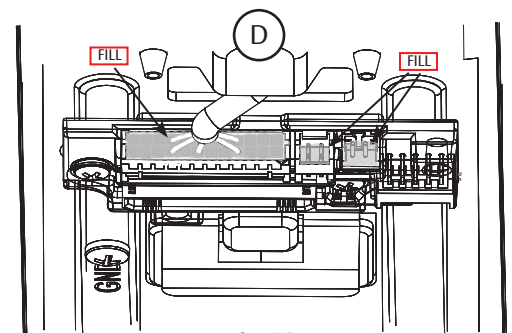


Fig. 13B

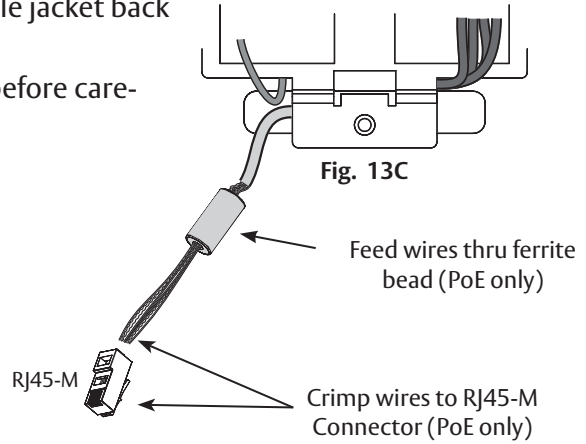
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13 Installation of Connectors (Continued)

Important Note: If you are installing IN220 (PoE)*:

- E. Pull 5 1/2 inches of Ethernet cable from hole. Strip cable jacket back 3 1/2 inches.
- F. Separate (untwist) and straighten (8) Ethernet wires before carefully feeding through ferrite bead (Fig. 13C).
- G. Crimp RJ45 (male) connector on end of wires.

*For more detail, refer to Section 4 'Installation Wiring', "A - Frame Harness Installation".

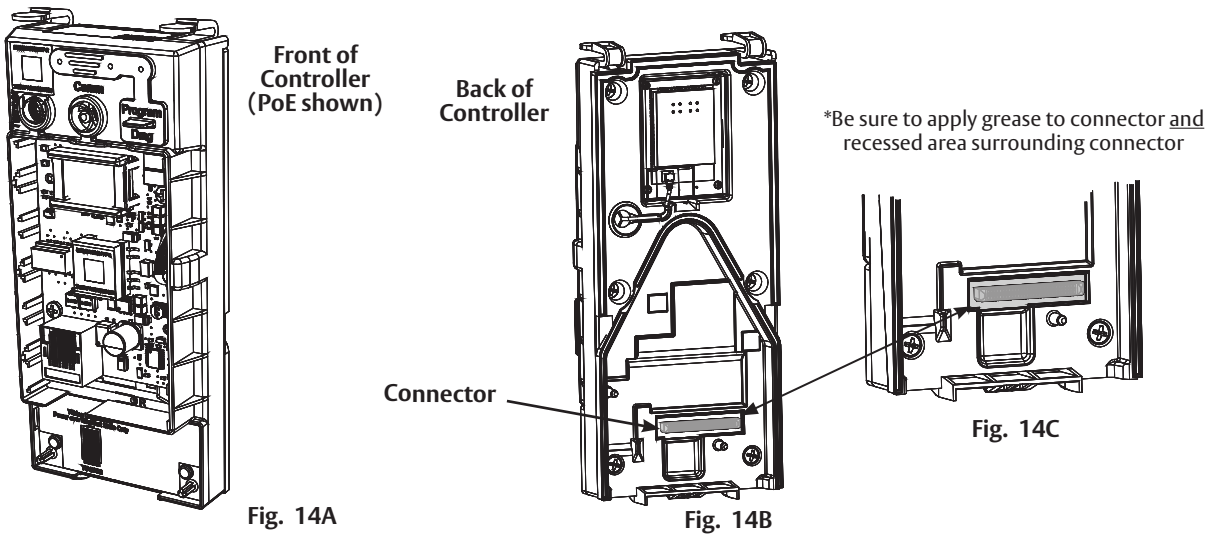


14 Installing the Controller

Important Note: Before you install the controller

Apply dielectric grease to connector* located on back of Controller (FIG. 14B, C).

CAUTION - Do not allow debris to enter connector contacts.



14 Installing the Controller (Continued)

1. Insert bottom tab of controller (ensure a clear path) into slot on mounting plate (Fig. 14D, E).
2. Ensure proper alignment of board-to-board connectors (Fig. 14E) while pivoting controller toward door until two tabs on top click securely into place on mounting plate (Fig. 14D).

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.

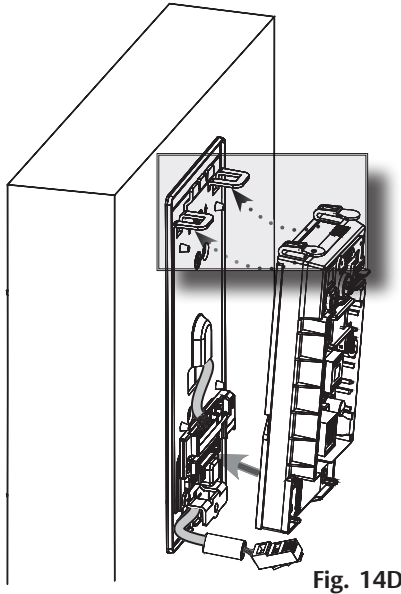


Fig. 14D

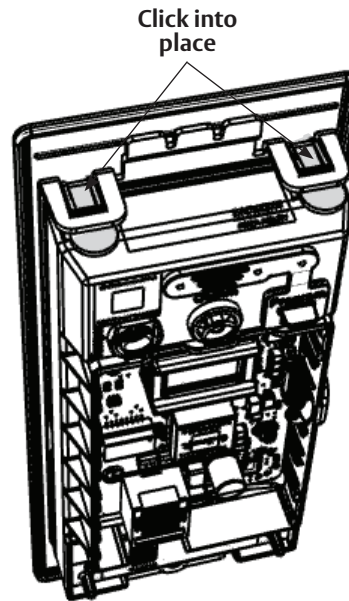


Fig. 14E

15 Supplying Power to the Controller

A. IN220 (PoE)

Important - before inserting PoE plug into PoE connector, apply dielectric grease to top of plug, covering the pin area (Fig. 15A).

1. Once controller is securely in place, connect PoE plug (RJ45 male) to female RJ45 port on controller board (Fig. 15A).
2. If power is enabled, LED will flash and lock motor will cycle.

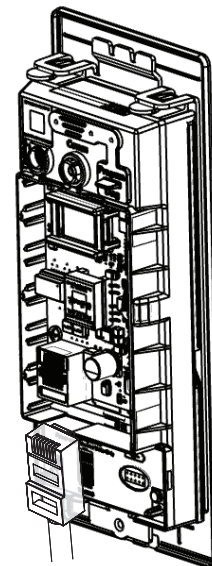


Fig. 15A

B. IN120 (WIFI)

1. Once controller is securely in place, place (6) "AA" alkaline batteries in the compartment, being careful to align polarity properly.
2. After batteries are installed, there is a slight delay; then an audible "beep" will sound and the lock motor will cycle.

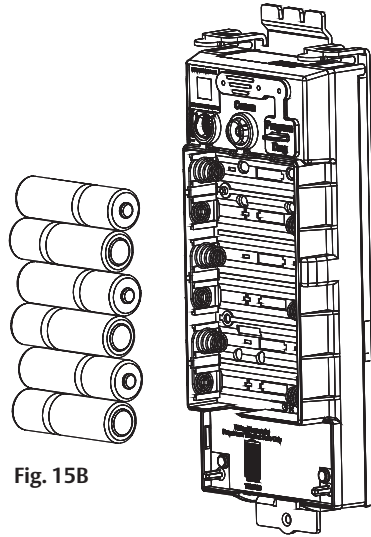
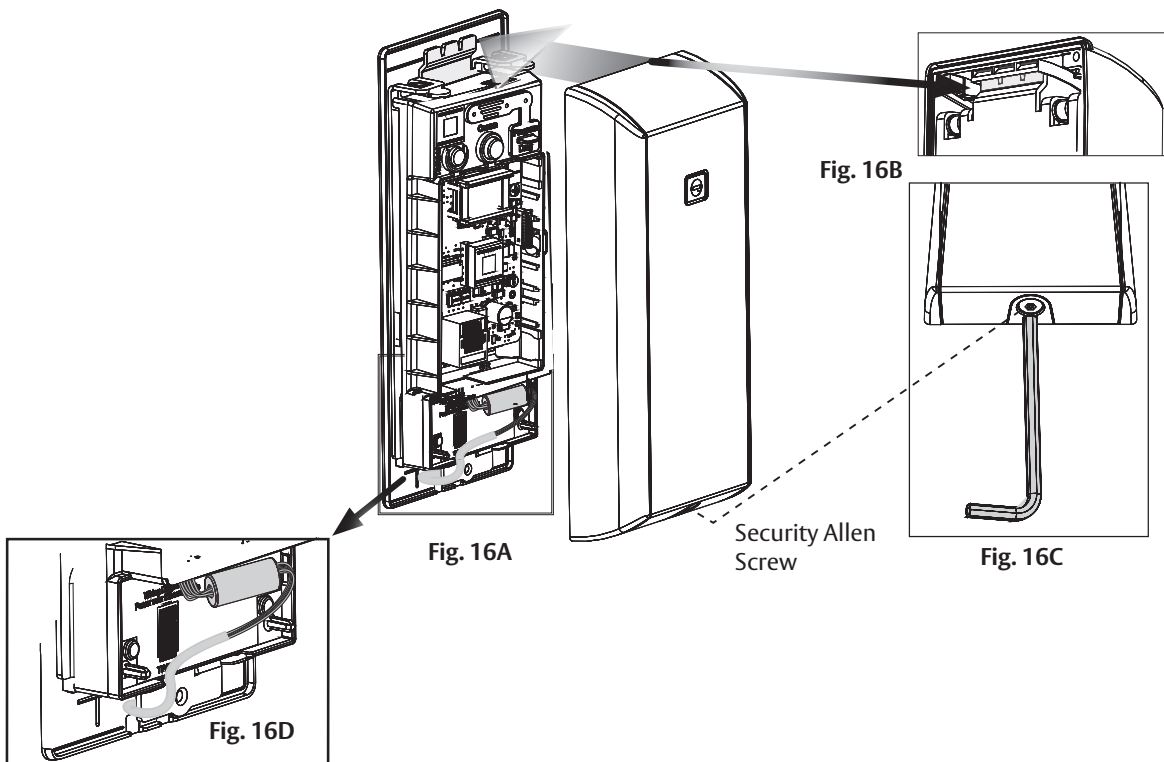


Fig. 15B

16 Inside Cover Installation

1. Assemble cover by hooking top edge on inside mounting plate taking care not to pinch gasket (top edge goes between plate and gasket).
2. Carefully press bottom of cover toward door without pinching any wires.
3. Secure the cover with a 1/8" security hex key (Fig. 16B).

*Note location of installed ferrite bead (IN220 PoE) and excess wires (Fig. 16A, D).



6 Operational Check

IMPORTANT: Be sure to test functions prior to closing door.

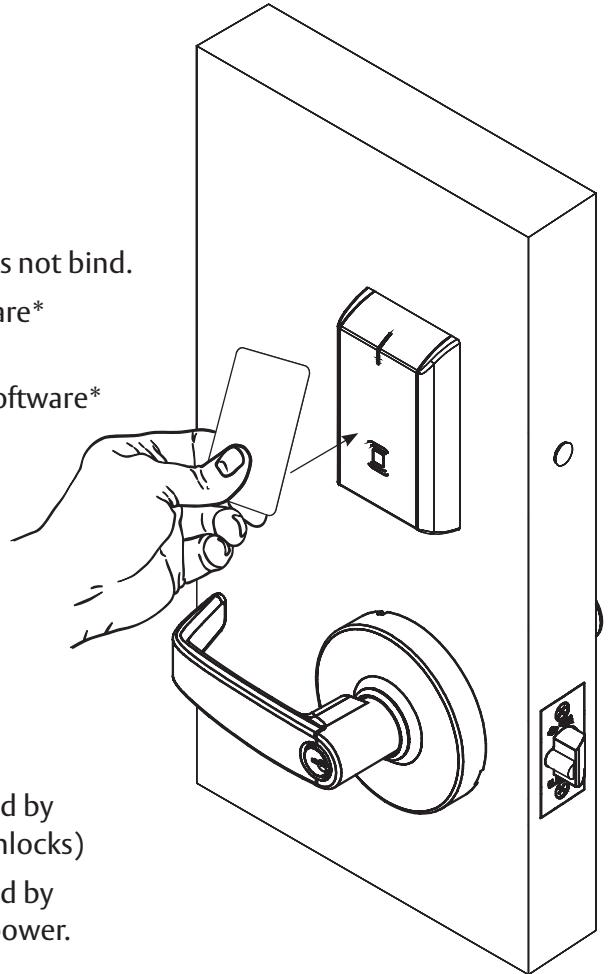
In all cases, perform the following checks:

1. Ensure that inside lever retracts latch.
 - To test cylinder, the following checks apply:
Insert key into cylinder and rotate:
 - a. The key will retract the latch.
The key should rotate freely.
 - b. Ensure inside lever retracts latch.
 - c. Close door, ensure latch is fully extended and does not bind.
 - For units without a keypad, add card using LCT software* and then test.
 - For units with a keypad, add pin and card using LCT software* and then test.

* 20 seconds after being configured with the LCT software, the lock goes into "lock" mode (single beep with lock motor actuation), credentials are needed to unlock the door.

LCT software is available at:

<https://go.intelligentopenings.com/lct>



2. LED signaling:

- After using a valid credential a green flash followed by motor unlock indicates normal operation (lock unlocks)
- After using a valid credential a green flash followed by 4 beeps and 4 fast purple flashes – indicates low power. Check the input voltage.
- If the input voltage is low, disconnect lock from power source and check power source voltage. If power source voltage is correct, inspect lock wiring for a possible short.
- If the lock loses power, it will flash rapid blue for approximately one minute. Lock will default to programmed fail safe or fail secure.
- After that, the lock will no longer be functional.

When you have completed the tests, close the door, ensuring latchbolt fully extends into strike plate without binding.

Note: The credential should be presented about 1/2 inch parallel to the contact marking, as indicated in the image above, to ensure that the credential is read properly.

Do not wave credential.

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