IN220 PoE

Installation Instructions

ED5200(S)N & ED5600N Series Exit Devices

(Includes: Rim & Mortise)

Corbin Russwin

ASSA ABLOY

FM433 03/18

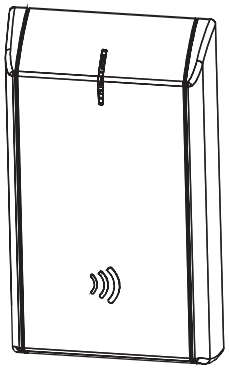
Attention Installer

Please read these instructions carefully to prevent missing important steps.

Please Note: Improper installations may result in damage to the lock and void the factory warranty.

Important: 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 Technical Assistance call Corbin Russwin at 1-800-810-WIRE (9473)

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1) Warning

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: 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 the 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 technician for help

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met. This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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 appareillage numérique de la classe B répond à toutes les exigences de l'interférence canadienne causant des règlements d'équipement. 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.

*Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and Corbin Russwin, 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

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

2) General Description

The Corbin Russwin IN220 Exit device combines superior aesthetics with the energy efficiency and streamlined architecture of Power-over-Ethernet (PoE) access control. PoE-enabled access control allows facilities to leverage existing network infrastructure for enhanced security and easier, more cost-effective installations.

Featuring multiCLASS SE® technology, it supports multiple credential types, including mobile devices, for a future-proof solution that is convenient and secure.

3) Specifications / Features

Hardware Specifications

- Latch – Stainless steel, ¾" (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

NOTE: A weather-protective gasket is required for outdoor applications.

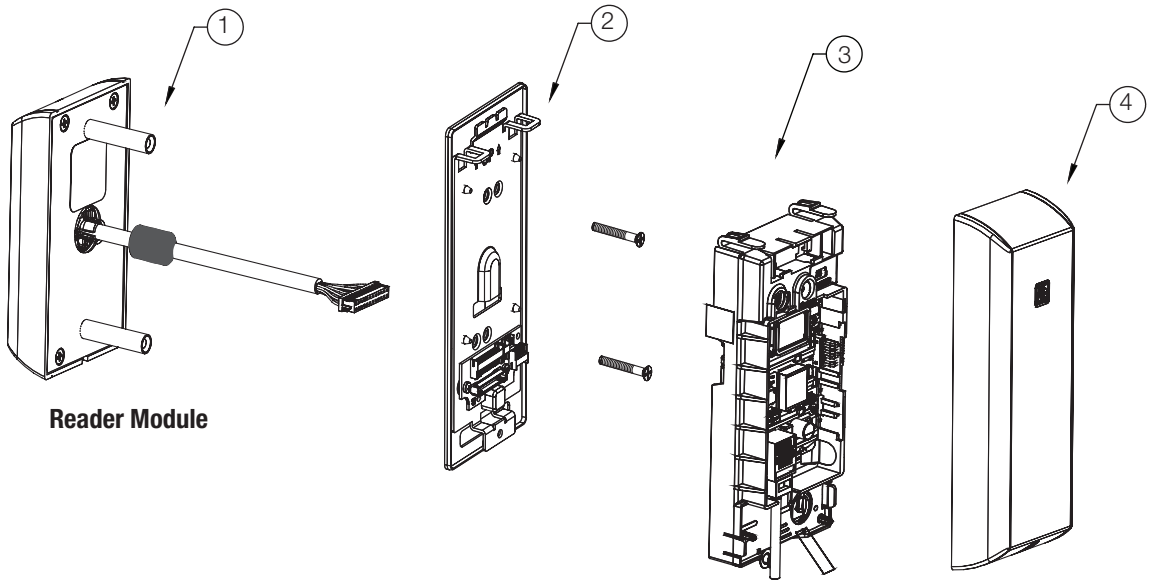
Electrical Specifications:

- HID® multiCLASS SE® technology offers support for the following credentials:
  - 2.4 GHz credential compatibility:
    - Secure Identity Object™ (SIO) on Mobile IDs (Bluetooth Smart)
  - 13.56 MHz credential compatibility:
    - iCLASS®
    - iCLASS SE® (SIO-enabled)
    - iCLASS Seos®
    - SIO on MIFARE® Classic
    - SIO on MIFARE® DESfire® EV1
    - MIFARE® Classic
    - DESfire® EV1
    - NFC-enabled mobile phones
  - 125 kHz credential compatibilty:
    - HID Prox®
- Input Power: PoE Class 1 Device, as defined by IEEE 802.3af, requires less than 3.84 watts over structured cabling
- Multiple time zone and holiday access scheduling
- First-in unlock or automatic unlock configuration, based on specified time schedule
- 2,400 users per lock; 10,000 event audit trail
- Privacy button
- Power Requirements: 55VDC, 90mA
- UL Listed* - UL 294 Indoor Use
- CUL Listed - S319: Class 1
- UL 294 Access Control Performance Ratings:

Destructive Attack	Level I
Line Security	Level I
Endurance	Level IV
Standby Power	Level I

***UL testing was conducted on product powered by UL Listed model 9001GR/AC injector; manufactured by Microsemi Corp.**

4) Product Illustration



Reader Module

ITEM	PART NUMBER/ORDER STRING	DESCRIPTION	COLOR/TRIM	QTY
1*	IN-220-EM01-[**B**]IP-B	Reader assembly - black plastic	Black	1
	IN-220-EM01-[**B**]IP-W	Reader assembly - white plastic	White	1
	IN-220-EM01-[**B**]IP-MB-[finish]**	Reader assembly - black plastic with metal trim	Black with metal trim	1
	IN-220-EM01-[**B**]IP-MW-[finish]**	Reader assembly - white plastic with metal trim	White with metal trim	1
	IN-220-EM01-[**B**]IPS-B	Reader assembly - black plastic	Black	1
	IN-220-EM01-[**B**]IPS-W	Reader assembly - white plastic	White	1
	IN-220-EM01-[**B**]IPS-MB-[finish]**	Reader assembly - black plastic with metal trim	Black with metal trim	1
	IN-220-EM01-[**B**]IPS-MW-[finish]**	Reader assembly - white plastic with metal trim	White with metal trim	1
	IN-220-EM01-[**B**]CP-B	Reader assembly - black plastic	Black	1
	IN-220-EM01-[**B**]CP-W	Reader assembly - white plastic	White	1
	IN-220-EM01-[**B**]CP-MB-[finish]**	Reader assembly - black plastic with metal trim	Black with metal trim	1
	IN-220-EM01-[**B**]CP-MW-[finish]**	Reader assembly - white plastic with metal trim	White with metal trim	1
2	782F718	Inside Mounting Kit (mounting plate & hardware)		1
3	784F259	Controller Assembly		1
4	782F729	Inside Escutcheon	Black	1
	782F739	Inside Escutcheon	White	
	783F725 FIN**	Inside Escutcheon	Black with metal trim	
	783F735 FIN**	Inside Escutcheon	White with metal trim	
5	FM355	Field prep template (not shown)		1
6	T31203	Door manufacturers template (not shown)		1
--	FM433	Instructions (this manual)		1

*Specifying **B** indicates BLE (Bluetooth) option when ordering

**Specify finish

5) Rim Exit Installation Instructions

1. Verify Hand and Bevel of door:

Door should be fitted and hung.

Verify box label for size of exit device, function and hand.

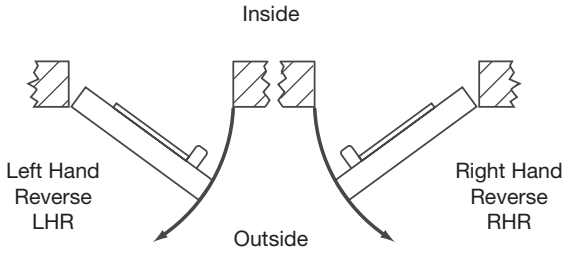


Fig. 1

2. Prep door according to Door Marker (FM429)

For door manufacturer templates visit **www.corbinrusswin.com** and reference template #'s T31235 & T31236.

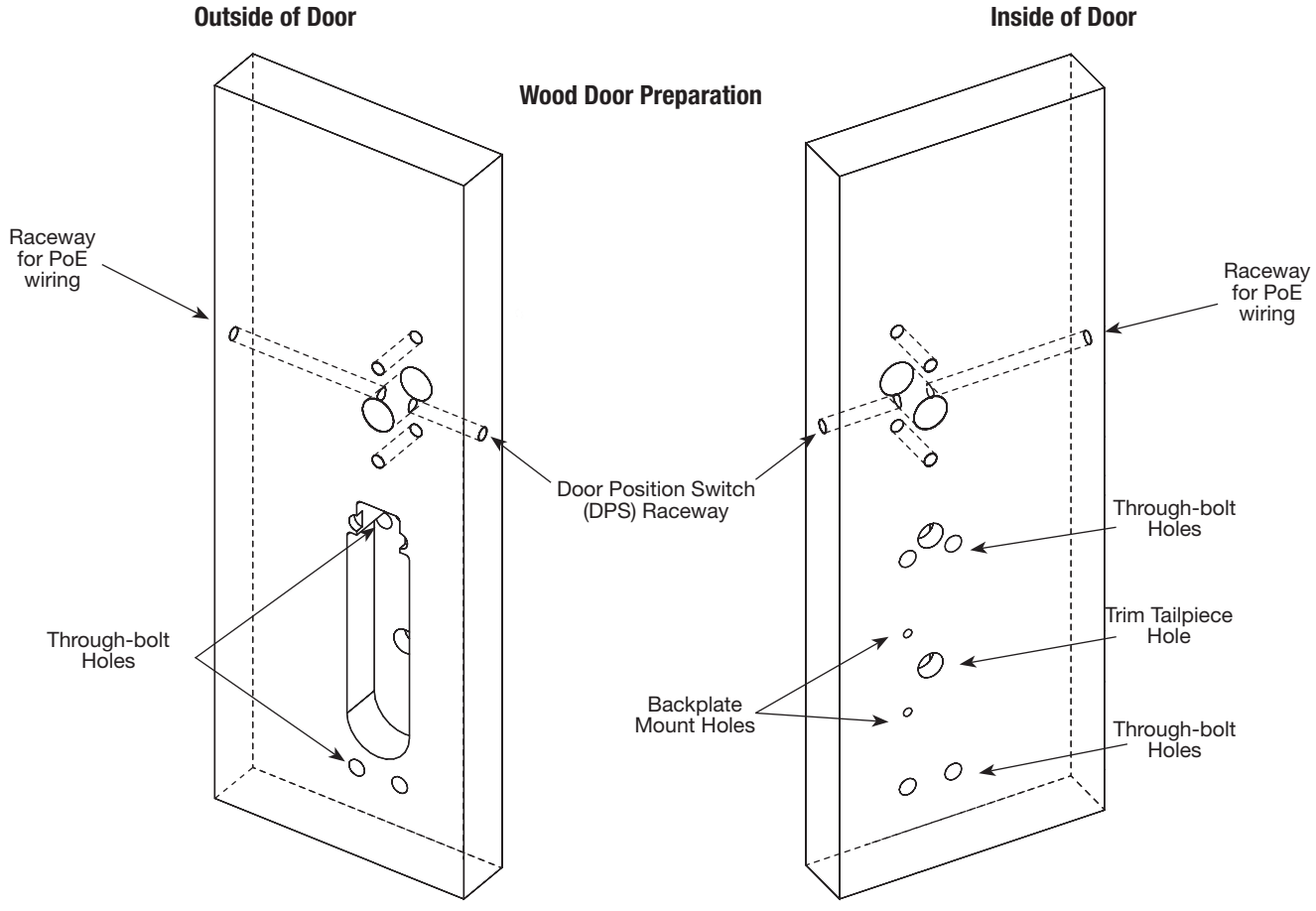


Fig. 2

5) Rim Exit Installation Instructions (Continued)

3. Install Door Position Switch (DPS)

a. Insert DPS into the raceway on the latch edge of the door.

b. Push wires through raceway toward lock prep.

c. Push DPS firmly into place by hand.
Note: **DO NOT TAP SWITCH WITH ANY TOOL.**

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

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

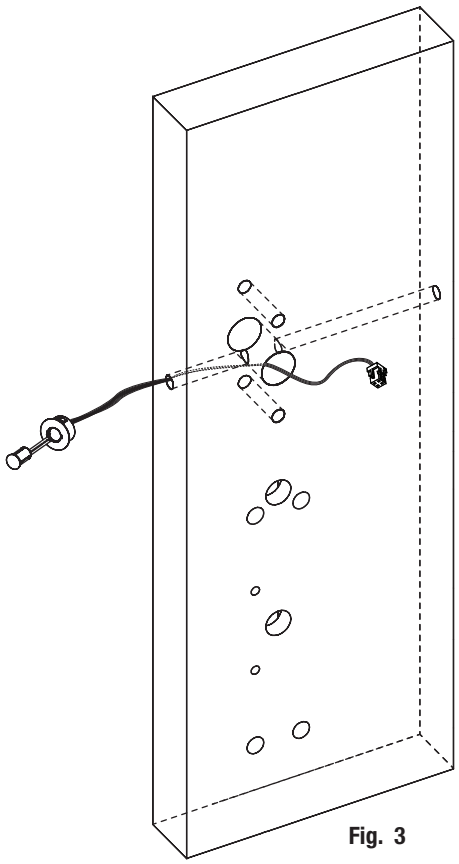


Fig. 3

5) Rim Exit Installation Instructions (Continued)

4. Trim Assembly Instructions:

a. Check cylinder components:

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

Refer to Cylinder Collar Chart (Fig. 4a).

(for Mortise, skip to Step 5)

b. If required, modify by cutting cylinder tailpiece:

Correct length is 1/16" to 3/16" (2 to 5mm) beyond cylinder housing cam.

Cylinder Collar Chart		
Cylinder Length		Collar
Inches	Millimeters	
1-1/8"	29mm	None
1-1/4"	32mm	422F88*
1-1/2"	38mm	686F98*

*Specify Finish

Fig. 4a

c. Assemble cylinder:

1. Insert cylinder housing prongs into matching notches of escutcheon.
2. Pass cylinder tailpiece through cylinder collar (if required) and slot in cylinder cam.
3. Fasten cylinder in escutcheon recess or collar using 2 mounting screws.

Do not overtighten screws.

d. Escutcheon Assembly (Fig. 4b):

The lever is handed (LHR shown).

Note: Lever Return Spring handing can be identified by the color of the spring:

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

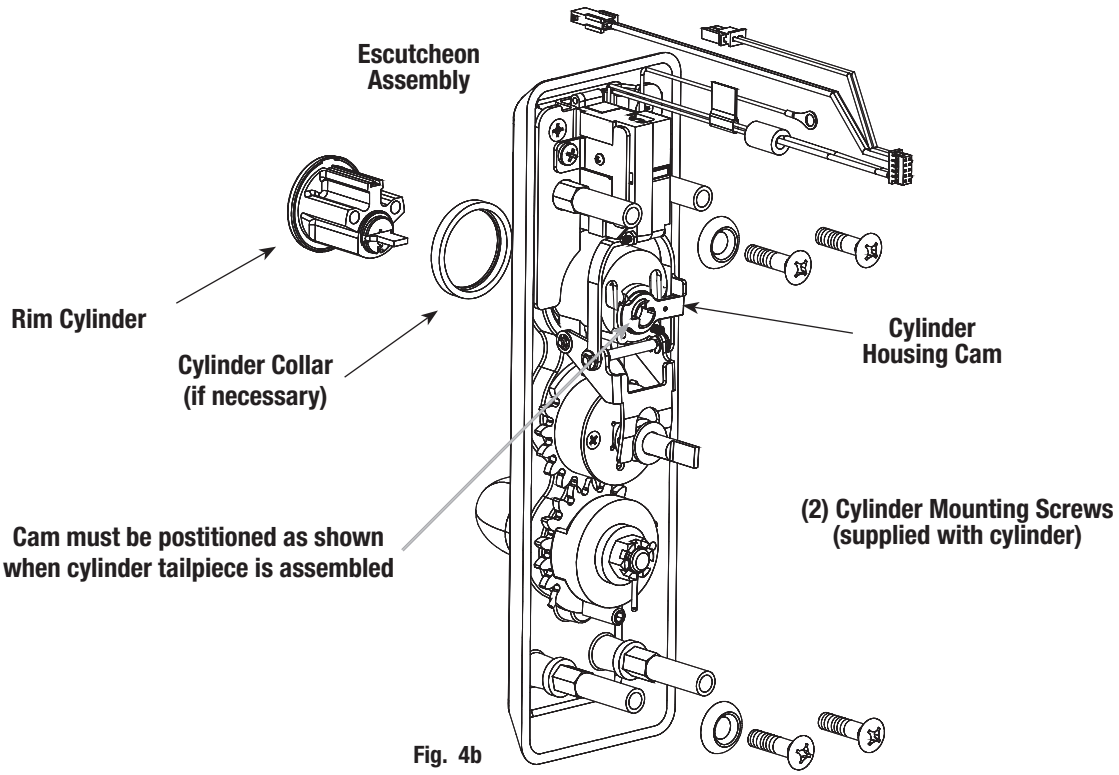


Fig. 4b

5) Rim Exit Installation Instructions (Continued)

5. Install Exit Device:

a. Feed trim harness through upper hole in cutout (Fig. 5a).

b. Seat device against door being careful to align vertical trim tailpiece to engage with cross hole of device cam - **see Figure 5b.**

c. Fasten device to trim assembly using (2) 1/4-20 pan head screws (Fig. 5c).

d. Follow instructions packed with device to secure device to door.

e. Tighten all (4) screws (Fig. 5d).

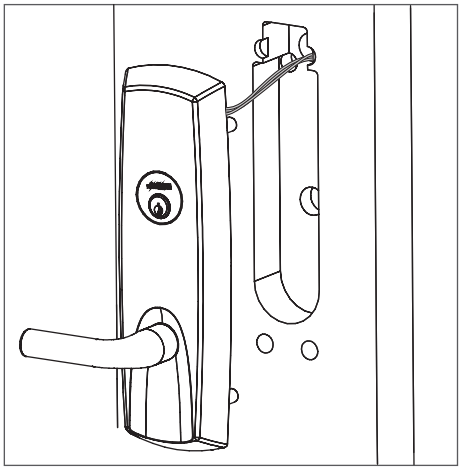


Fig. 5a

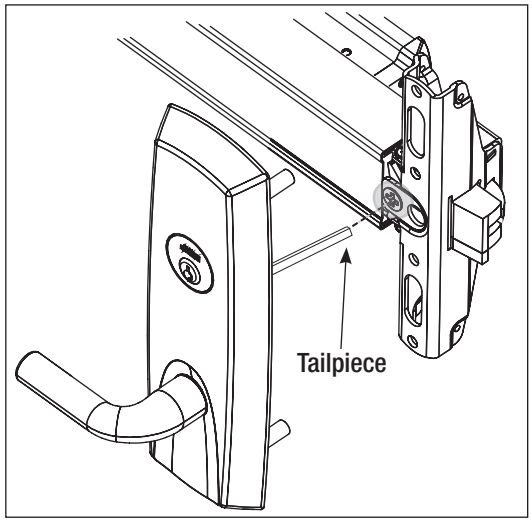


Fig. 5b (door not shown)

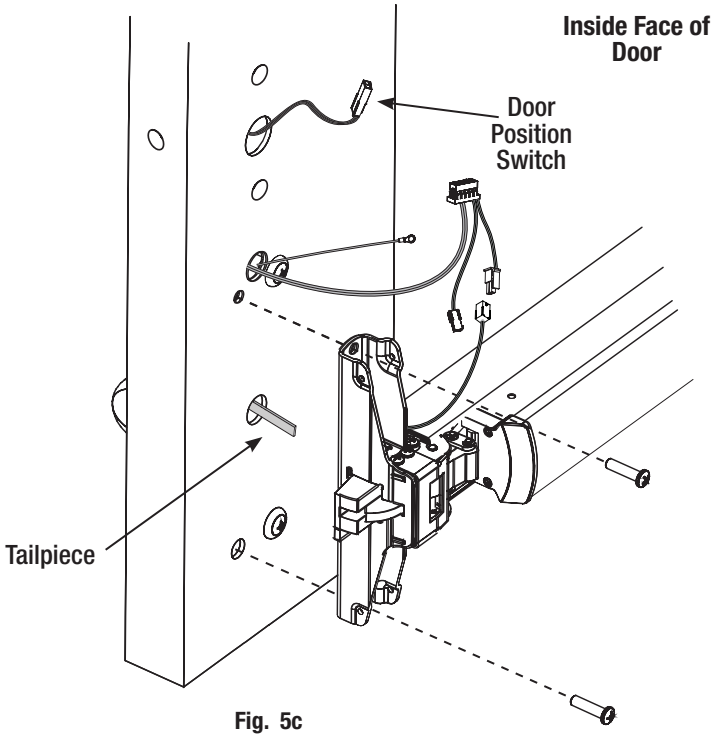


Fig. 5c

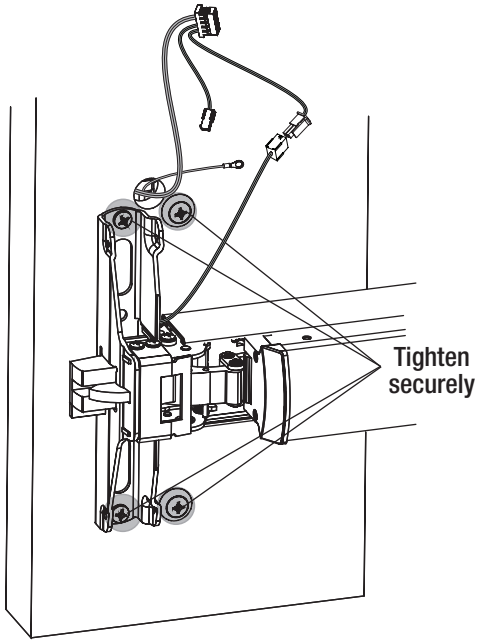


Fig. 5d

5) Rim Exit Installation Instructions (Continued)

6. Harness Connections:

a. Connect motor harness adapter to chassis harness connector (Fig. 6).

b. Connect rail assembly harness adapter to chassis harness connector (Fig. 6).

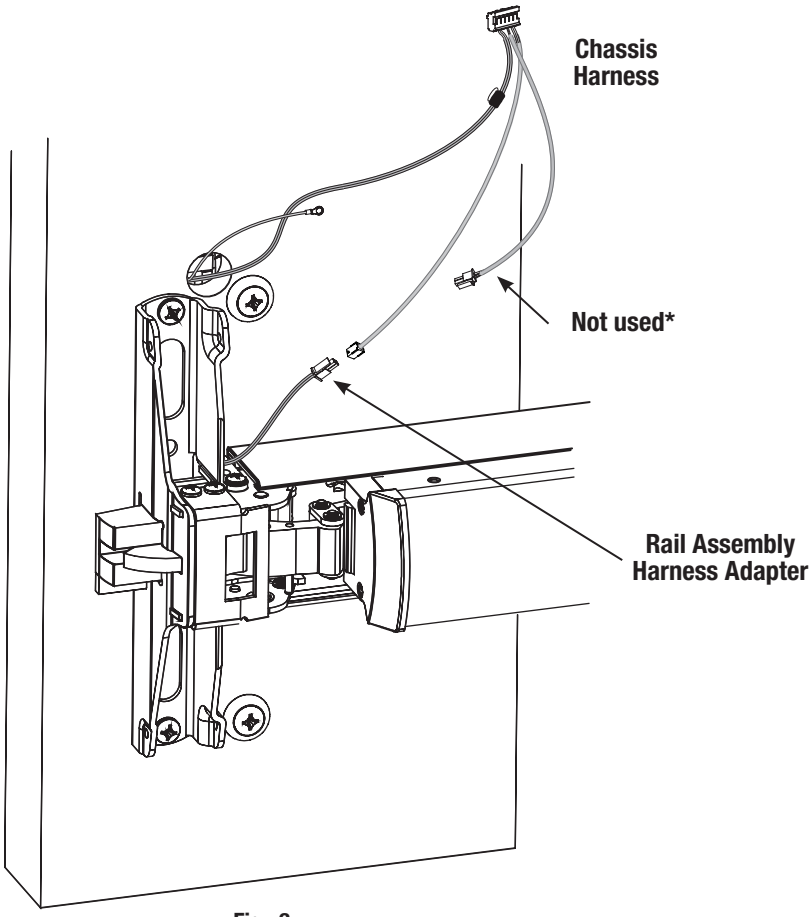


Fig. 6

*Not used in typical installation

5) Rim Exit Installation Instructions (Continued)

7. Install Head Cover:

a. Lay device wire harnesses across 1” hole (Fig. 7a).

b. Tuck wires into hole when installing cover so that wires are not pinched between head cover and door.

c. Attach head cover using (2) #8-32 flat head screws (Fig. 7b).

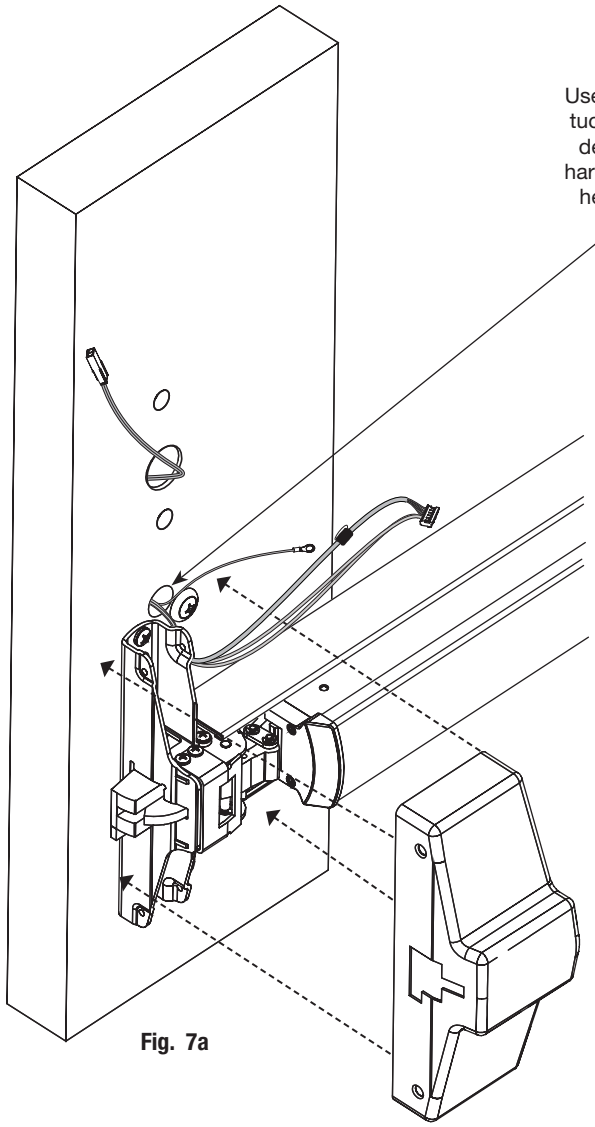


Fig. 7a

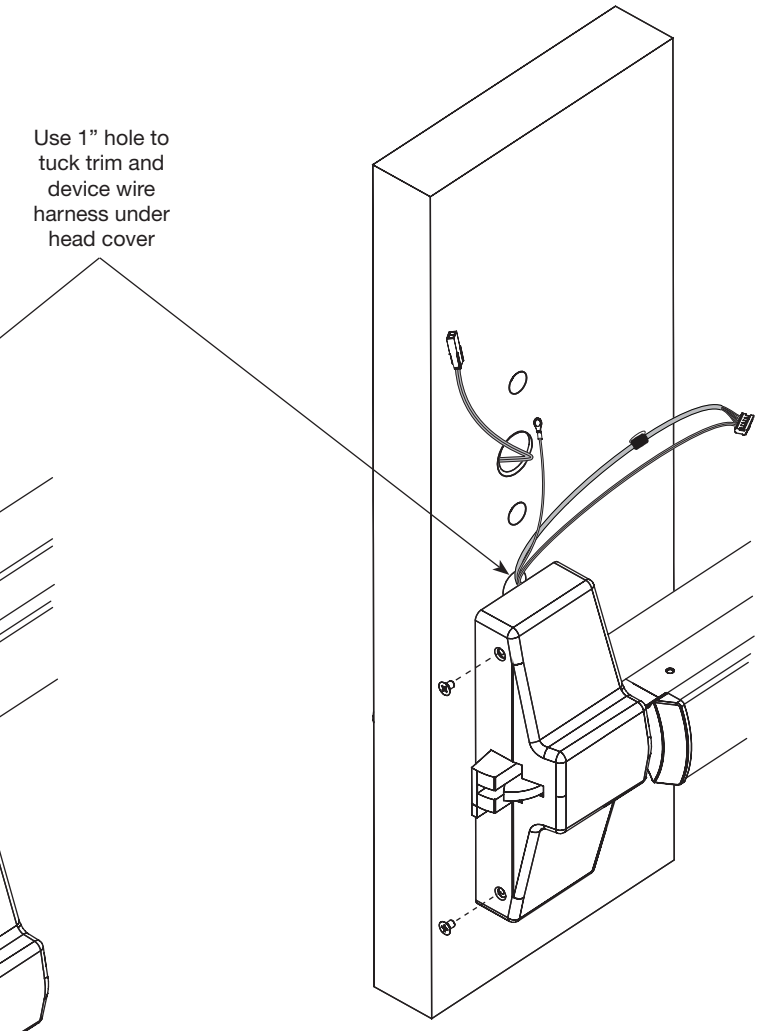


Fig. 7b

Important Note: Rim Exit Installation Continues on Page 16 - Section 7

6) Mortise Exit Installation Instructions

1. Verify Hand and Bevel of door:

Door should be fitted and hung.

Verify box label for size of exit device, function and hand.

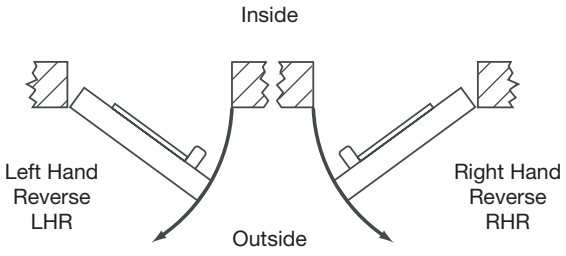


Fig. 8

2. Prep door

For door manufacturer templates visit **www.corbinrusswin.com** and reference template # **T31237** (Wood).

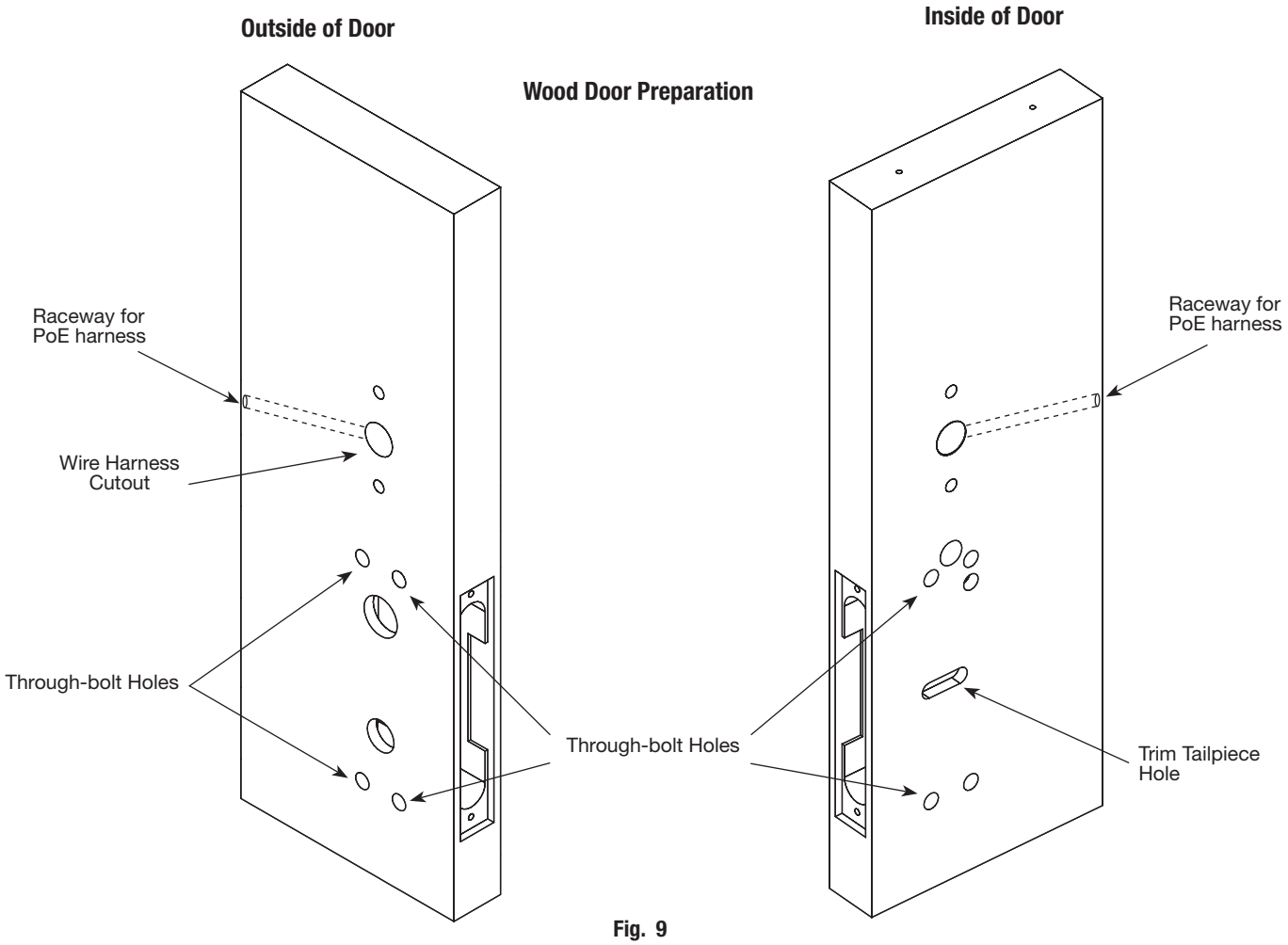


Fig. 9

6) Mortise Exit Installation Instructions (Continued)

3. Install Door Position Switch (DPS)

a. Insert DPS into the raceway on the latch edge of the door.

b. Push wires through raceway toward lock prep.

c. Push DPS firmly into place by hand.
Note: **DO NOT TAP SWITCH WITH ANY TOOL.**

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

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

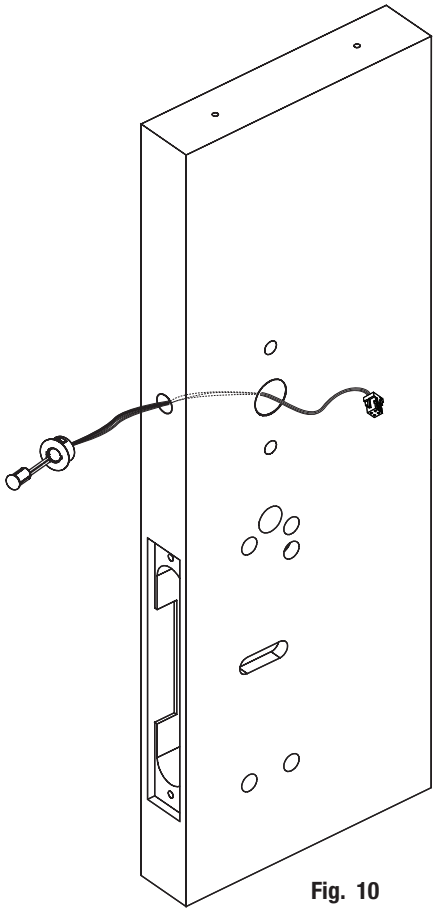


Fig. 10

6) Mortise Exit Installation Instructions (Continued)

4. Install Mortise and Outside Trim Assembly:

a. Make sure tailpiece is oriented vertically.

b. Feed trim wire harness through wire harness hole (Fig. 11a).

c. Mount trim assembly to door pulling slack wire towards device side of door.

Note: Be careful not to pinch wire harness.

d. When mounting trim, lift tailpiece to pass through hole on device side (Fig. 11b).

Note: Ensure tailpiece is still oriented vertically.

e. Fasten trim assembly to door using (2) 1/4”-20 oval head screws and (2) finish washers (Fig. 11b).

Note: Finger tighten only.

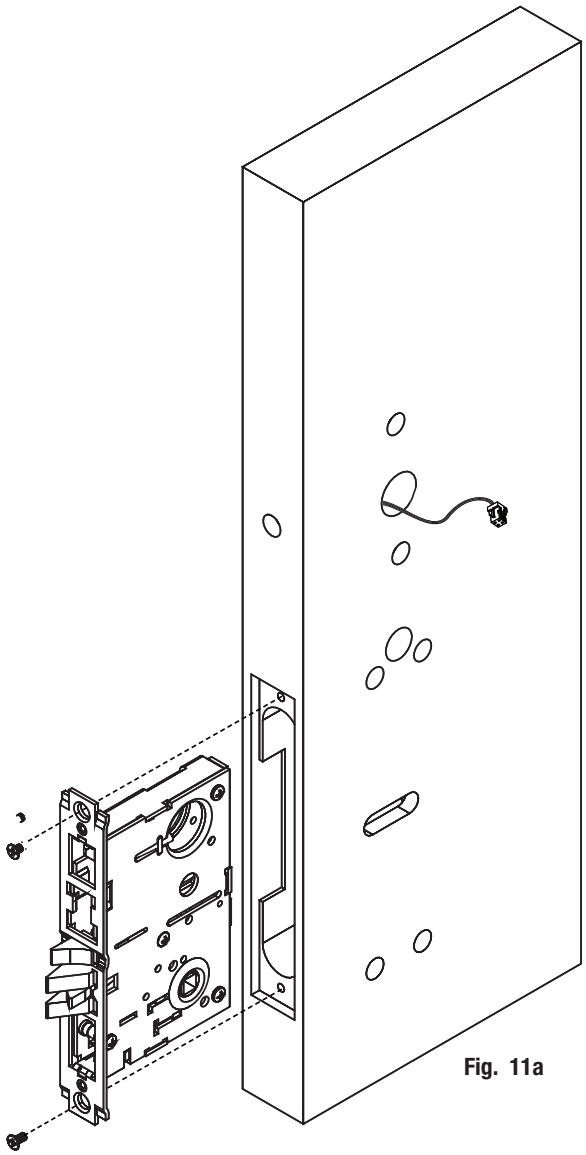


Fig. 11a

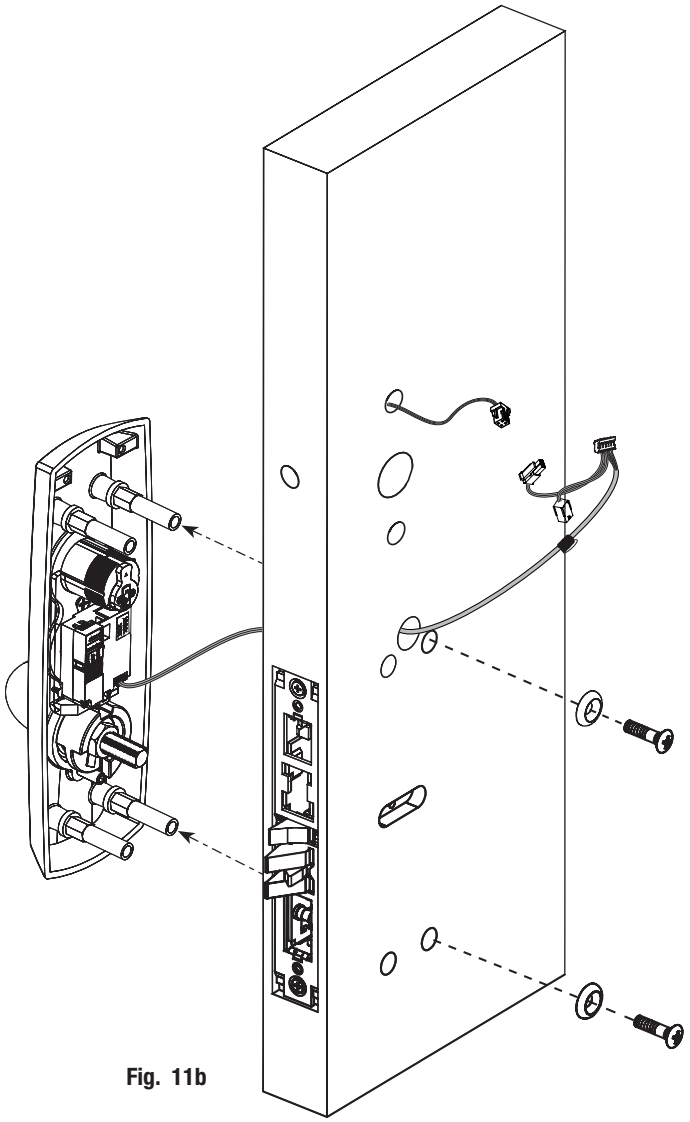


Fig. 11b

6) Mortise Exit Installation Instructions (Continued)

5. Install Exit Device:

a. Seat device against door being careful to align vertical trim tailpiece to engage with cross hole of device cam - **see Figure 12a.**

b. Fasten device to trim assembly using (2) 1/4-20 pan head screws (Fig. 12a).

c. Follow instructions packed with device to secure device to door.

d. Tighten all (4) screws (Fig. 12b).

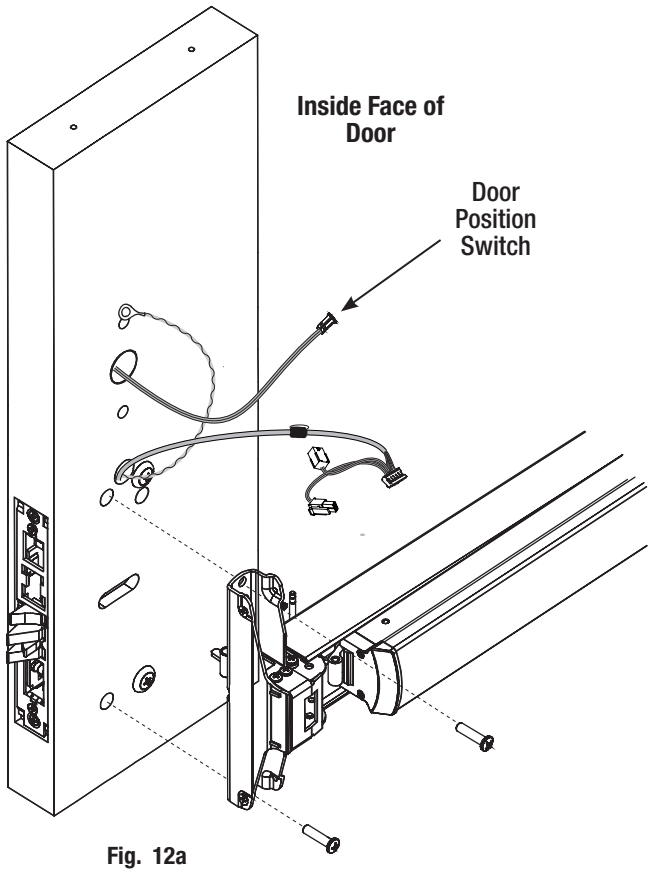


Fig. 12a

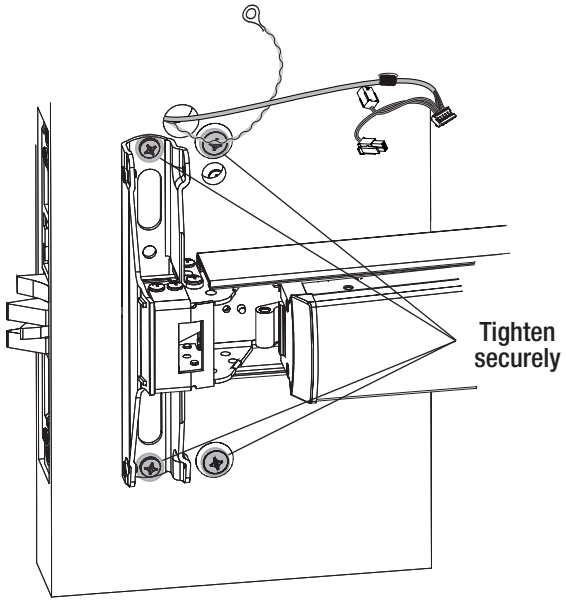


Fig. 12b

6. Harness Connections:

a. Connect motor harness adapter to chassis harness connector (Fig. 13).

b. Connect rail assembly harness adapter to chassis harness connector (Fig. 13).

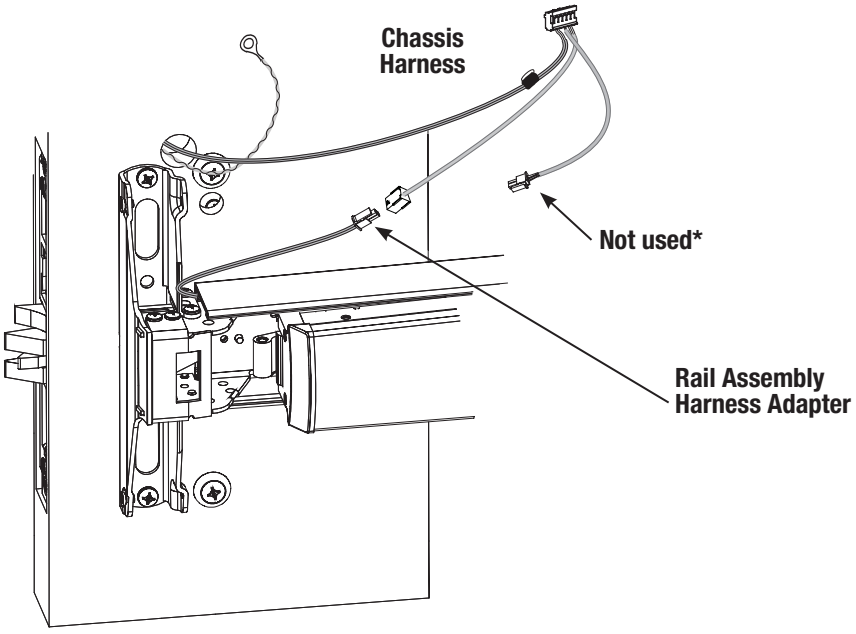


Fig. 13

*Not used in typical installation

6) Mortise Exit Installation Instructions (Continued)

7. Install Head Cover:

a. Lay device wire harnesses across 1” hole (Fig. 14a).

b. Tuck wires into hole when installing cover so that wires are not pinched between head cover and door.

c. Attach head cover using (2) #8-32 flat head screws (Fig. 14b).

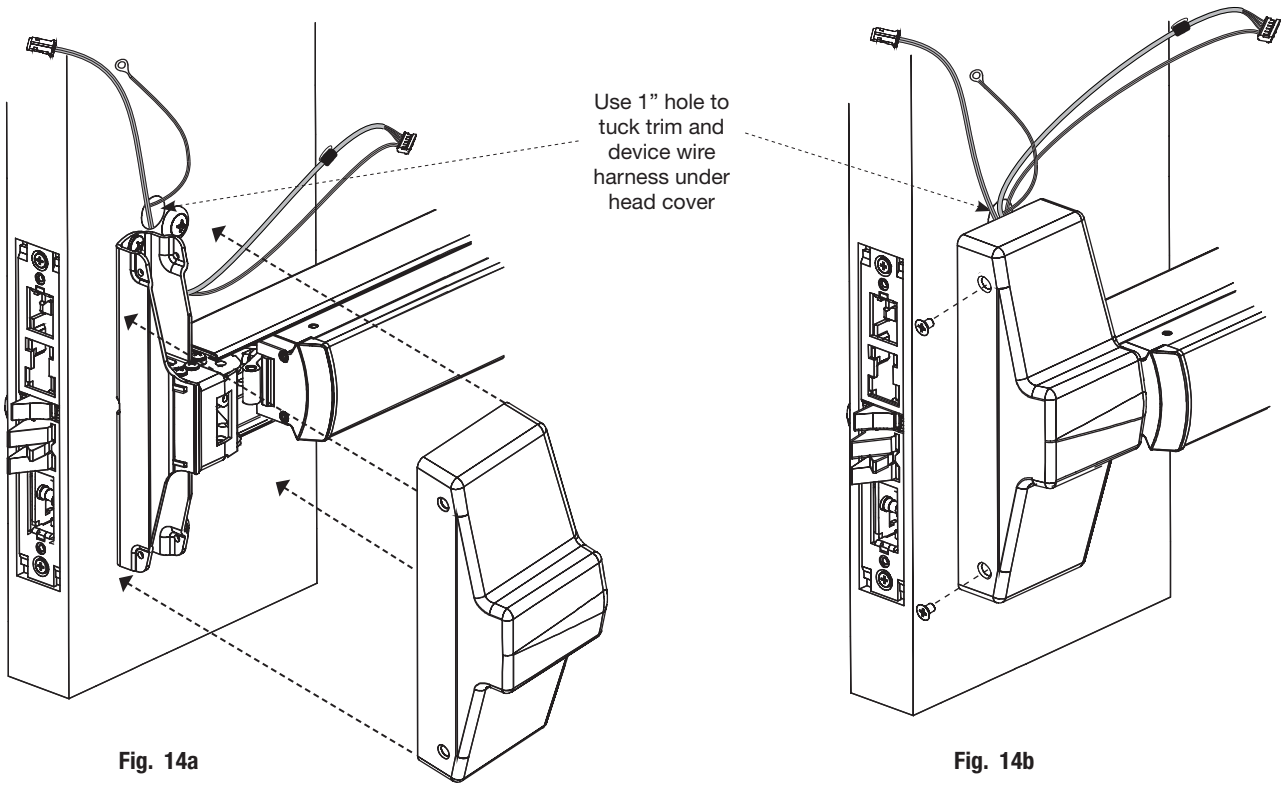


Fig. 14a

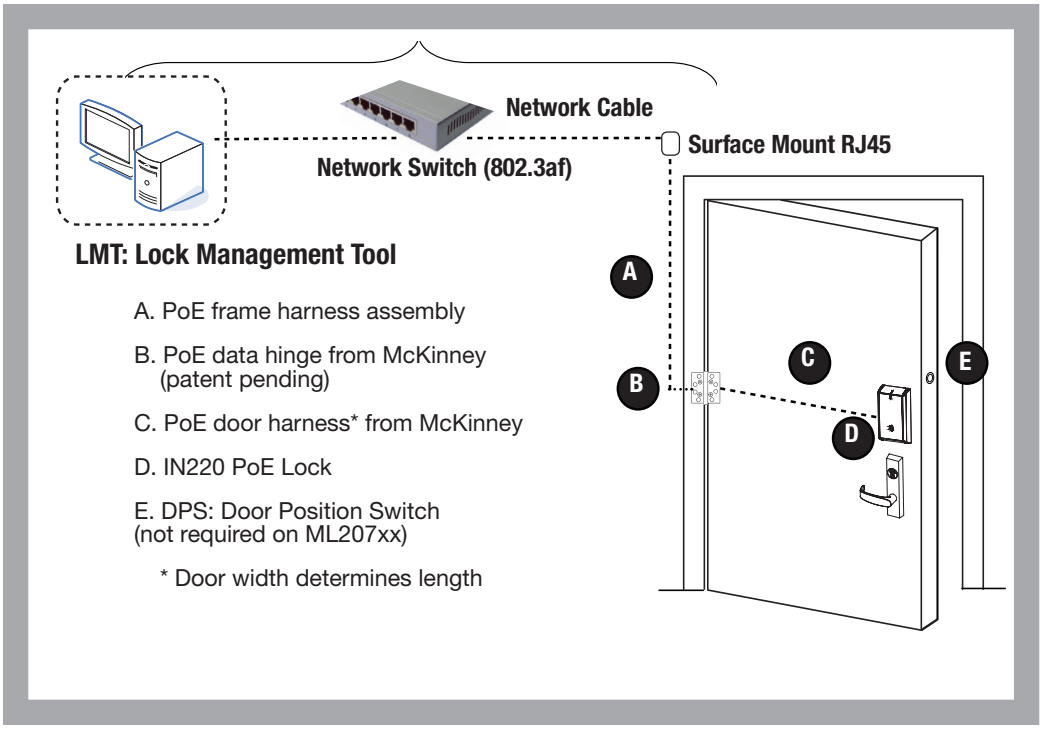
Fig. 14b

Mortise Exit Installation Continues on Next Page - Section 7

7) IN220 (PoE) Wiring & Installation

Overview

Corbin Russwin IN220 PoE Typical Application



A. PoE frame harness assembly

B. PoE data hinge from McKinney (patent pending)

C. PoE door harness* from McKinney

D. IN220 PoE Lock

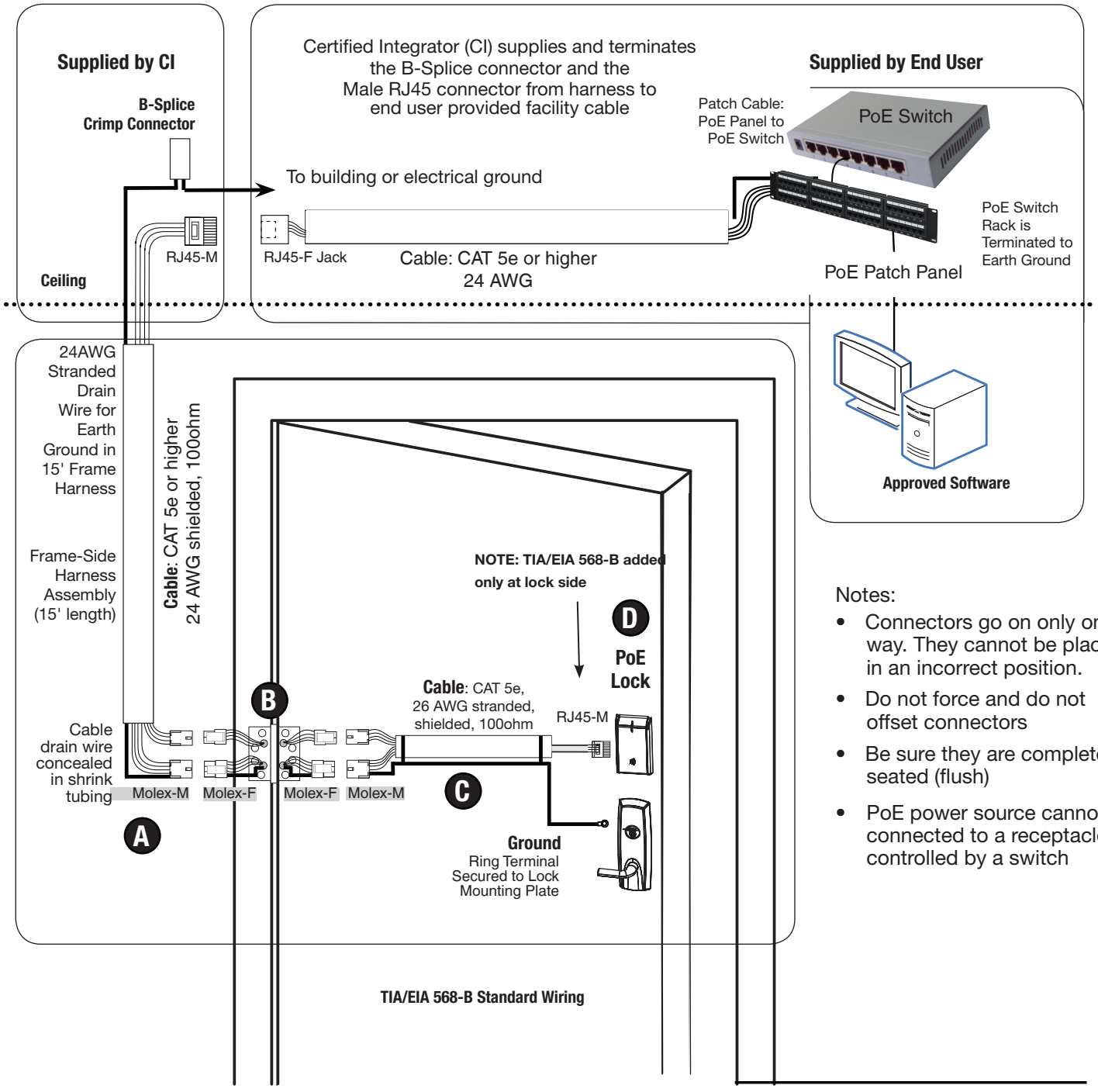
E. DPS: Door Position Switch (not required on ML207xx)

* Door width determines length

7) IN220 (PoE) Wiring & Installation (Continued)

- **A** PoE Frame harness assembly (From McKinney)
- **B** PoE data hinge (Patent Pending) (From McKinney)
- **C** PoE Door harness* (From McKinney)
- **D** IN220 PIP (PoE Lock)

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

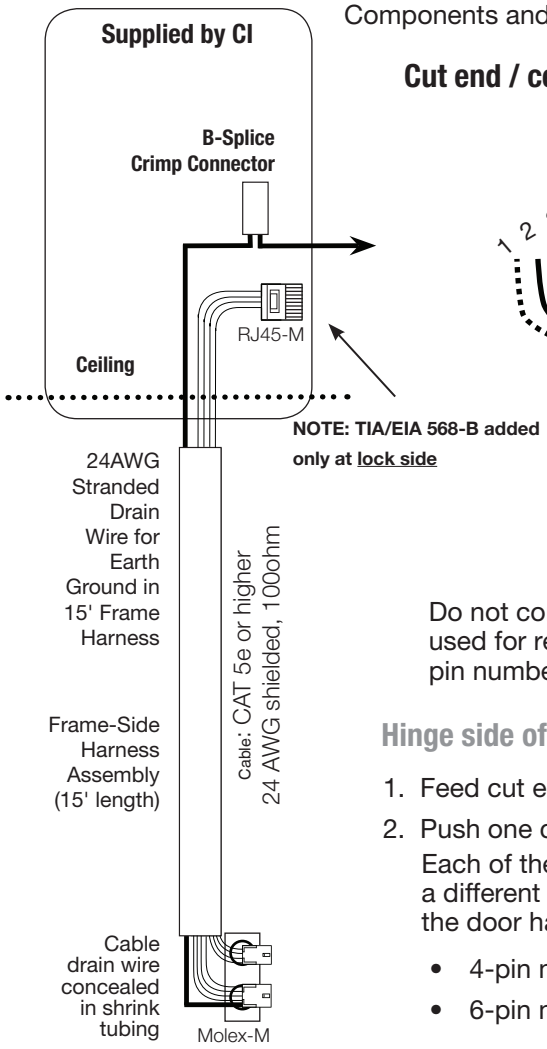


Notes:

- 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

7) IN220 (PoE) Wiring & Installation (Continued)

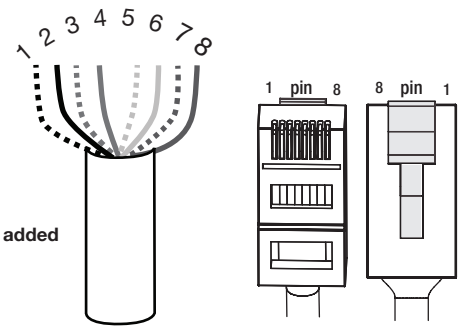
A Frame Harness Installation



Components and wire harness supplied by McKinney. Suggested installation:

Cut end / ceiling-side PoE harness:

TIA/EIA 568-B Standard Wiring



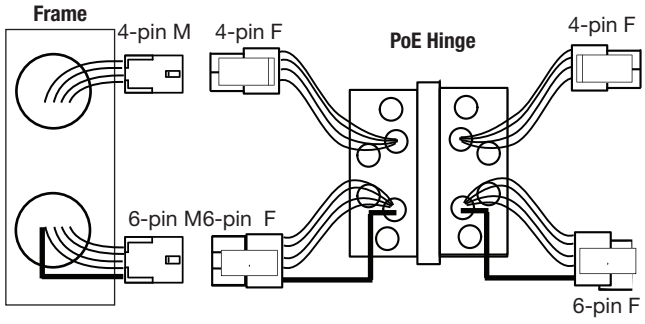
PIN	Wire	Pair Number
1	White/Orange	2
2	Orange	2
3	White/Green	3
4	Blue	1
5	White/Blue	1
6	Green	3
7	White/Brown	4
8	Brown	4

Do not confuse pair numbers with pin numbers. A pair number is used for reference only (eg: 10BaseT Ethernet uses pairs 2 & 3). The pin numbers indicate actual physical locations on the plug and jack.

Hinge side of PoE 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

7) IN220 (PoE) Wiring & Installation (Continued)

C Hinge Installation

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

Hinge-side harness connectors:

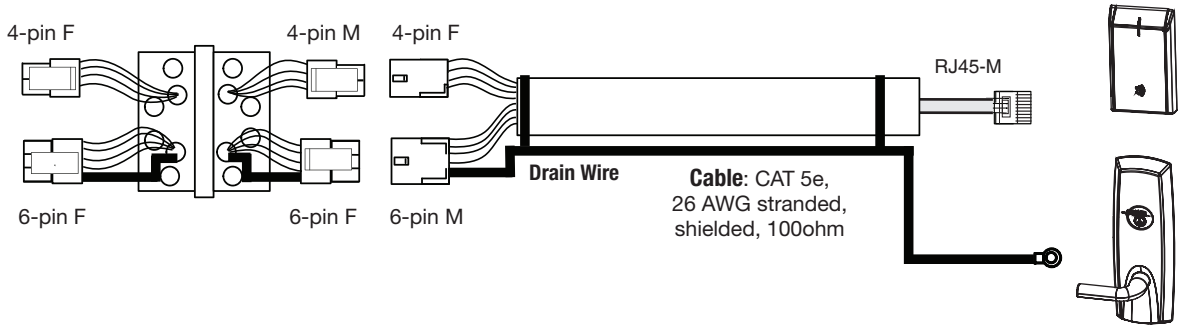
- 4-pin male Molex connector
- 6-pin male Molex connector with ground wire

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).



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 to the lock.
3. Remove tape from ring terminal and door harness connectors.

   Hinge-side harness connectors:

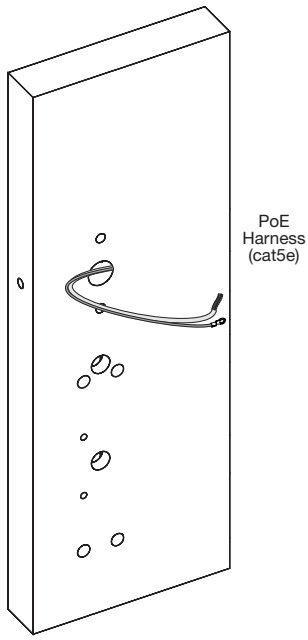
   - 4-pin male Molex connector
   - 6-pin male Molex connector with ground wire

   Lock-side harness connectors:

   - Ring terminal
   - (1) male RJ45 connector

   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).



8) IN220 Installation Instructions

1. Install Outside Reader

a. Orient the reader so the LED lens is at the top.

b. Feed the reader harness through the door (from outside to inside).

c. 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.

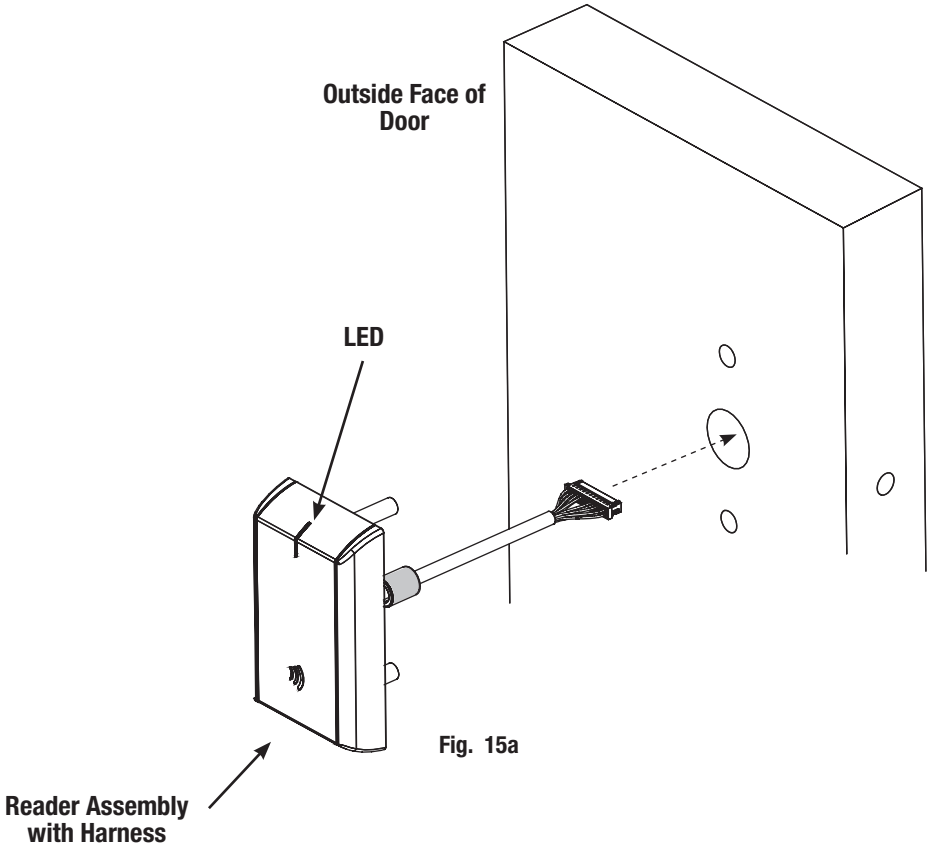


Fig. 15a

8) IN220 Installation Instructions (Continued)

1. Install Outside Reader - (Continued)

d. Next feed the cables/connectors through the inside mounting assembly (and gasket if required*).

e. **Insert and partially tighten (2) through-bolts prior to installation of connectors.**

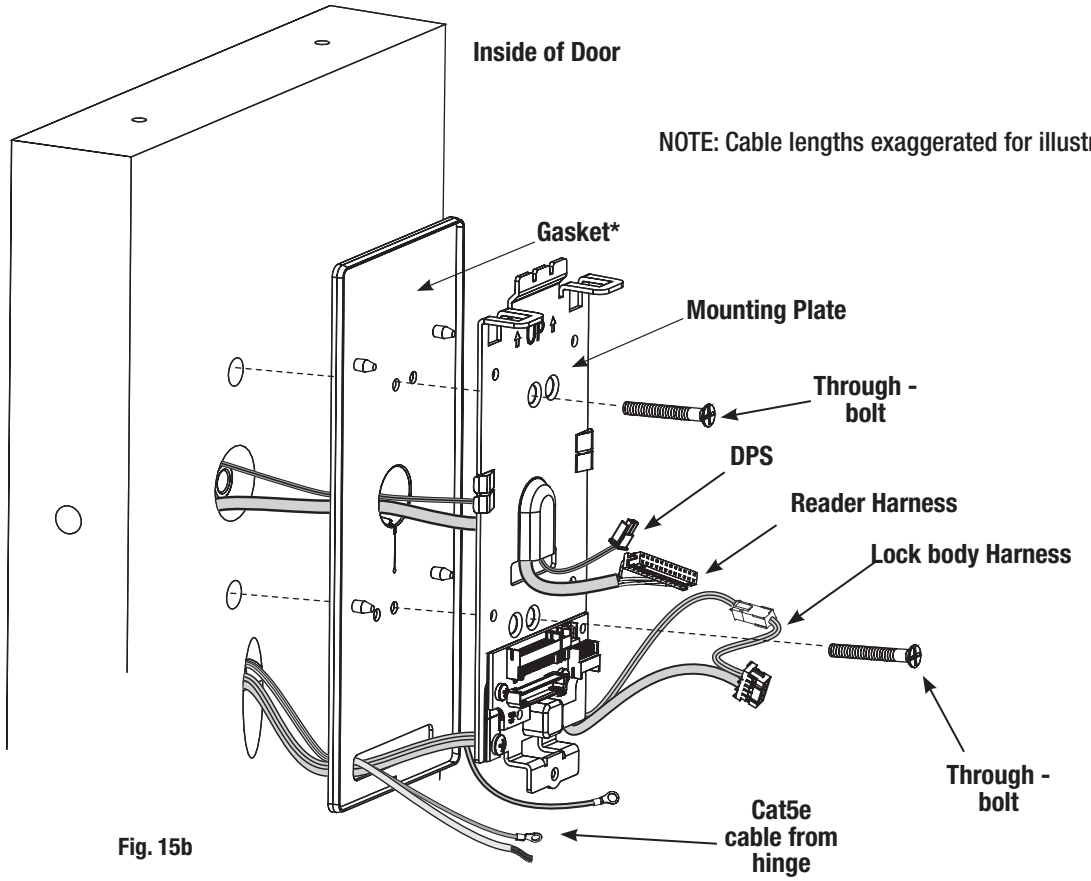


Fig. 15b

f. Secure both ground lugs with #6-32 machine screw (Fig. 15c).

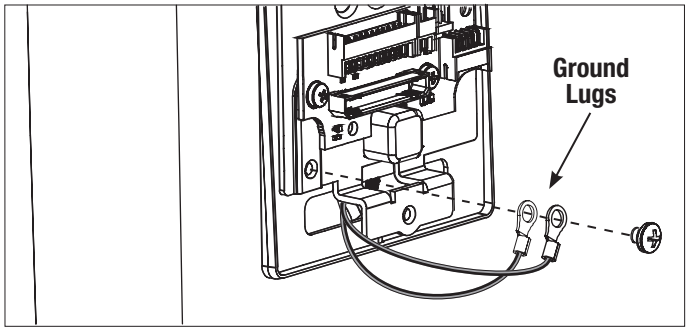


Fig. 15c

*Gasket is required for outdoor installations.

If installing with gasket; separate gasket from mounting plate to feed cables/connectors through holes as indicated (Fig. 15b).

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

8) IN220 Installation Instructions (Continued)

2. Installation of Connectors

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

Secure the following connectors to their respective terminals (Fig. 15a):

A. Secure the 4-pin DPS connector.

B. Secure the 10-pin lock body assembly connector.

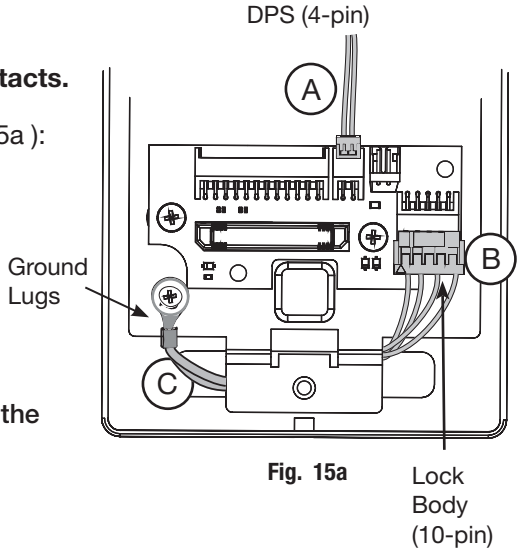


Fig. 15a

IMPORTANT: Do not run wires through hole in plate (Fig. 15b) - this will damage wires and the controller connector.

Route wires around flange, do not route wires through the flange hole (Fig. 15c,d).

Secure Mounting Plate

1. Tuck excess cable into wire hole on inside of door.
2. 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. 15b).

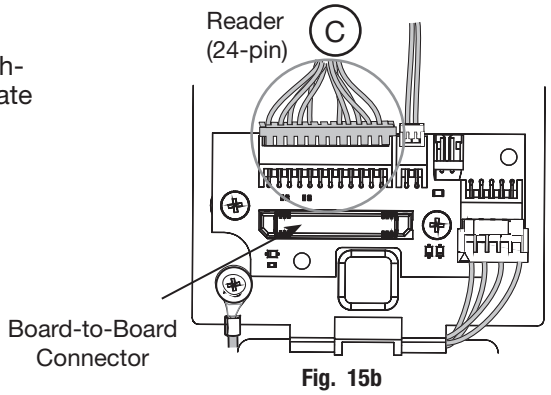
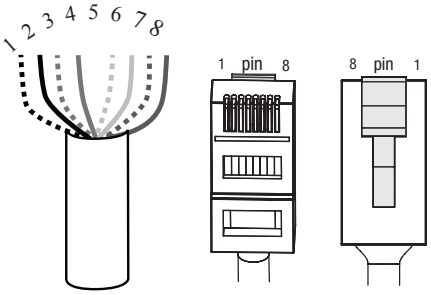


Fig. 15b

D. Crimp* RJ45 to cat5e cable from hinge (Fig. 15c).

*For more detail, refer to section (5) 'Installation Wiring', "A - Frame Harness Installation".

TIA/EIA 568-B Standard Wiring



PIN	Wire	Pair Number
1	White/Orange	2
2	Orange	2
3	White/Green	3
4	Blue	1
5	White/Blue	1
6	Green	3
7	White/Brown	4
8	Brown	4

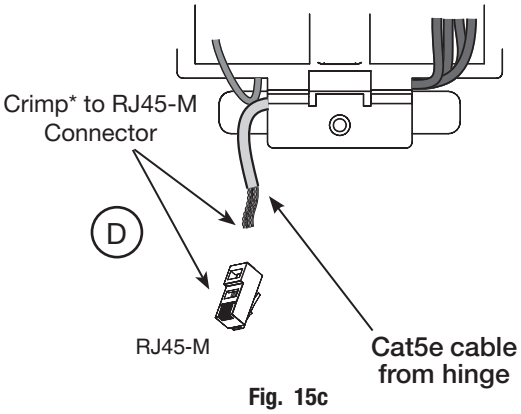


Fig. 15c

Do not confuse pair numbers with pin numbers. A pair number is used for reference only (eg: 10BaseT Ethernet uses pairs 2 & 3). The pin numbers indicate actual physical locations on the plug and jack.

8) IN220 Installation Instructions (Continued)

3. Installation of Inside Module Component Assembly (Controller)

1. Insert top tabs of controller into slots on mounting plate (Fig. 16a,b).
2. Ensure proper alignment of board-to-board connectors while pivoting bottom of controller toward door until tab on bottom snaps securely into place on mounting plate.

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.

3. Connect RJ45 Male Connector to female RJ45 port on controller board (Fig. 16b).

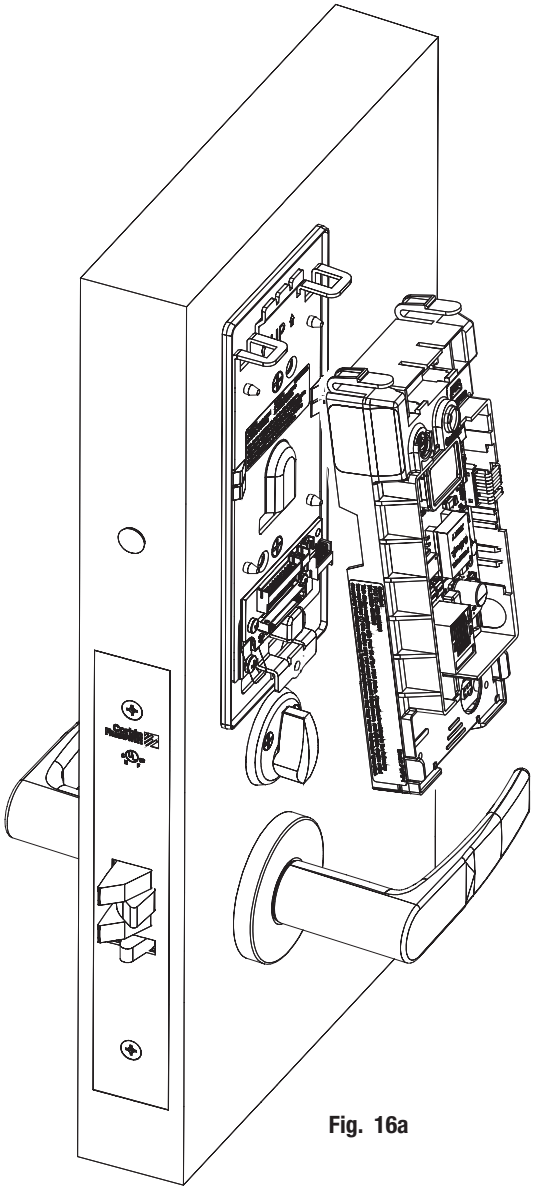


Fig. 16a

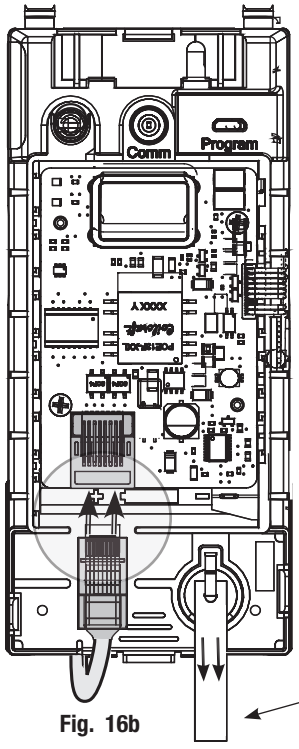


Fig. 16b

4. Remove **pull tab** from its position beneath the coin cell by pulling on tab in direction of arrows printed on tab (Fig. 16b).

8) IN220 Installation Instructions (Continued)

4. Inside Cover Installation

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

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

c. Secure cover utilizing security allen wrench.

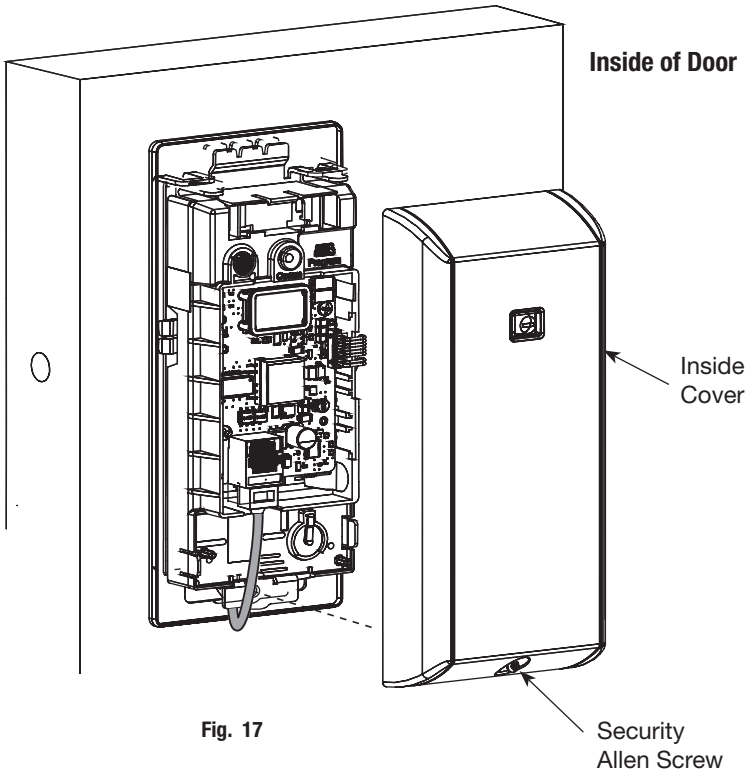


Fig. 17

9) Operational Check

When lock is fully installed, perform the following steps.

For units with cylinders, the following checks apply:

a. Insert key into cylinder and rotate (Fig. 18a).

b. There should be no friction against lock case, wire harness or any other obstructions.

c. Check that the key retracts the latch.

d. The key should rotate freely.

e. Try the inside lever; ensure it retracts latch.

f. Use a valid credential* set up with the **Lock Configuration Tool** to unlock outside lever and retract latch.

Refer to **Network and Lock Configuration Tool** user manual (**WFMN1**) for information on how to configure and program locks.

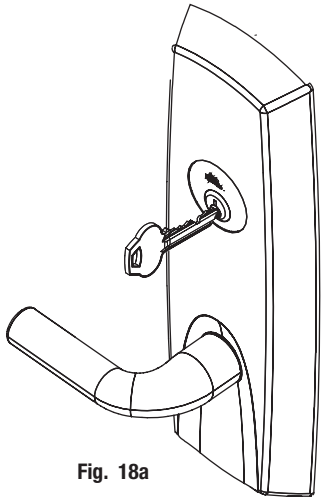


Fig. 18a

*Twenty (20) seconds after lock initialization (single beep with lock motor actuation).

Note: The credential should approach the inscription on the reader as indicated (Fig. 18b) to ensure that the credential is read properly.

Do not wave credential.

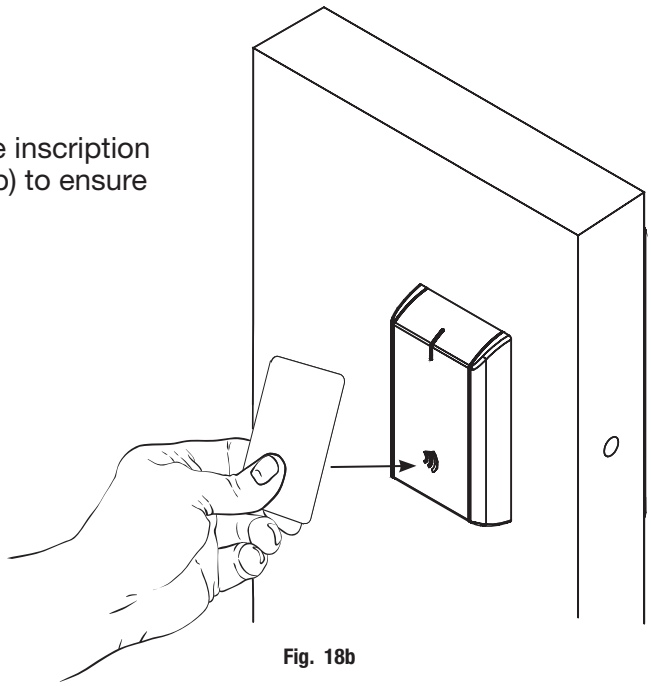


Fig. 18b