

**Installation Instructions**  
**ML20900 Series**  
**Electrified Mortise Lockset**



**ASSA ABLOY**

FM357 02/14

In U.S.:  
Corbin Russwin, Inc.  
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www.corbinrusswin.com

In Canada:  
ASSA ABLOY Door Security Solutions Canada  
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Vaughan, Ontario, Canada L4K4T9  
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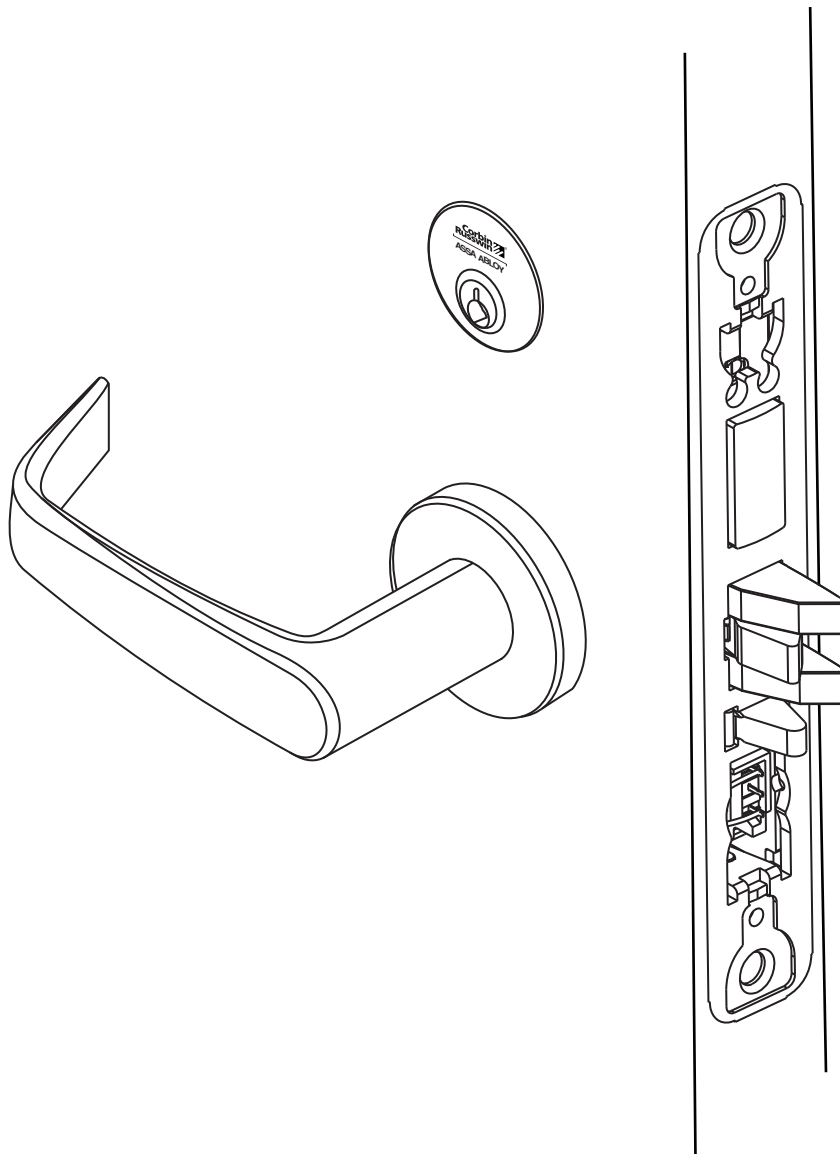
**Attention Installer**

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 TV technician for help

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme avec la norme NMB-003 du Canada.



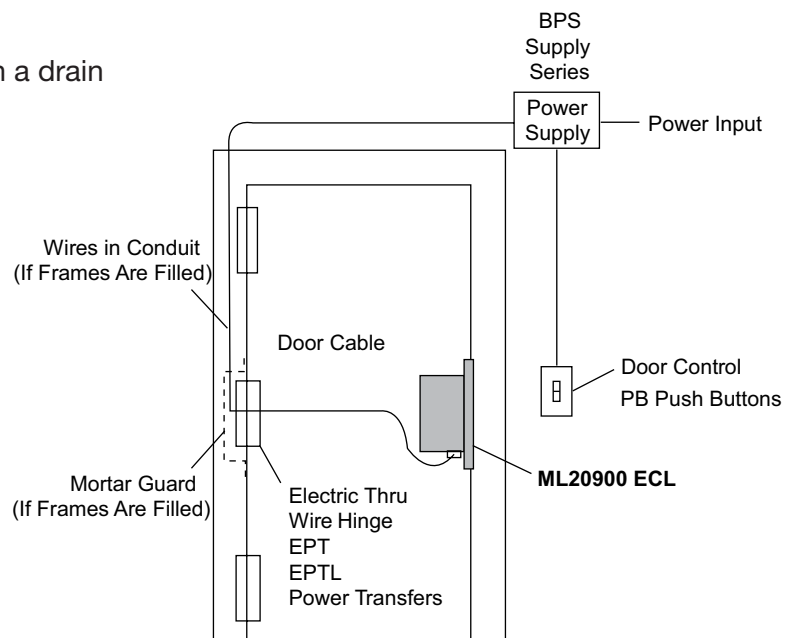
Observe precautions for handling electrostatic sensitive devices.

## 2) General Description

Combine simplicity and access control with the Corbin Russwin ML20900 ECL series electrically controlled mortise lock. Utilizing the proven ML2000 Series mortise lockset with the patented quick reversible latchbolt, the ML20900 series provides electrified remote locking and unlocking.

## 3) Specifications / Features

- Latch - Stainless steel, 3/4" projection
- Deadbolt - Stainless steel, 1" projection
- Guardbolt - Stainless steel, non-handed
- Handed - Easily field reversible without opening case
- Case - 12 gauge heavy duty wrought steel
- Fail safe or fail secure operation (can be specified when ordering or easily field configured)
- Operates from 12-24V
- UL and CUL listed for use on Fire Doors
- Wire from EAC panel to door must be shielded with a drain terminated at EAC panel controller

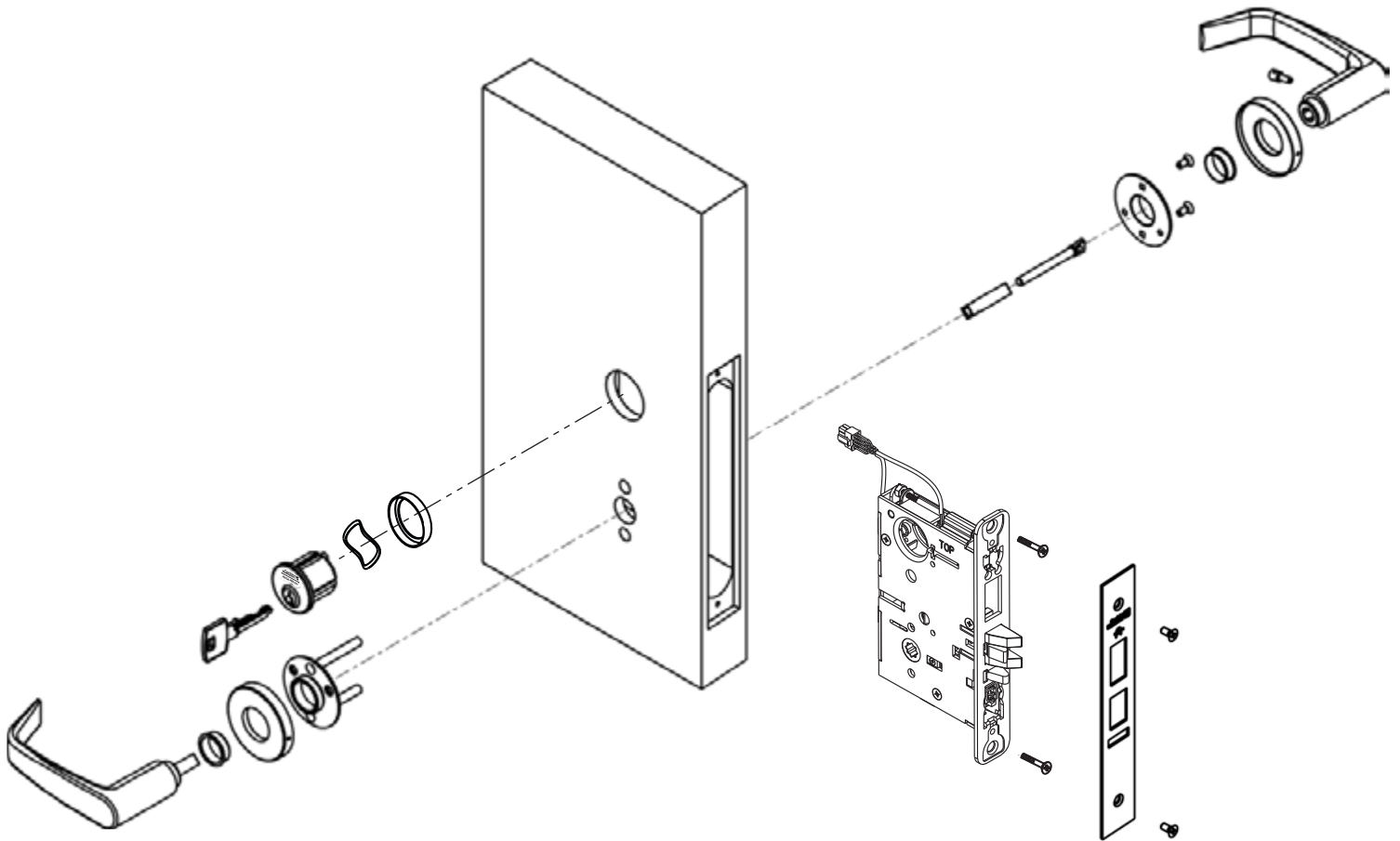


### Electrical Specifications

12/24VDC System

- Reader draw = .140 Amp
- Actuator draw = .015 Amp continuous
- Maximum 2 locks per 1 Amp power supply (1/2 Amp peak current draw)

## 4) Product Illustration

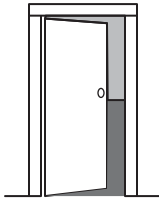


### Tools Required:

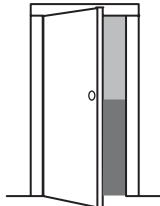
- Phillips Screw Driver (Standard size)
- Flat Blade Screw Driver (Standard size)
- 1/8" Allen Wrench

**5) Installation Instructions**

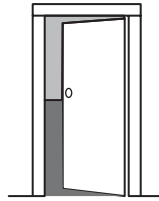
1. Verify Hand and Bevel of door. Illustrations shown are as viewed from the outside or secure side of opening.



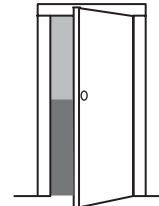
Left Hand  
Hinges Left.  
Open Inward.  
"LH"



Left Hand  
Reverse Bevel  
Hinges Left.  
Open Outward  
"LHRB"

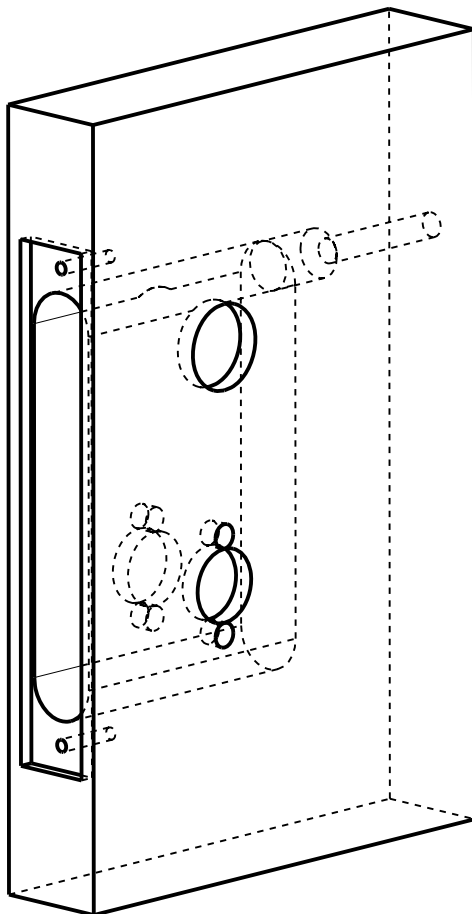


Right Hand  
Hinges Right.  
Open Inward.  
"RH"

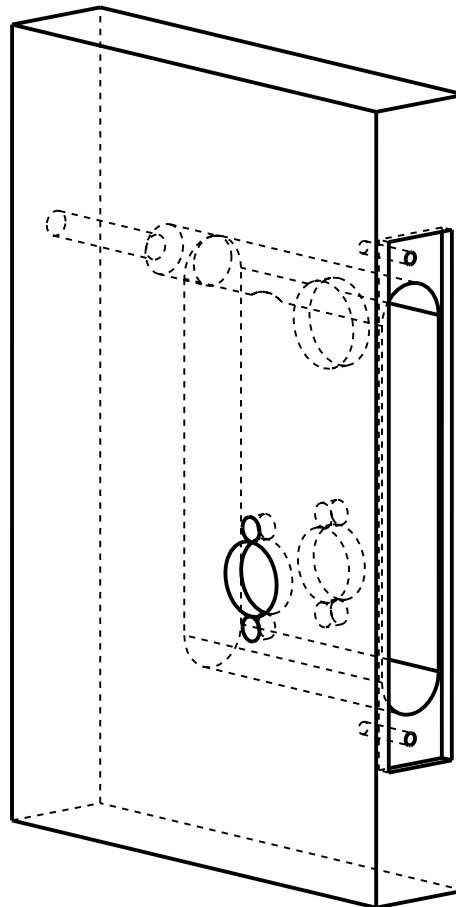


Right Hand  
Reverse Bevel  
Hinges Right.  
Open Outward  
"RHRB"

2. Prep door according to supplied door marker. For door manufacturer templates, visit [www.corbinrusswin.com](http://www.corbinrusswin.com).



**Inside Face of Door**



**Outside Face of Door**

5) Installation Instructions (Continued)

**3** Handing of Lock Body

Step 1) Move the red locking screw to side of lock body being locked (Fig. 1)

Step 2) Push in latch then depress catch plate with screw driver (Fig. 1)

Step 3) Pull latch out of lock body and turn latch over (Fig. 2)

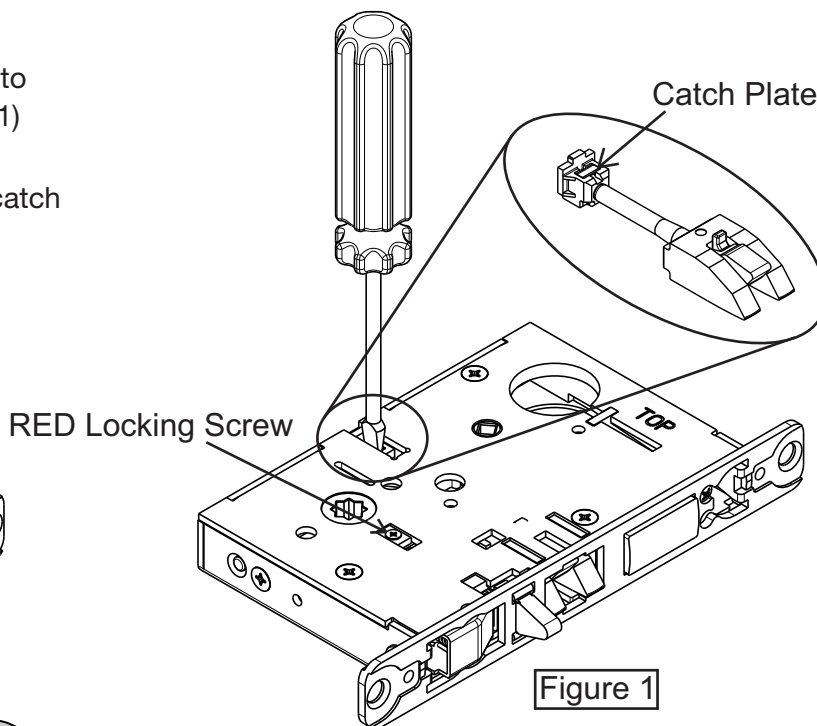


Figure 1

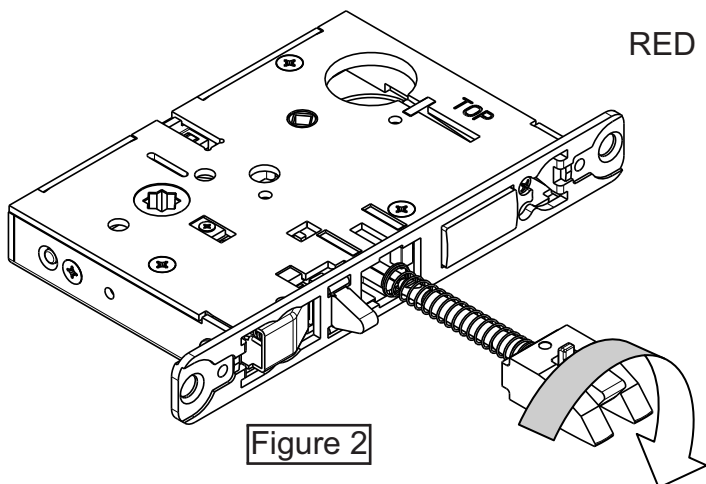


Figure 2

Step 4) Push in latch while holding screw driver behind latch tail (Fig. 3)

Note: Push in latch until catch plate is no longer depressed (Fig. 4)

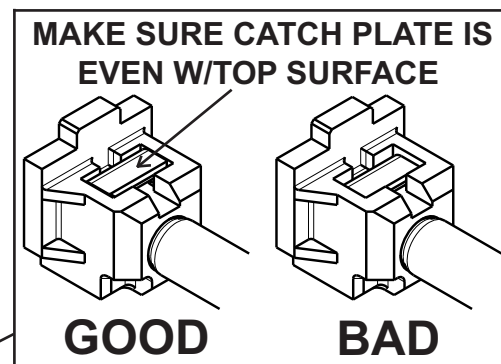


Figure 4

Step 5) Rotate lock front to match bevel of door as shown (Fig. 5)

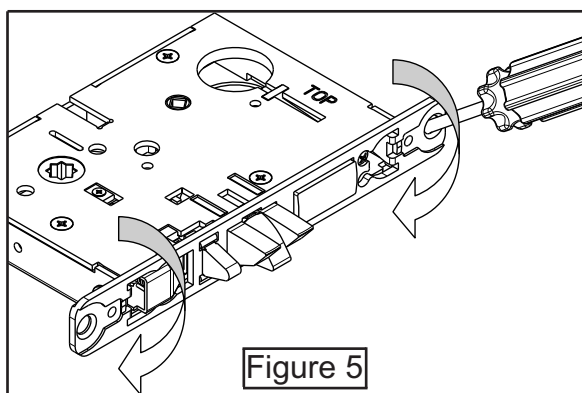


Figure 5

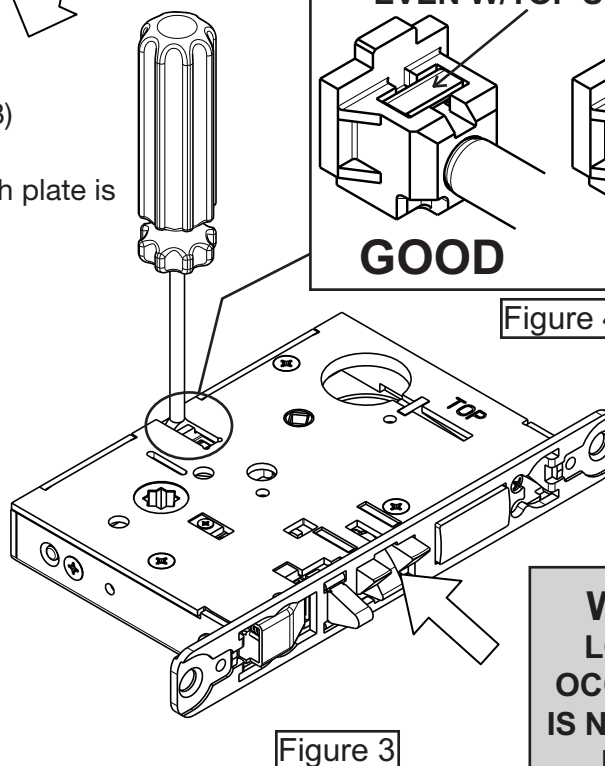


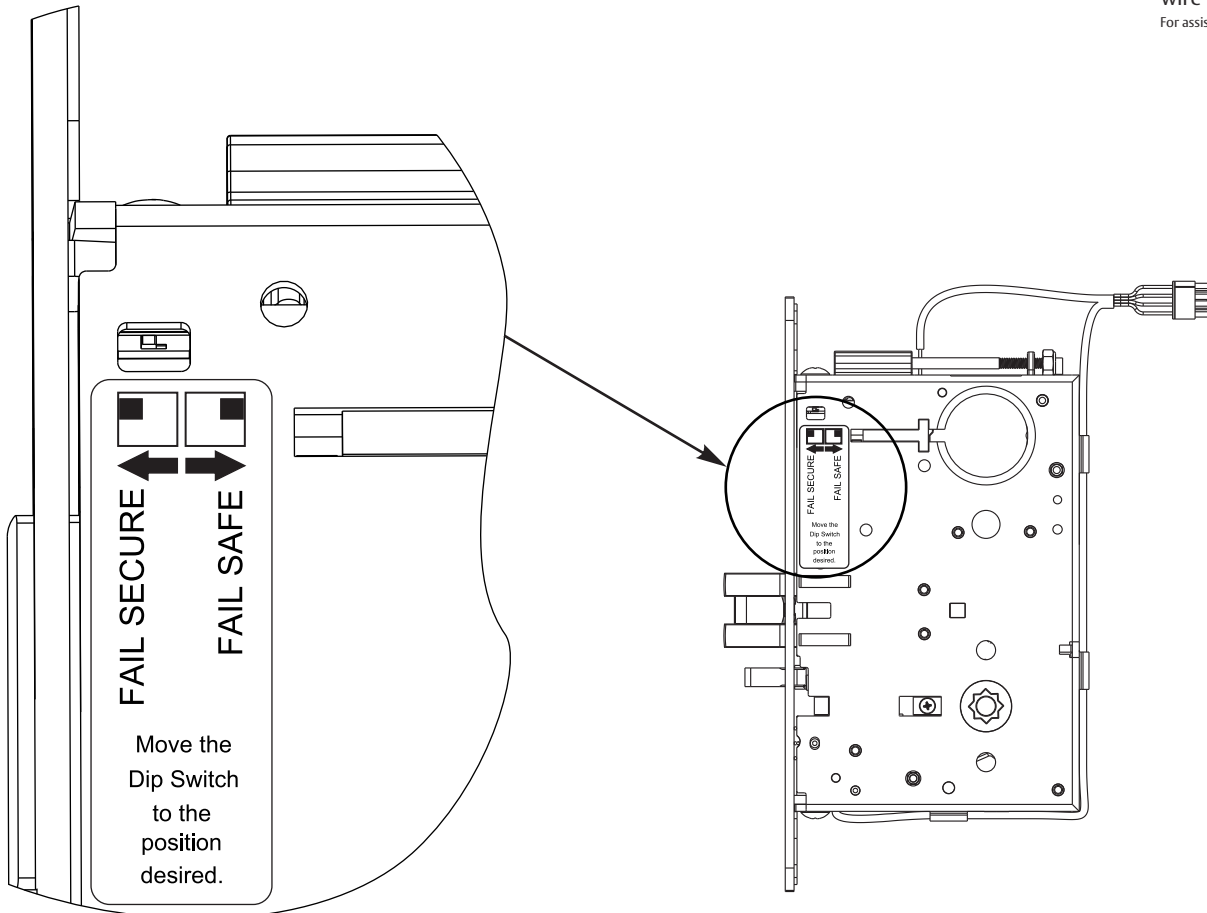
Figure 3

**WARNING:**  
LOCK-IN CAN  
OCCUR IF LATCH  
IS NOT PROPERLY  
INSTALLED

### 5) Installation Instructions (Continued)

4. Configuring the Fail Safe/Fail Secure DIP switch settings:  
Please note that the lock must be cycled once in order to change the fail safe/fail secure setting.

Check polarity:   
Verify + (red) wire  
wire  
For assistance, call 800-810-WIRE



5. Install Lock Body into Door:
- Plug mortise lock harness into ElectroLynx<sup>®</sup> harness in door (Fig. 5).  
Important: Door must remain open during installation. Use door stop.
  - Install, but do not tighten two #12 x 1" combination screws through lock body (Fig. 5).

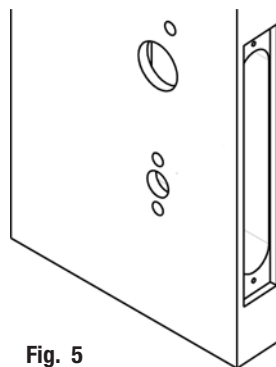
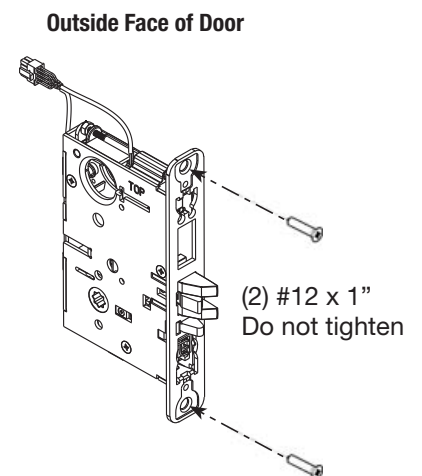


Fig. 5



**5) Installation Instructions (Continued)**

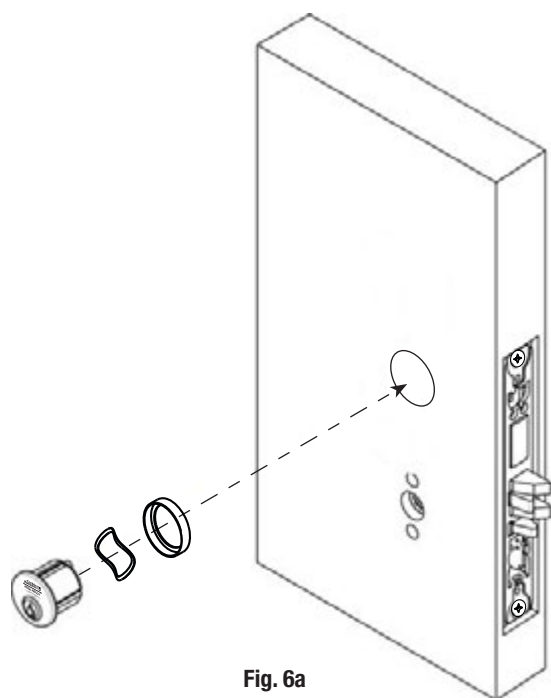
6. Install Cylinder:

- a. Thread cylinder into lock body (Fig. 6a).

Note: Make sure cylinder is oriented correctly (Fig. 6a1).

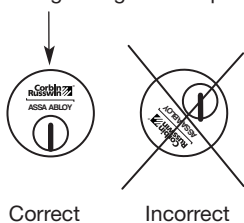
- b. Tighten cylinder clamp using 7/64" allen wrench (provided) (Fig. 6b).

- c. Turn the key to make sure that lock functions correctly (latch, deadbolt, and key).

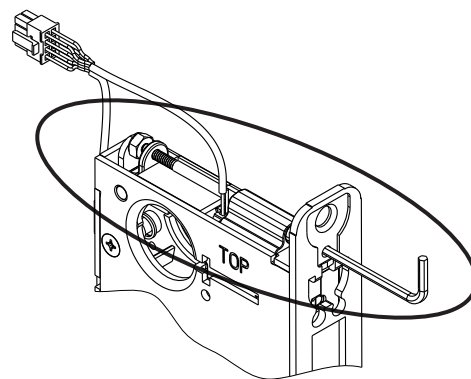


**Fig. 6a**

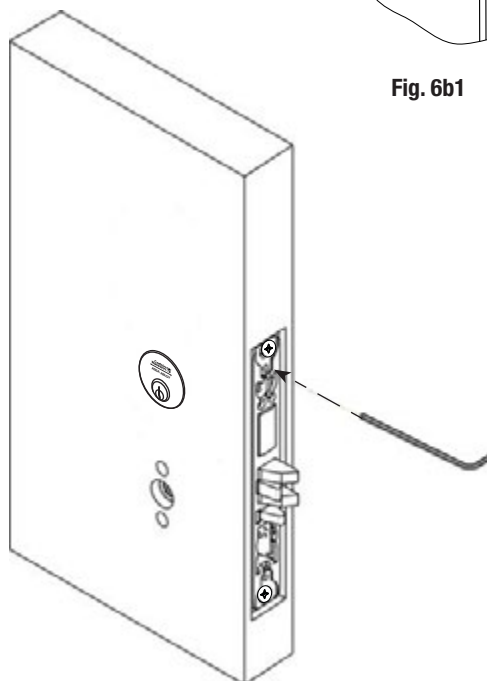
Position cylinder so that the logo is right-side up.



**Fig. 6a1**




**Fig. 6b1**



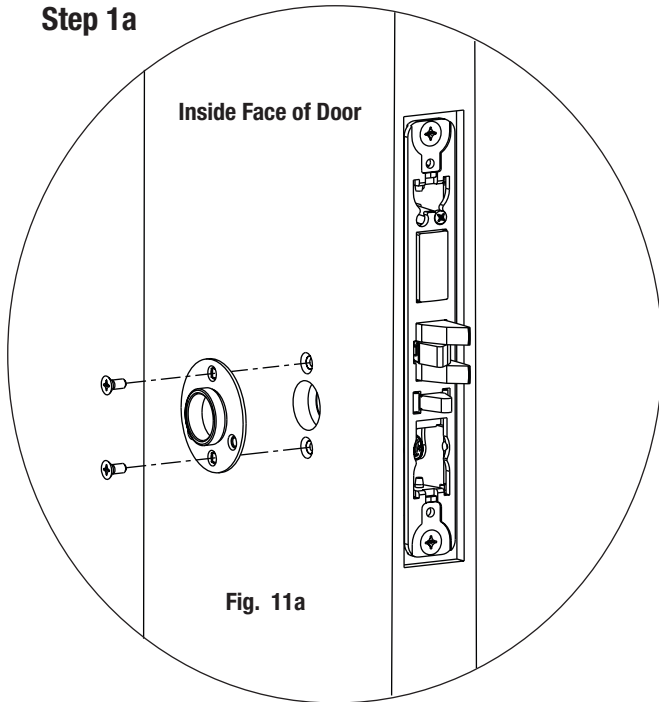
**Fig. 6b**



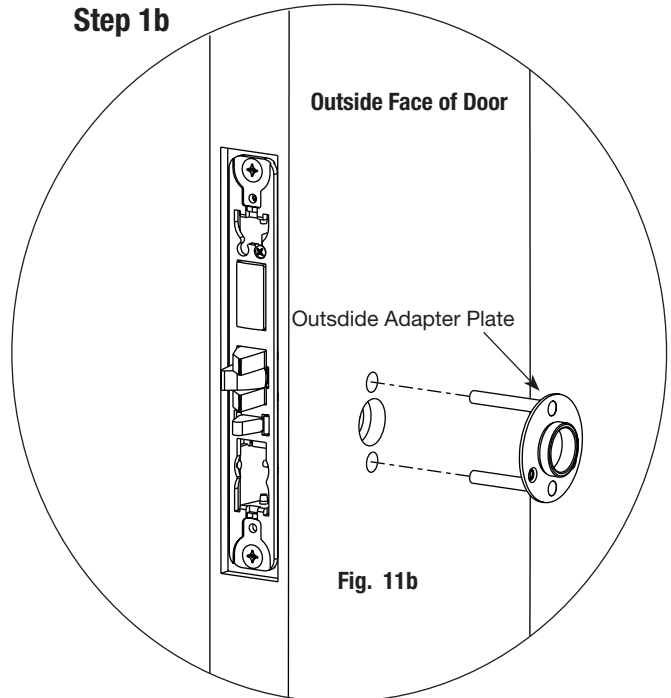
5) Installation Instructions (Continued)

7a. Install Standard Lever Trim. Refer to 7b on following pages for  Trim:

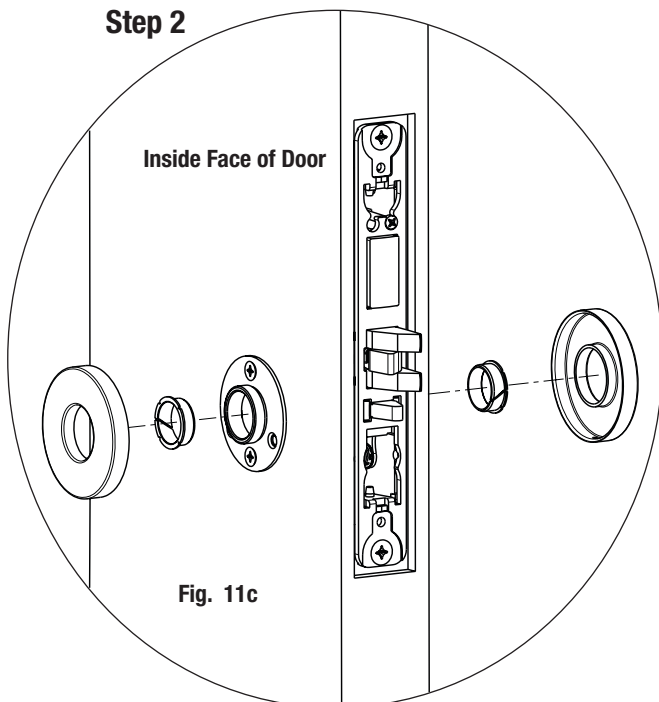
Step 1a



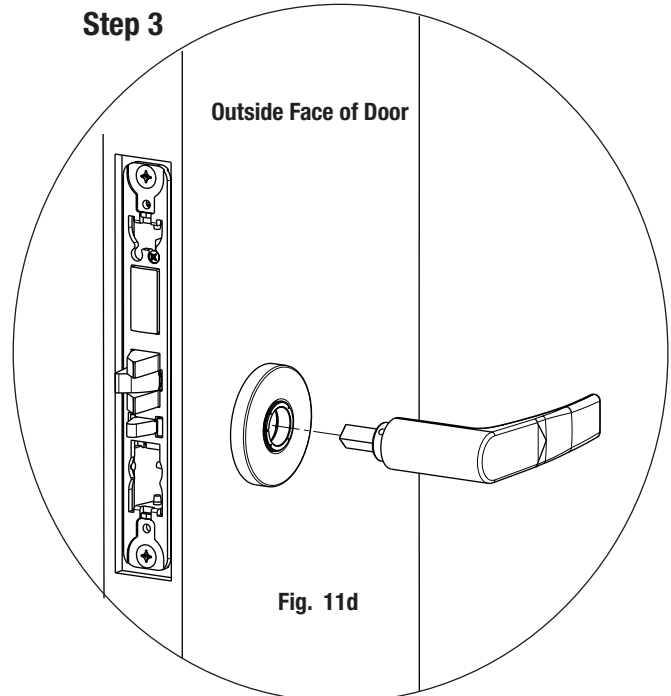
Step 1b



Step 2

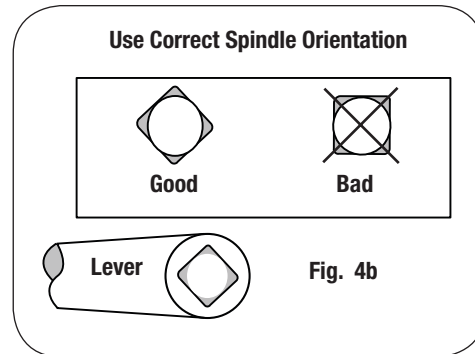
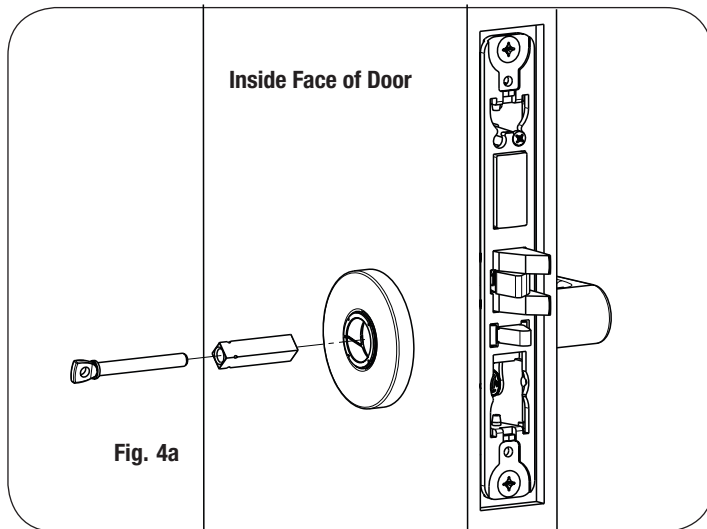


Step 3



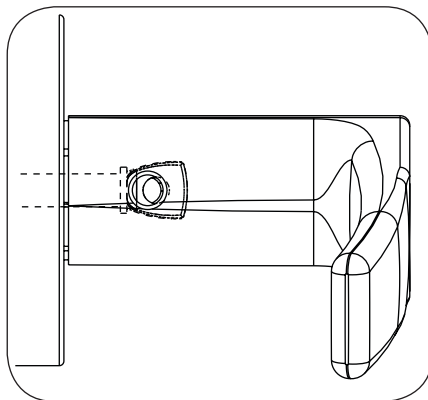
**5) Installation Instructions (Continued)**

**Step 4**

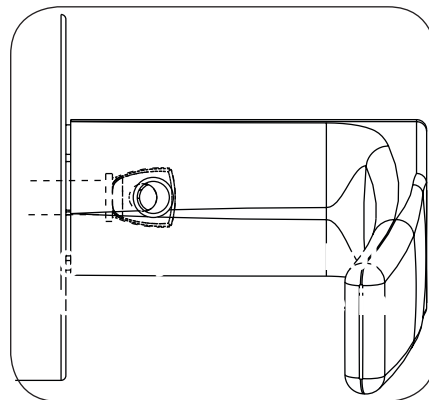


**Step 5**

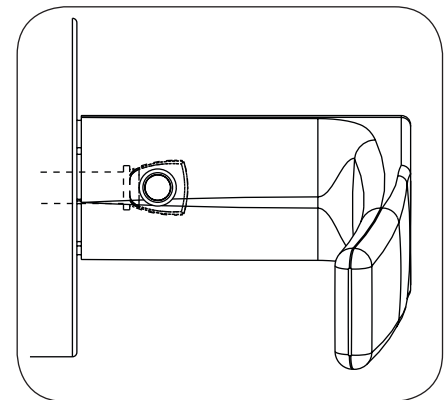
Align adjustment bolt with threaded hole in lever



Adjustment bolt needs to be threaded in farther.



Adjustment bolt needs to be unthreaded.

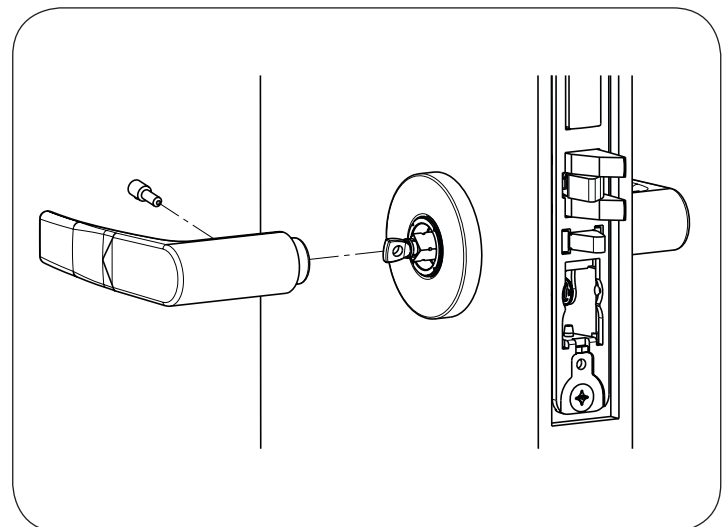


Adjustment bolt fully aligned.

**Step 6**

Notes:

- Unthread Adjustment Bolt approximately four turns for a good starting point (After being fully tightened)
- Make sure O/S lever is fully inserted into adapter plate before aligning adjustment bolt.



5) Installation Instructions (Continued)

7b. Install **MUSEO** Trim:

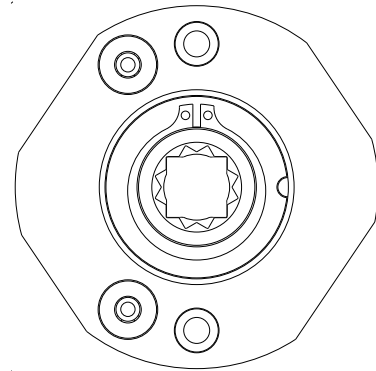
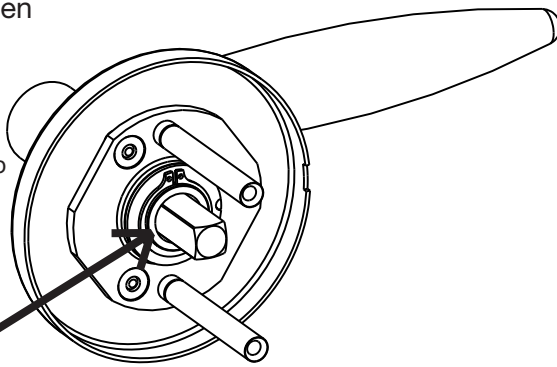
1.)

Thread adapter plate hub into lever and fully tighten

Align adapter plate hub with square hole in lever; keeping hub as tight as possible

NOTE: Spindle can be used to help thread hub into lever

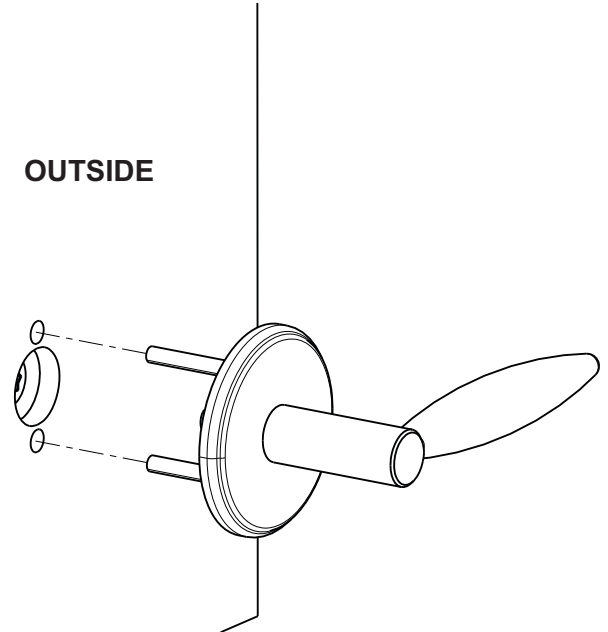
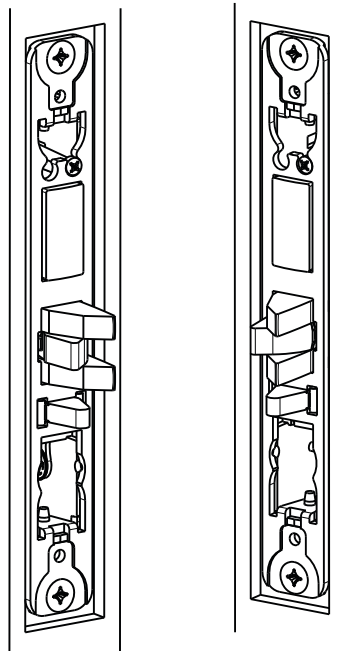
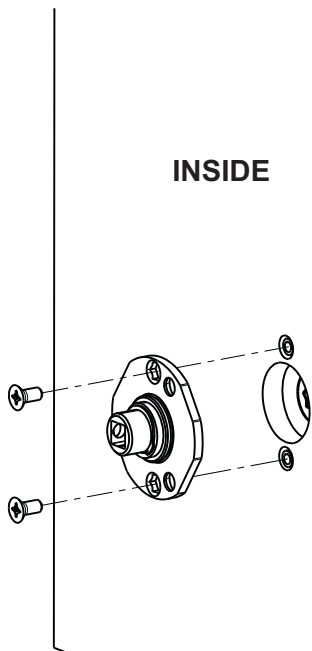
Adapter Plate Hub



2.)

INSIDE

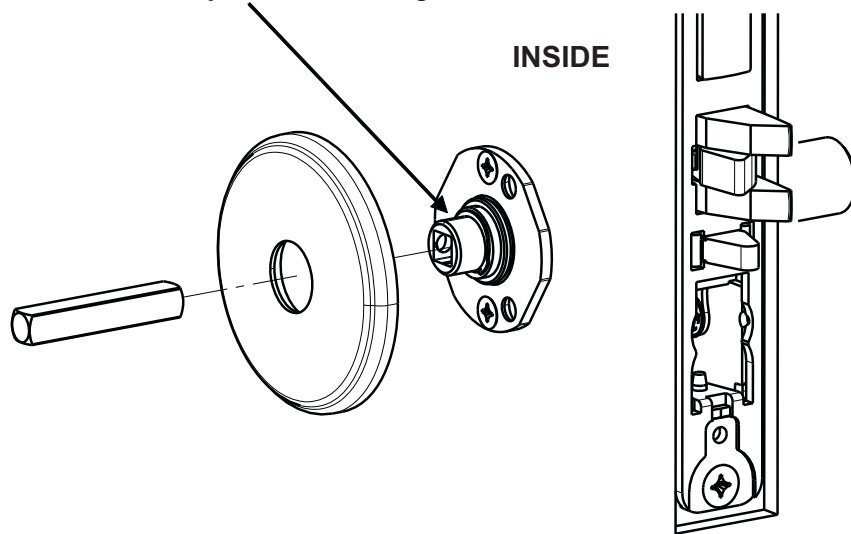
OUTSIDE



5) Installation Instructions (Continued)

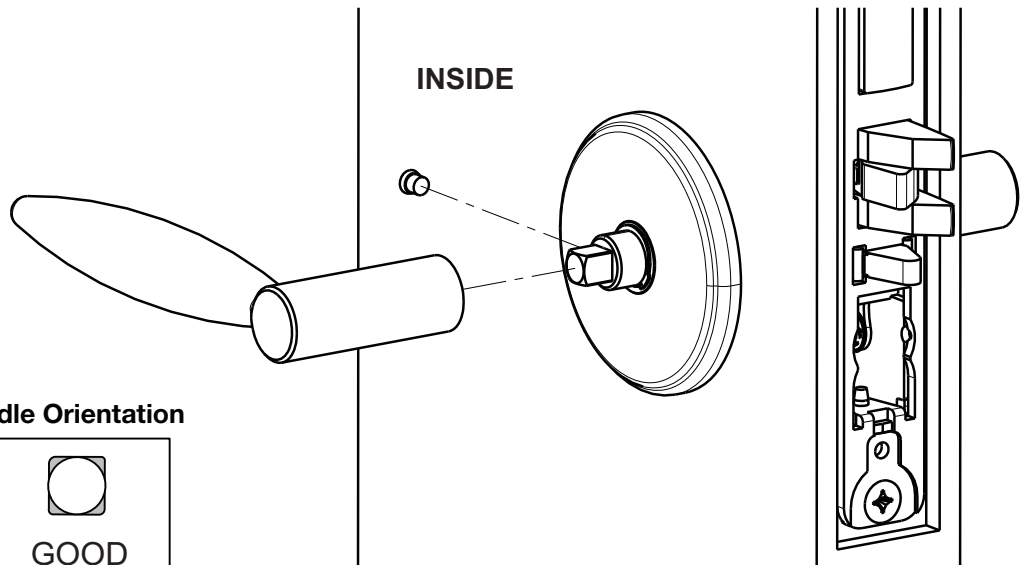
3.)

Set screw in hub faces  
away from door edge.

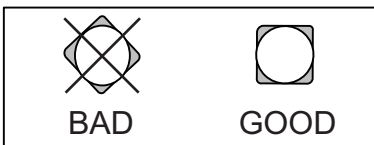


4.)

INSIDE

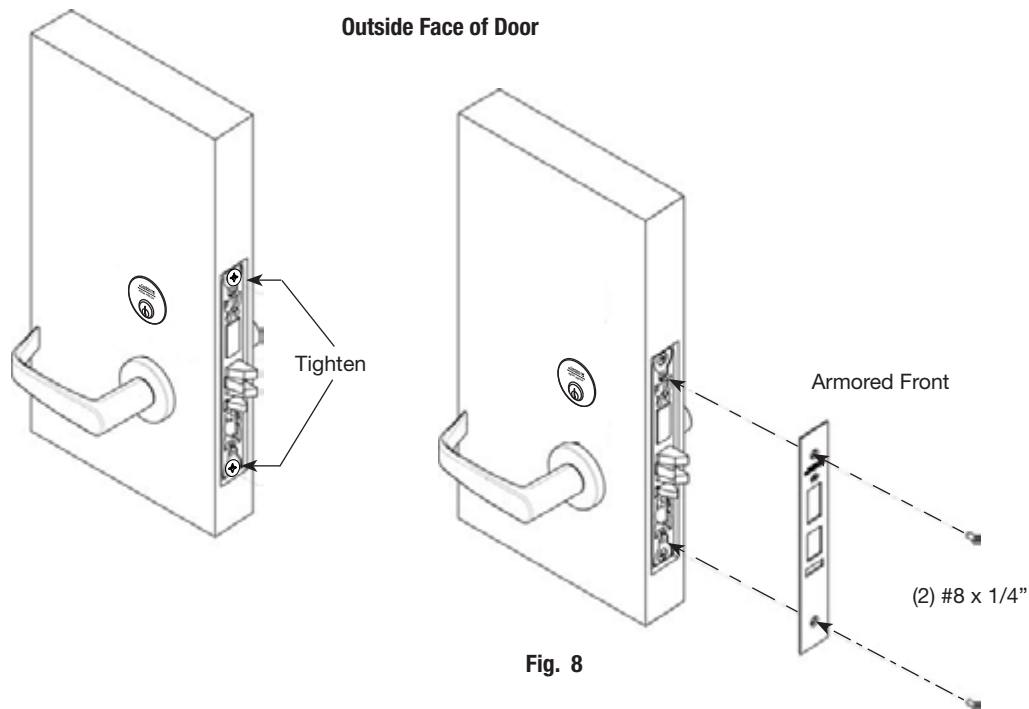


Use Correct Spindle Orientation



## 5) Installation Instructions (Continued)

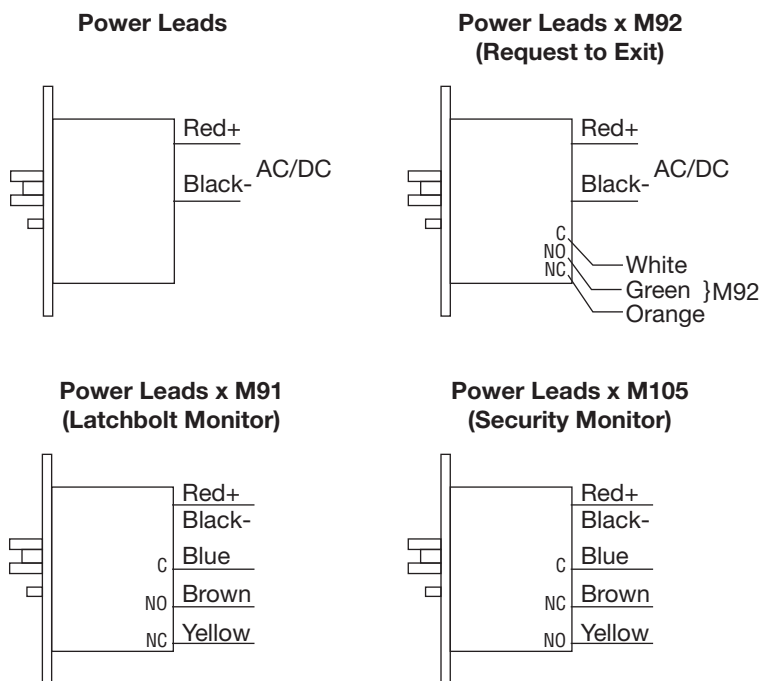
8. Install Armored Front:
  - a. Tighten (2) screws through lock body.
  - b. Attach armored front with two #8 x 1/4" screws (Fig. 8).



6) Wiring Diagrams

Lock Schematics

Check polarity: Verify + (red) wire For assistance, call 800-810-WIRE

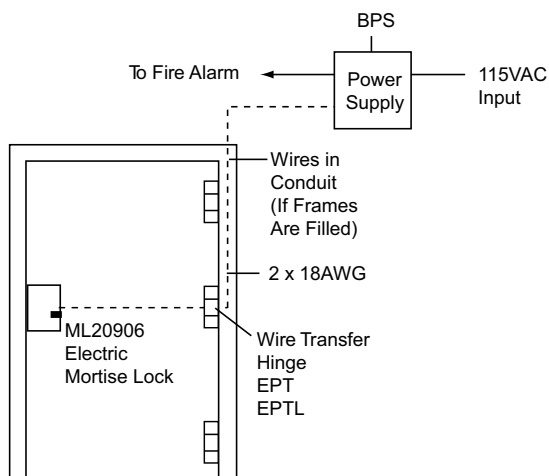


Monitoring Options:

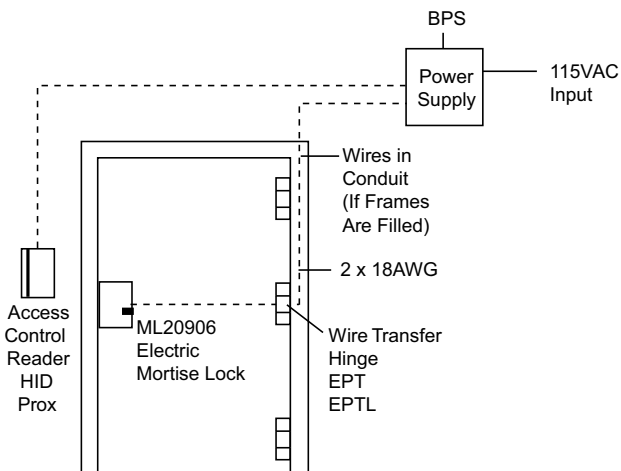
- M91 - Latchbolt Monitor  
Latchbolt monitoring is a SPDT switch which monitors the full extension of the main latch. Activated when latch is fully projected.
- M92 - Request to Exit Monitor  
Request to Exit monitoring is a SPDT switch which monitors the activation of the trim. (Both levers activate switch.) Activated when unlocked lever is rotated. Rotating locked lever will not activate switch.
- M105 - Security Monitor  
Security Monitor is two switches in series that monitors lock status (locked or unlocked) and Auxiliary Latch position. Activated when door is closed and locked.
- M91 x M92 - Latchbolt and Request-to-Exit Monitoring
- M92 x M105 - Request-to-Exit and Security Monitoring

### 6) Wiring Diagrams

#### Tower Stairwell



#### Access Control on Employee Entrance



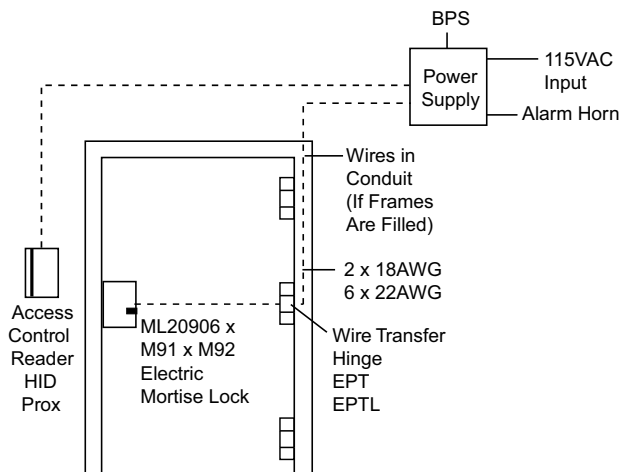
**Operation:**

Free egress at all times. Door is locked at all times preventing entry from the stairwell to a floor. Fire alarm activation will allow re-entry from the stairwell to the floor. Power failure will allow re-entry from the stairwell to the floor.

**Operation:**

Free egress at all times. Door is locked at all times preventing unauthorized entry. Authorized entry is permitted by presenting a valid user card.

#### Controlled Entry With Alarm



**Operation:**

Free egress at all times. User exits through the door which triggers the M92 switch which shunts the alarm. Door is locked at all times preventing unauthorized entry. Authorized entry is permitted by presenting a valid user card. Forced entry will trigger M91 switch and activate alarm. Alarm is deactivated by a valid user card.



ElectroLynx® a system of universal Molex® plug-in connectors and standardized color-coded wiring, makes installing electrified doorway components a snap!



Consult factory for electrical system layouts, riser and wiring diagrams.

## 7) Mechanical Operational Check

For mortise locks with cylinders:

- a. Insert key into cylinder and rotate: There should be no friction against lock case, wire harness or any other obstructions.
- b. The key will retract the latch: Key should rotate freely.
- c. Inside lever: Ensure it retracts the latch.
- d. Close door: Ensure latch fully extends and does not bind.

## 8) Electrical Operational Check

### **Lock/UnLock Check:**

- a. Turn power ON.
- b. Send unlock signal from control panel.
- c. Verify lock unlocks and re-locks at desired intervals.

### **Switch Signal Check:**

- d. Monitor switch signals at control panel and verify each switch activates correctly based on chosen wiring configuration (NO/NC).

### **EAC Card Reader Check:**

- e. Refer to Card reader instructions.