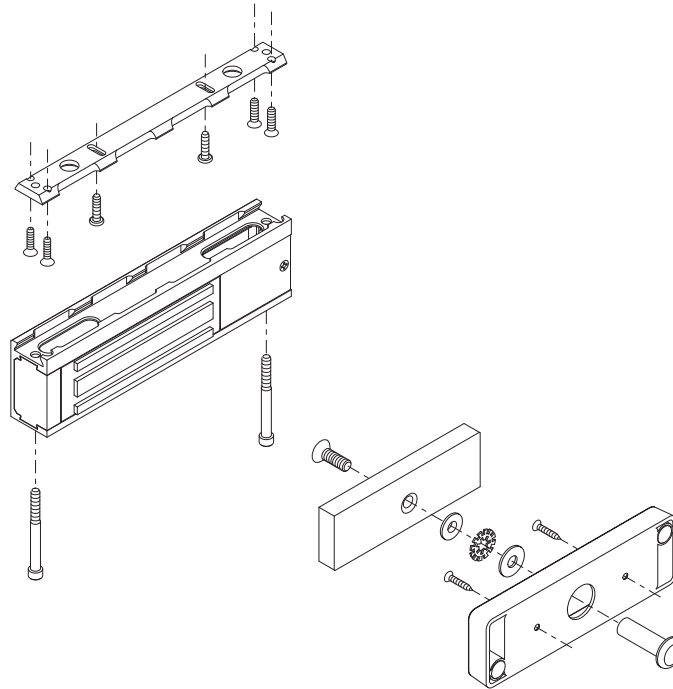


# M400 Series

## Electromagnetic Locks



Installation Instructions for Single Locks  
M420, M450, M490



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### FEATURES

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#### Automatic Voltage Selection (AVS)

Magnet immediately detects 12VDC or 24VDC when power is connected.

#### Anti-Tamper Switch (ATS)

An indication is provided should the magnet cover become unsecured from lock.

#### Magnetic Bond Sensor (MBS)

Detects proper bond between magnet and armature. It can be monitored remotely and locally with an LED.

#### LED

Provides local indication of MBS status.

#### Door Position Switch (DPS)

Indicates whether door is open or closed. this feature is used in conjunction with the MBS.

#### Relock Time Delay (RTD)

Relock time can be changed. Range is 1 - 30 seconds.

#### UL Requirements:

- Units shall not impair operation of panic hardware mounted on door.
- Units shall not impair intended operation of an emergency exit.
- Units/Models are intended to be connected to UL Listed Equipment, not intended for Burglar or Fire Alarm Initiating or Indicating Devices.
- Ambient Conditions - "For Indoor Use Only"

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### MODELS

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#### M420 (Traffic Control)

UL1034 and 10C/500lb and 3hr rating

#### M450 (High Security)

UL1034 and 10C/1000lb and 3hr rating

#### M490 (Max Security)

UL1034 and 10C/1500lb and 3hr rating

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### TRIMS

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#### Basic

Auto Voltage Selection (AVS) for 12 or 24VDC

#### Plus

Basic features + Door Position Switch (DPS), Magnetic Bond Sensor (MBS), Relocking Time Delay (RTD), LED Status Indicator (LED) and Anti-Tamper Switch (ATS)

#### This device complies with part 15 of FCC rules.

Operation is subject to following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including any interference that may cause undesired operation. Changes or modifications not expressly approved by party responsible for compliance could void user's authority to operate equipment.

# ELECTRICAL SPECIFICATIONS

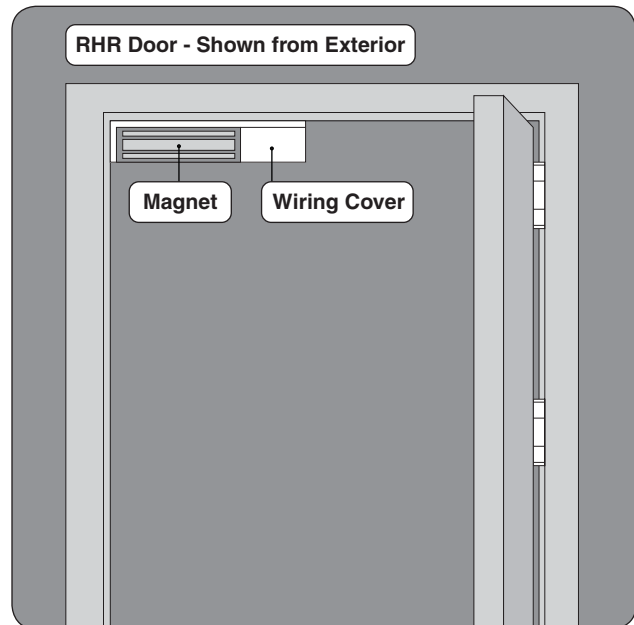
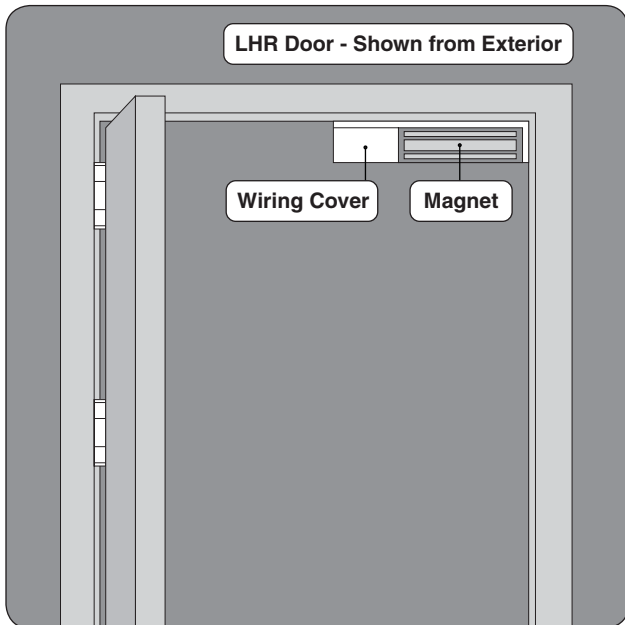
Model	Amps (12VDC) Per Lock	Amps (24VDC) Per Lock	Holding Force (lbs) Per Coil
M420	0.750	0.380	500
M450	0.750	0.380	1000
M490	0.650	0.350	1500

## LOCK INSTALLATION

### 1 PREPARE FOR INSTALLATION

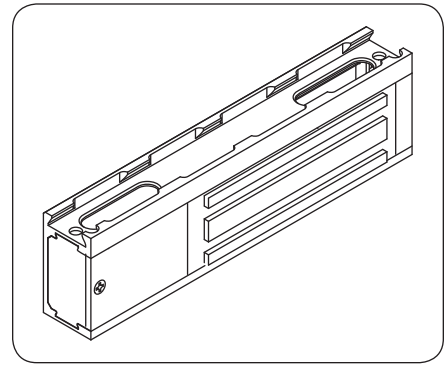
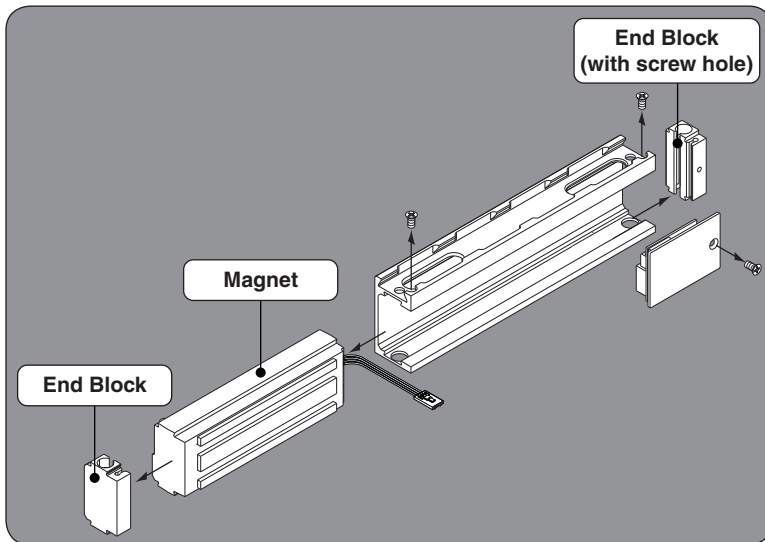
#### 1a Determine Proper Magnet Orientation

- Magnet should be placed opposite of door hinges.

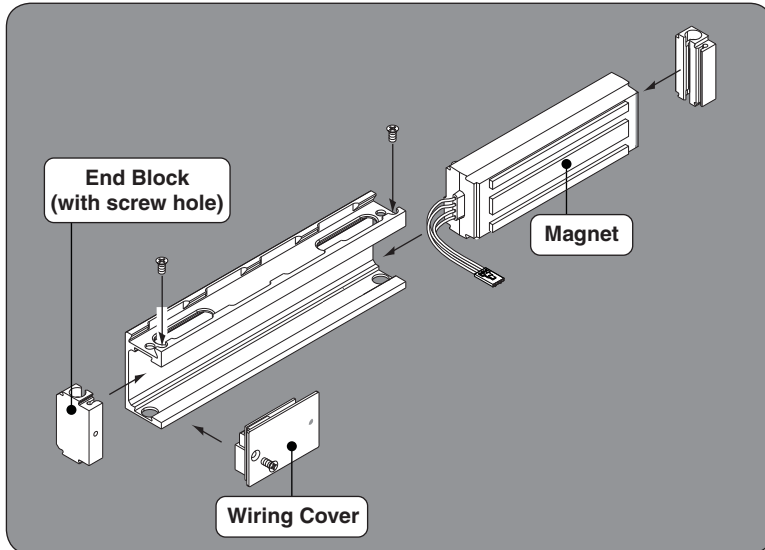


**1b****Reorient Magnet (if necessary)**

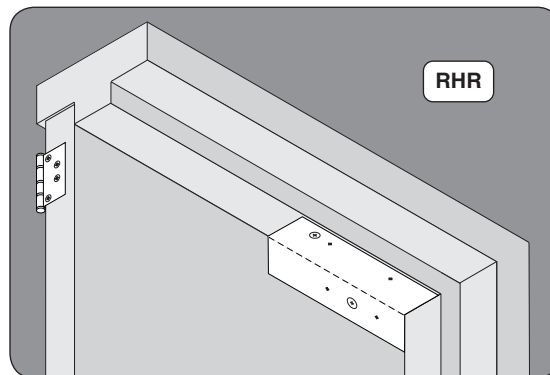
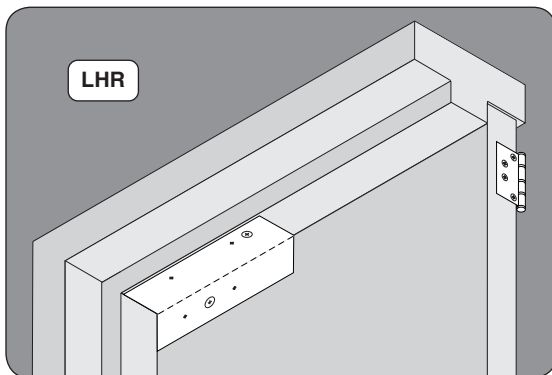
- Remove screws, wiring cover and end blocks.



- Rotate magnet, end blocks and wiring cover as shown, then reassemble.

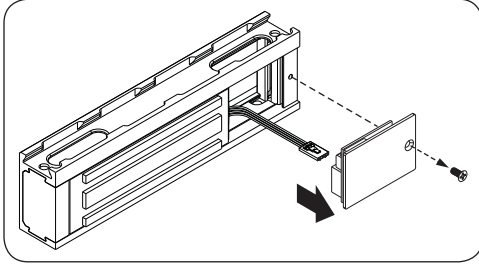
**1c****Place Template and Mark Holes**

- Place template on top corner, opposite of hinges.
- Mark holes and prepare them per template.

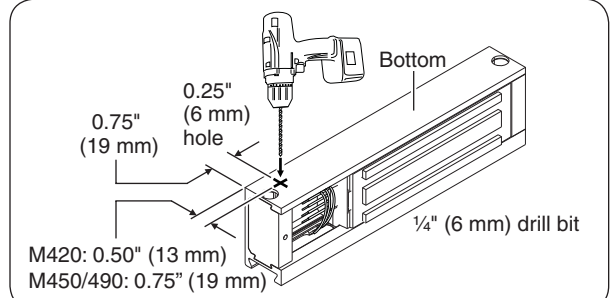


## 2 INSTALL MBS INDICATOR (OPTIONAL, PLUS MODELS ONLY)

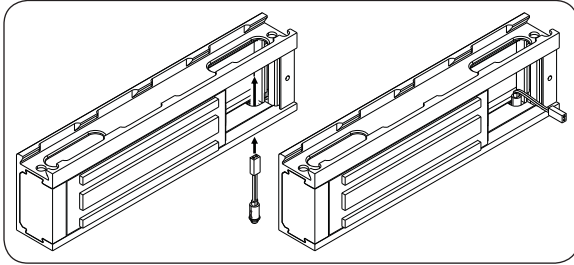
### 2a Remove Cover



### 2b Drill Hole for MBS Indicator

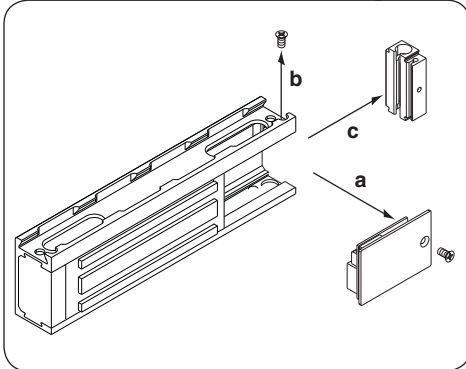


### 2c Install MBS Indicator

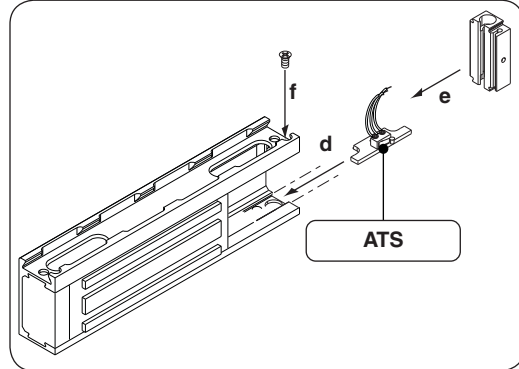


## 3 INSTALL ATS (OPTIONAL, PLUS MODELS ONLY)

### 3a Remove End Block and Wiring Cover

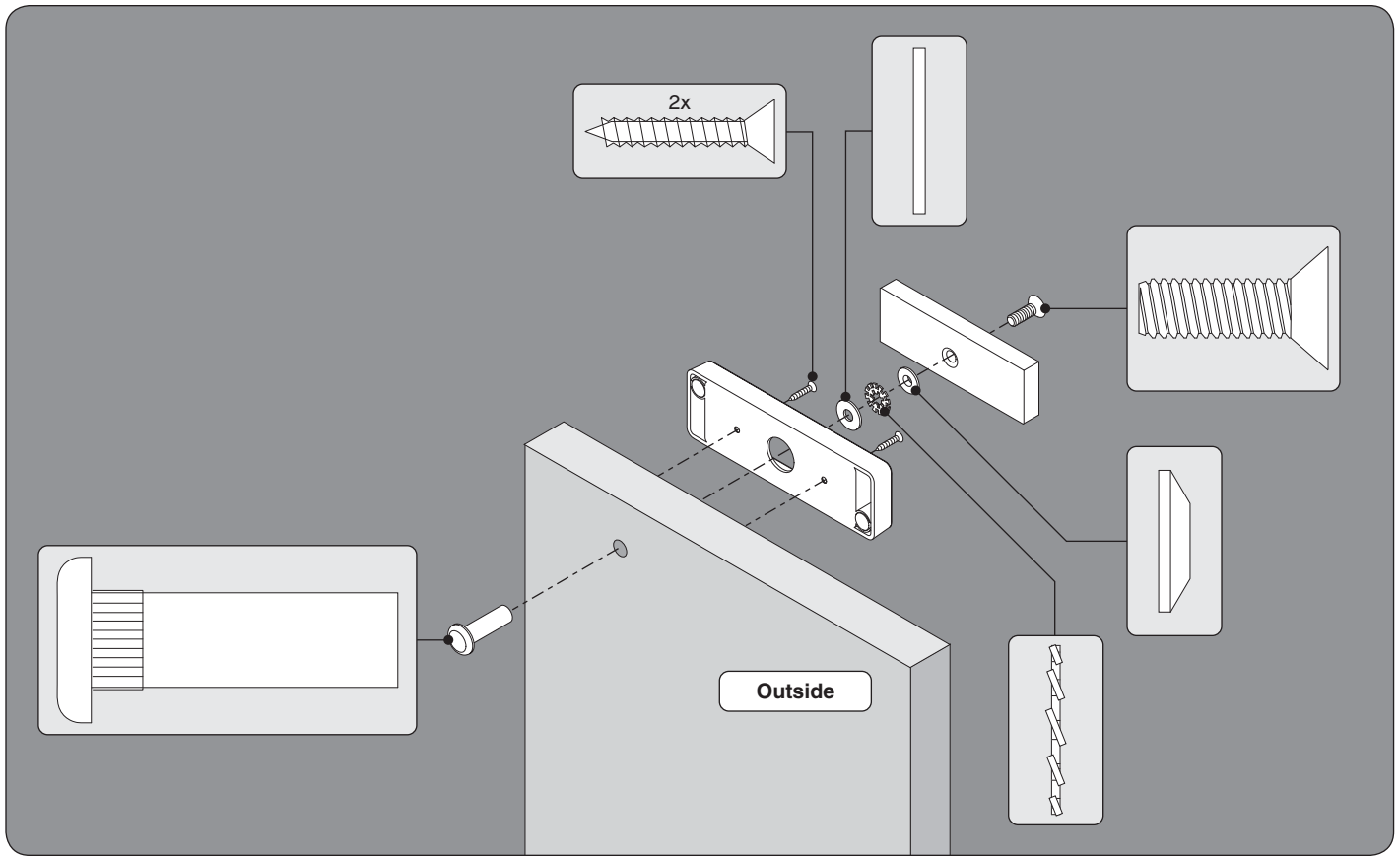


### 3b Install ATS and Reassemble



## 4 ATTACH ARMATURE TO DOOR

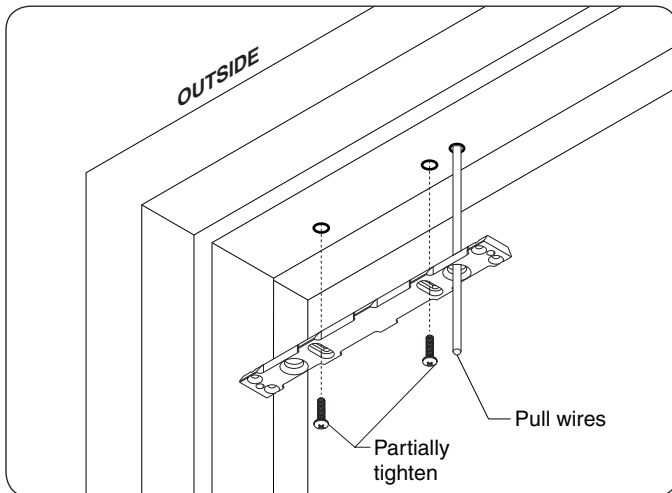
### 4a Install as Shown



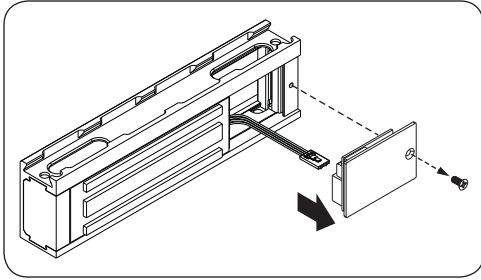
## 5 INSTALL MOUNTING BRACKET INTO FRAME

### 5a Attach Mounting Bracket Temporarily

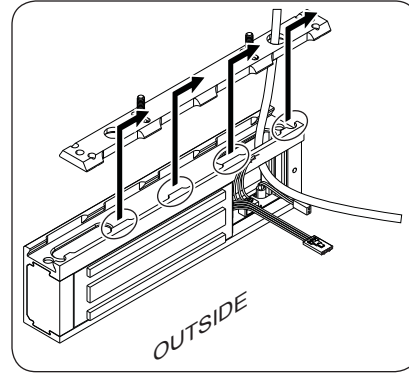
- Install two middle screws into slots and partially tighten.



### 5b Remove Wiring Cover

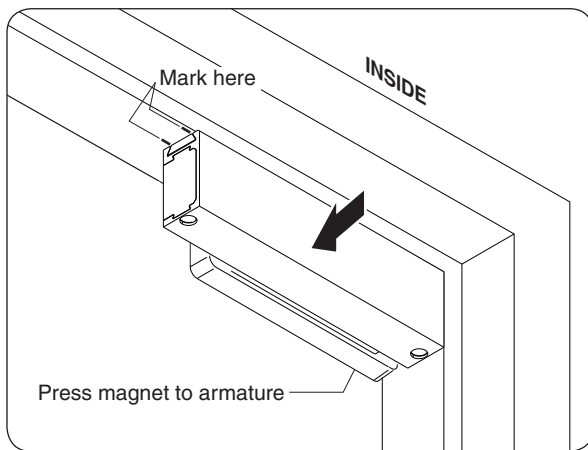


### 5c Slide Magnet onto Bracket



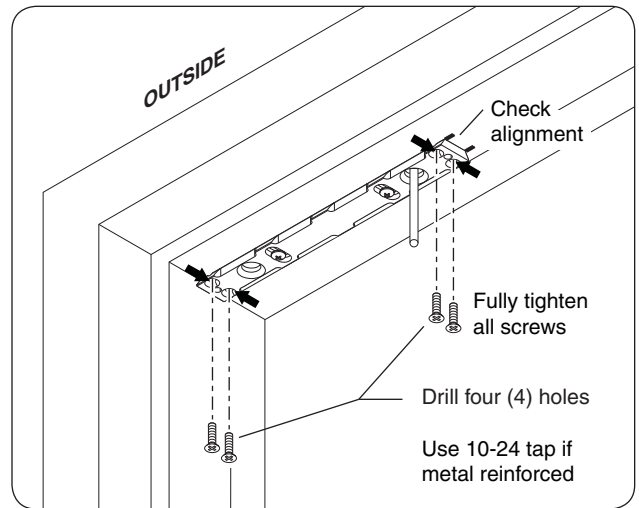
### 5d Align Magnet to Armature

- Close door.
- Press magnet to fully engage with armature.
- Mark bracket location.

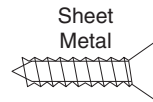
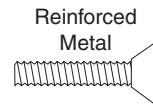


### 5e Fully Attach Bracket

- Remove magnet from bracket.
- Check bracket alignment with marks.
- Fully tighten two screws in slotted holes.
- Drill four (4) remaining holes.
- Fully tighten all screws.

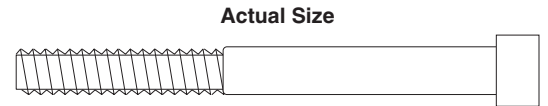
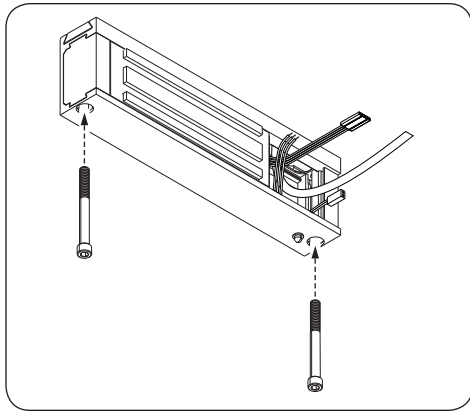


Actual Size



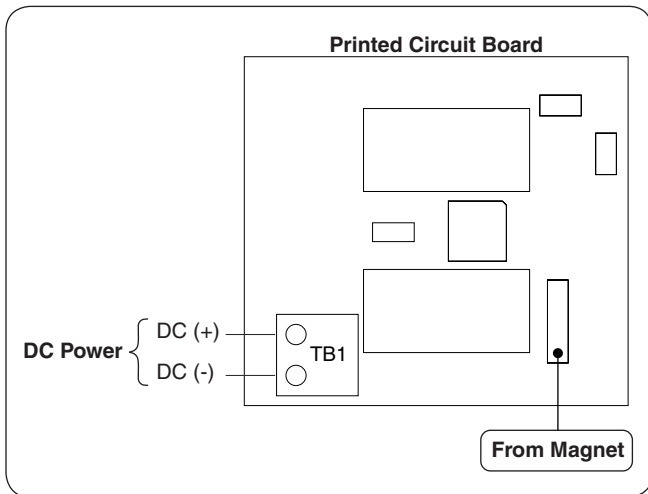
## 6 INSTALL LOCK

### 6a Install Magnet and Secure with Screws

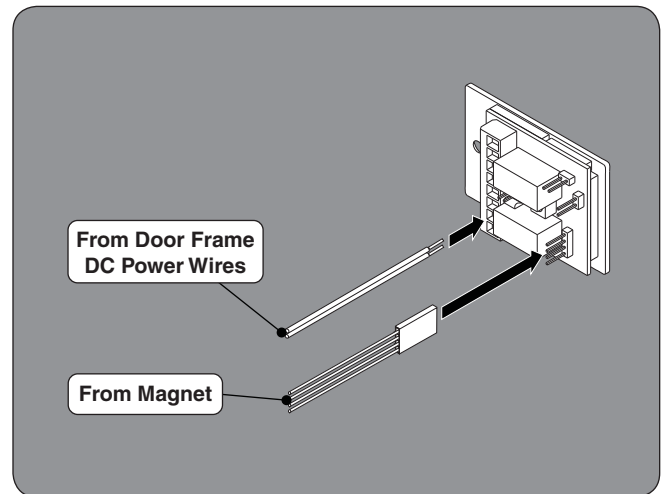


## 7 CONNECT WIRING TO BOARD (STANDARD MODEL)

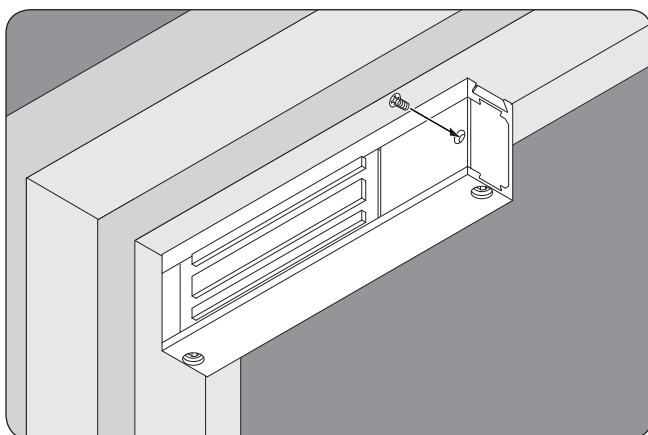
### 7a Review Wiring Connections



### 7b Connect Wires to Board

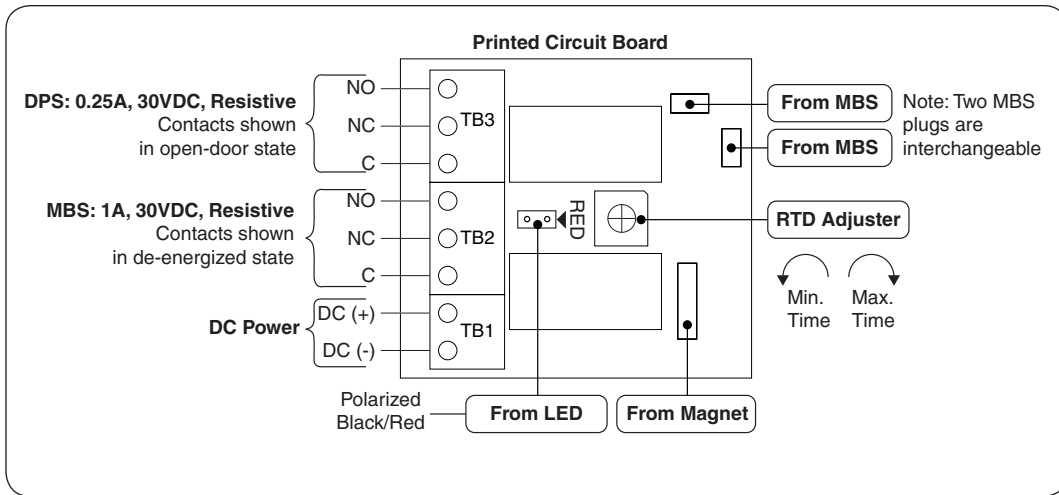


### 7c Install Cover

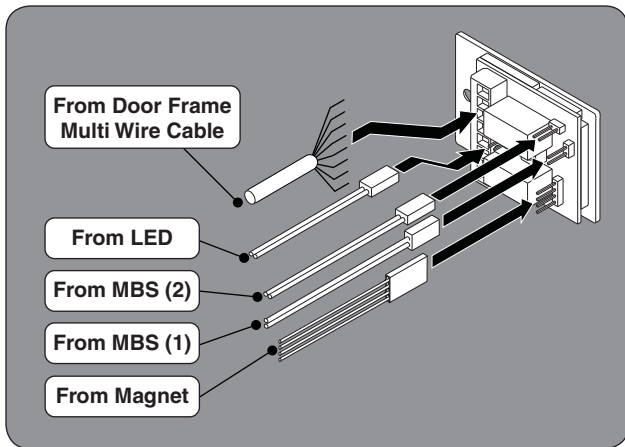


# 8 CONNECT WIRING TO BOARD (PLUS MODEL)

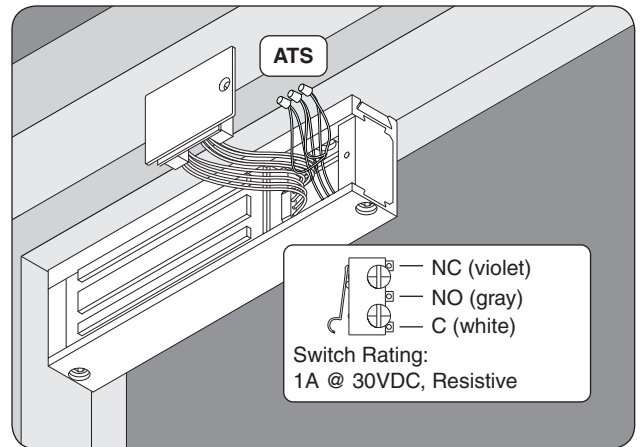
## 8a Review Wiring Connections



## 8b Connect Wires to Board



## 8c Connect ATS Wires



## 8d Install Cover

