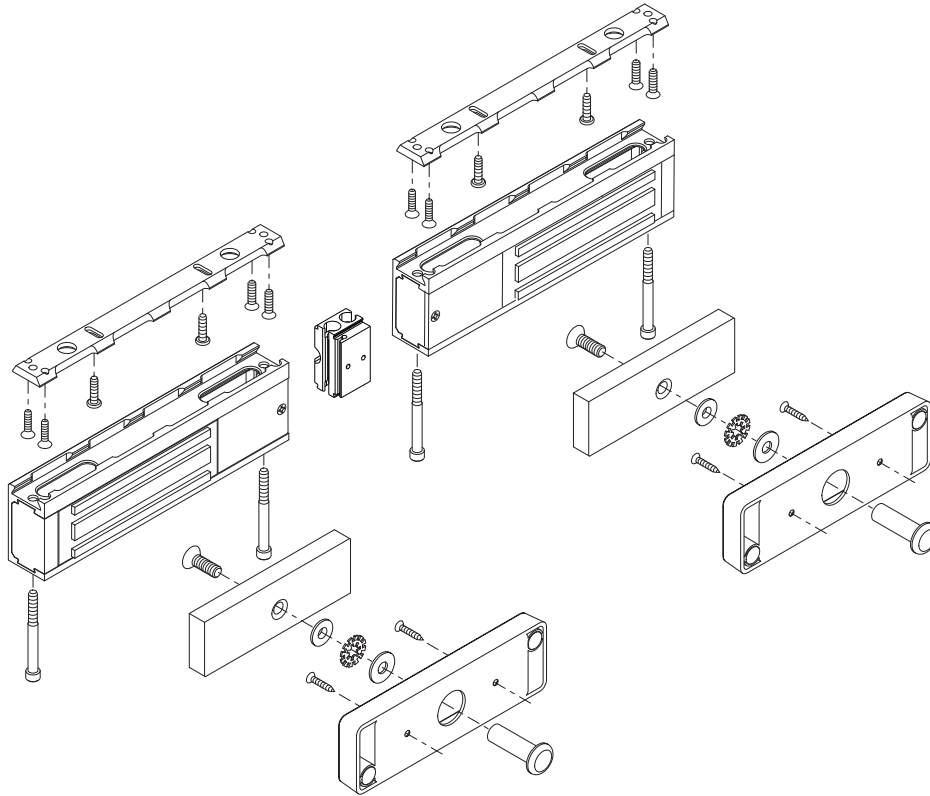


M400 Series

Electromagnetic Locks



Installation Instructions for Double Locks M422, M452, M492



FEATURES

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"

MODELS

M422 (Traffic Control)

UL1034 and 10C/500lb and 3hr rating

M452 (High Security)

UL1034 and 10C/1000lb and 3hr rating

M492 (Max Security)

UL1034 and 10C/1500lb and 3hr rating

TRIMS

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

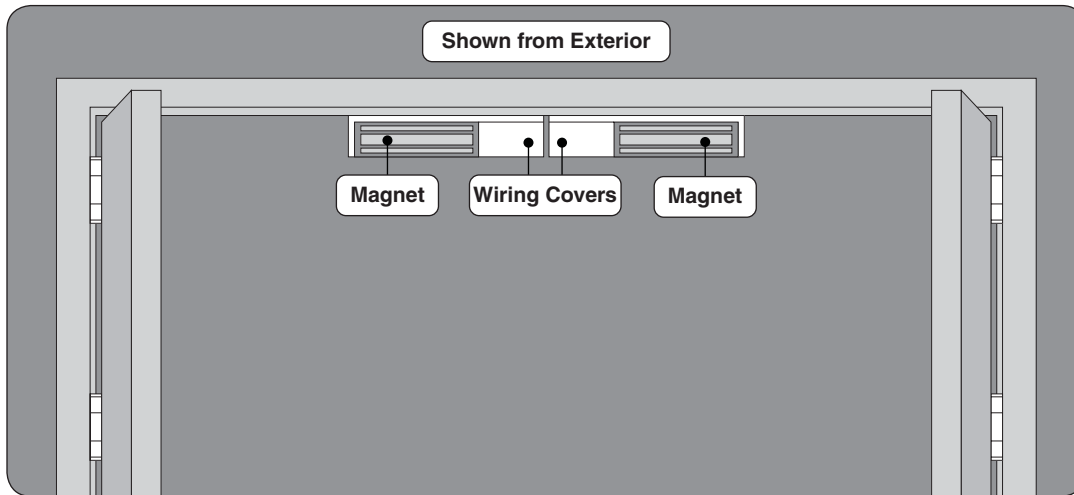
Model	Amps (12VDC) Per Lock	Amps (24VDC) Per Lock	Holding Force (lbs) Per Coil
M422	1.500	0.760	500
M452	1.500	0.760	1000
M492	1.300	0.700	1500

LOCK INSTALLATION

1 PREPARE FOR INSTALLATION

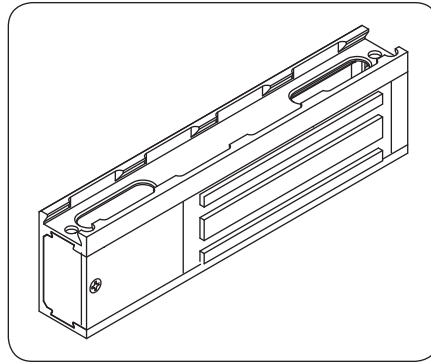
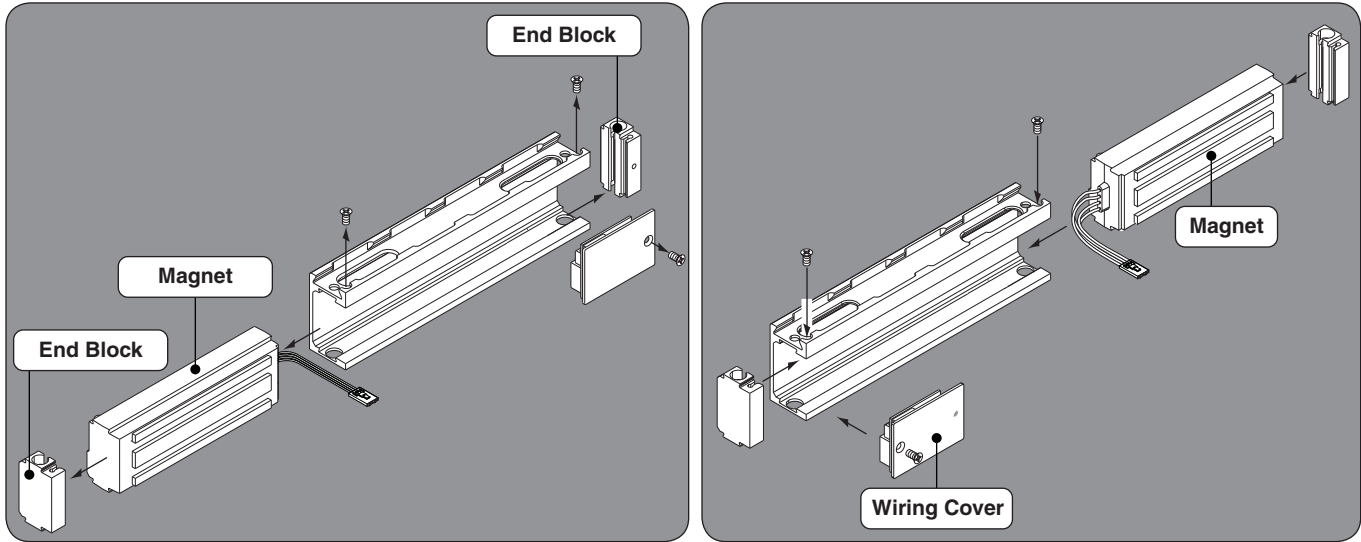
1a Lock Orientation

- Locks should be installed with wiring covers in the middle, so the magnet in one of the locks must be reoriented.

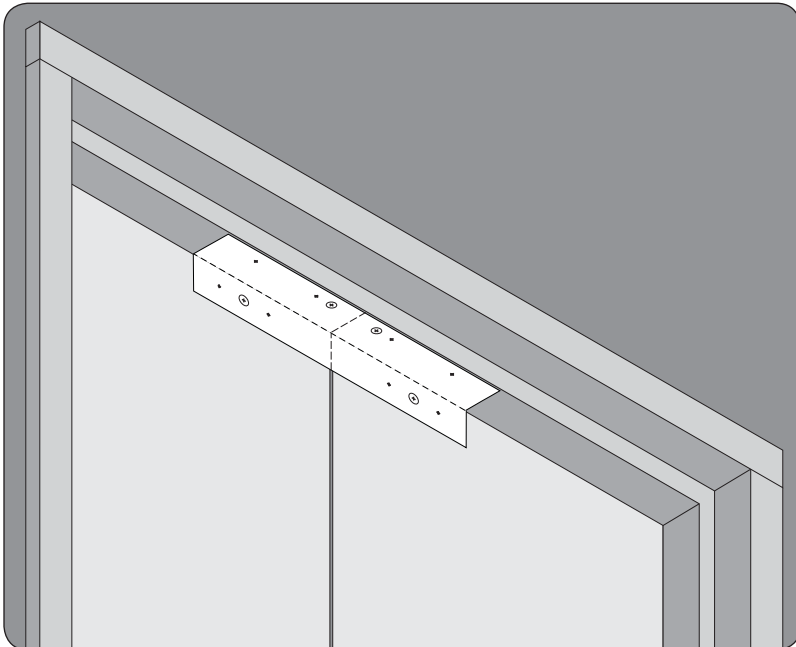


1b**Reorient Magnet in One Lock**

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

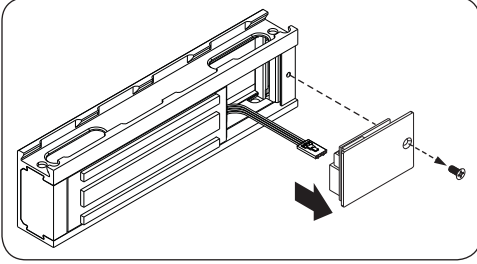
**1c****Place Template and Mark Holes**

- Place template on top centerline of doors.
- Mark holes and prepare them per template.

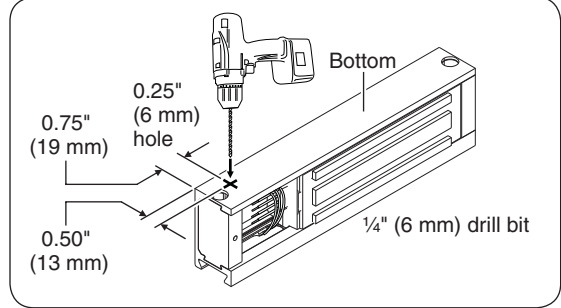


2 INSTALL MBS INDICATOR (OPTIONAL, PLUS MODELS ONLY)

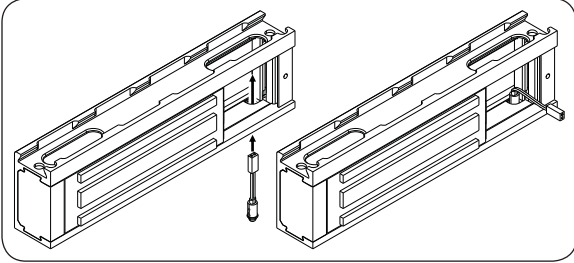
2a Remove Cover



2b Drill Hole for MBS Indicator

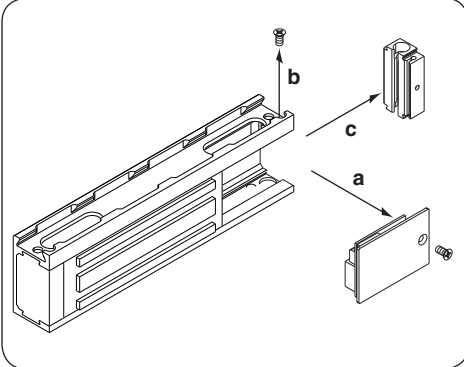


2c Install MBS Indicator

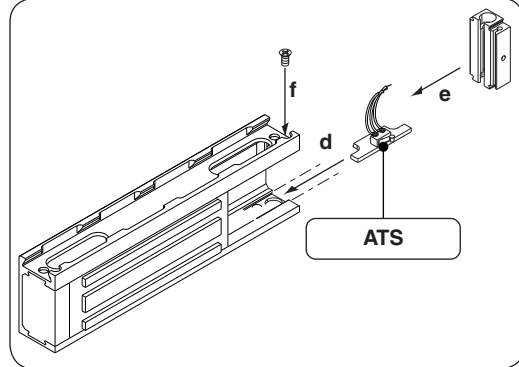


3 INSTALL ATS (PLUS MODELS ONLY)

3a Remove End Block and Wiring Cover

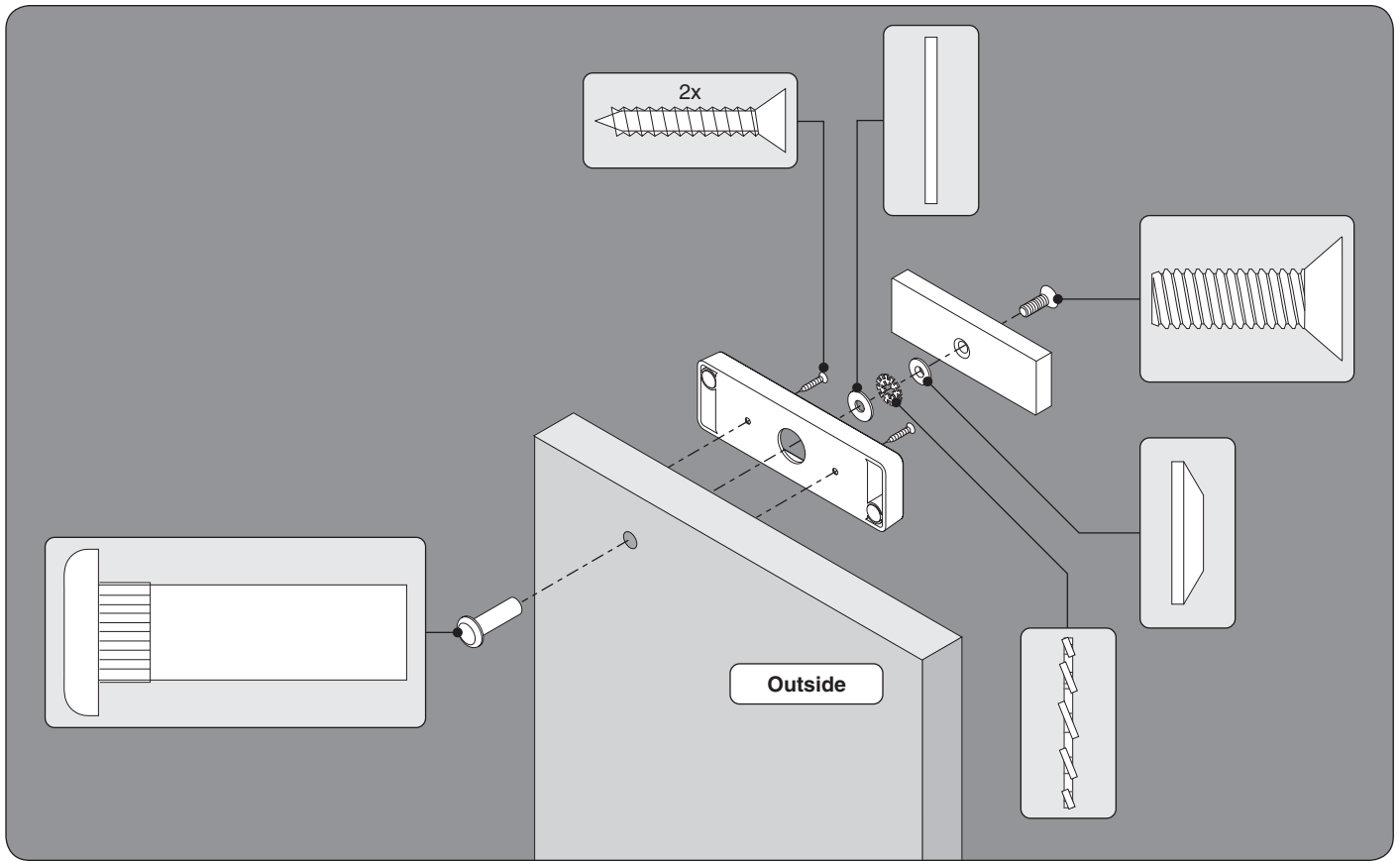


3b Install ATS and Reassemble



4 ATTACH ARMATURES TO DOORS

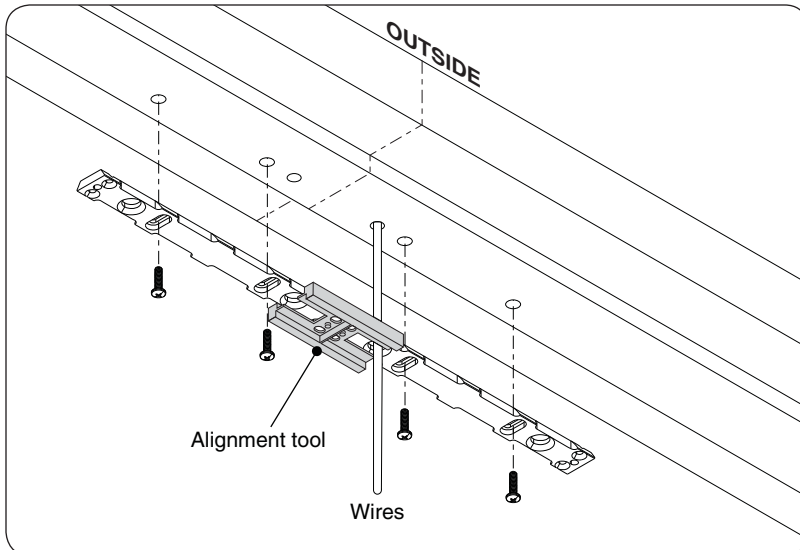
4a Install as Shown



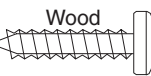
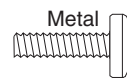
5 INSTALL MOUNTING BRACKETS INTO FRAME

5a Attach Mounting Brackets Temporarily

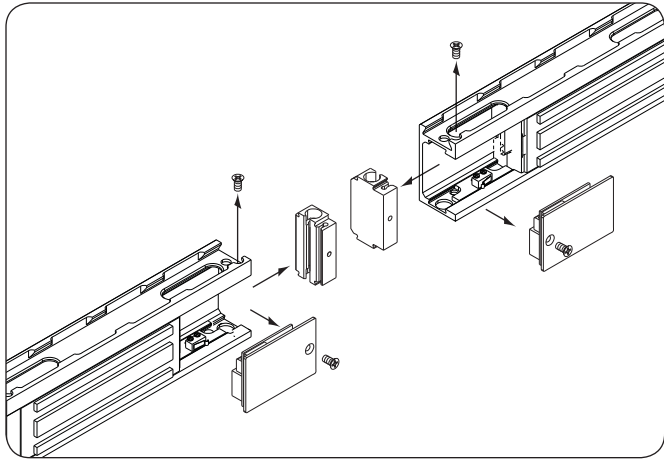
- Install alignment tool onto brackets.
- Install four (4) screws into slotted holes and partially tighten.



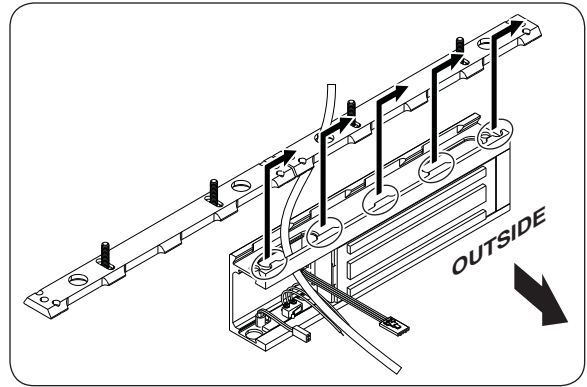
Actual Size



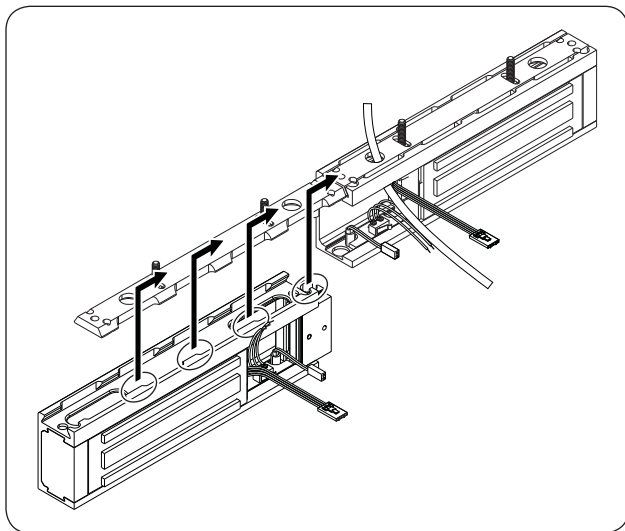
5b Remove Wiring Covers and End Blocks



5c Slide One Magnet onto Bracket

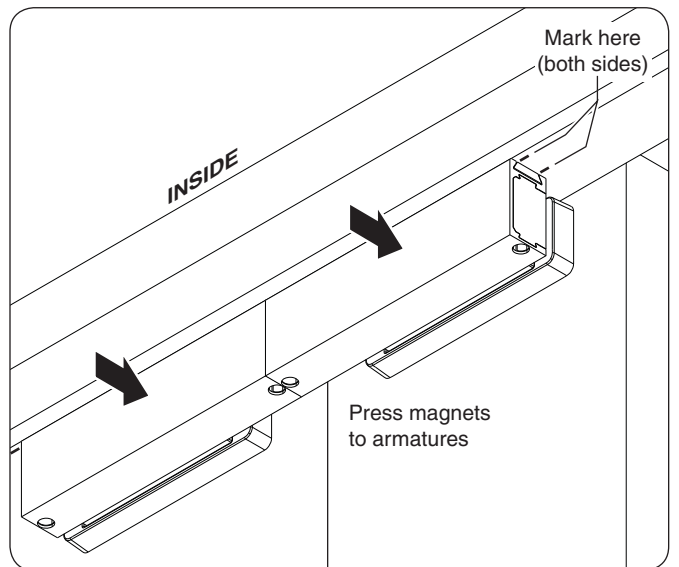


5d Slide Second Magnet onto Bracket

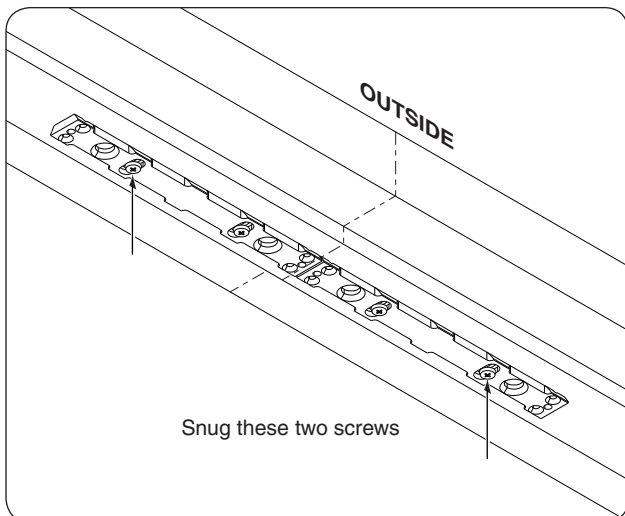


5e Align Magnets to Armatures

- Close doors.
- Press magnets to fully engage with armatures.
- Mark brackets on ends.

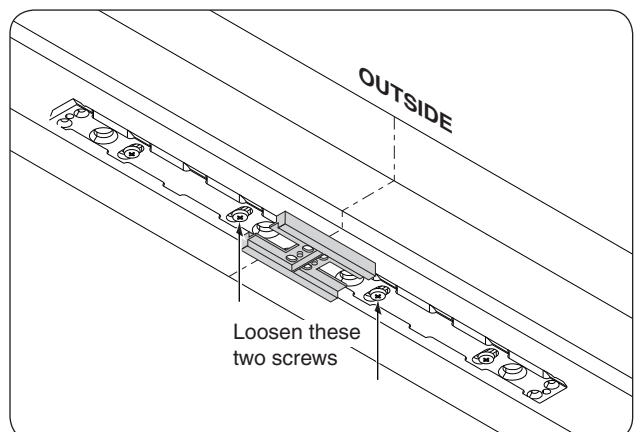


5f Remove Magnet and Snug Two (2) Outer Screws



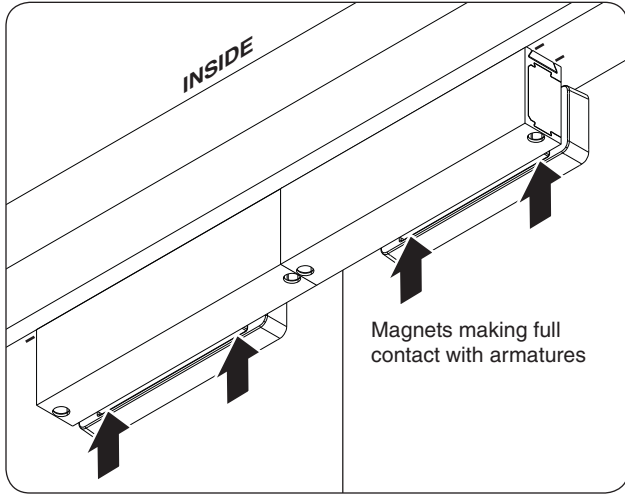
5g Align Center of Brackets Using Alignment Tool

- Loosen two (2) innermost screws.
- Place alignment tool over brackets.
- Tighten all four (4) screws.

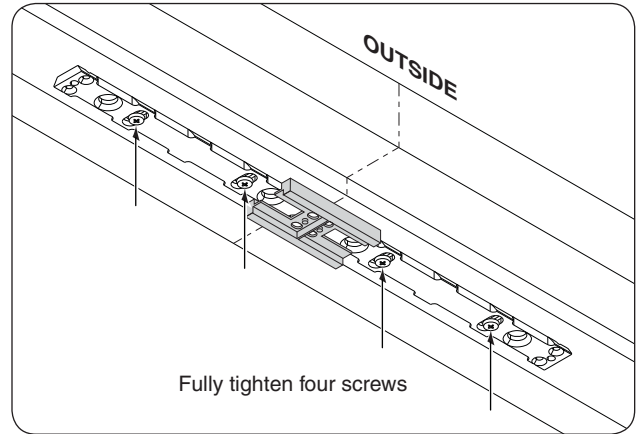


5h**Verify magnet Adjustment**

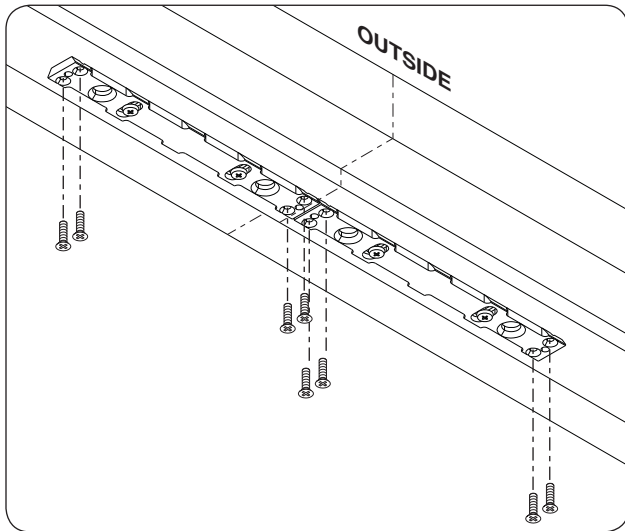
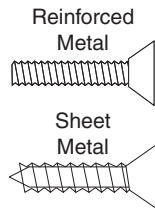
- Close door and verify magnets make full contact with armatures.
- If alignment is satisfactory, go to step 5i.
- If further adjustment is required, repeat steps 5e through 5h.

**5i****Prepare Additional Holes**

- Install alignment tool on brackets.
- Fully tighten four (4) screws.
- Drill eight (8) remaining holes. Use #10-24 tap if metal is reinforced.

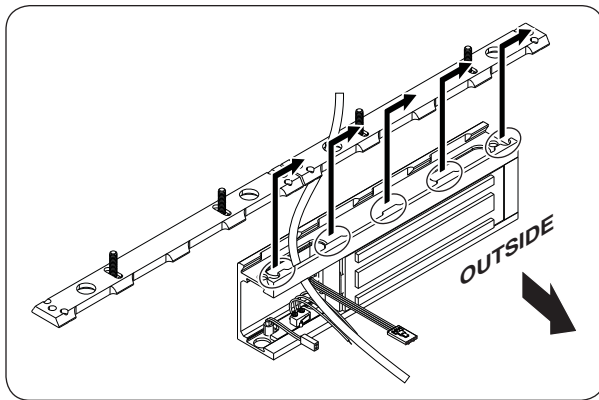
**5j****Install Eight (8) Screws**

- Remove alignment tool.
- Install and fully tighten eight (8) screws.

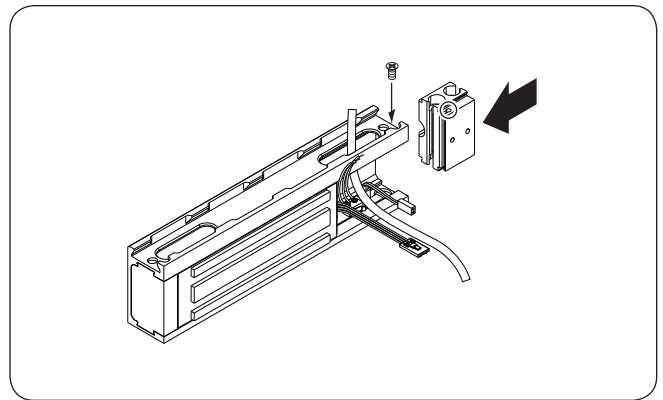
**Actual Size**

6 ATTACH MAGNETS TO MOUNTING BRACKETS

6a Slide One Magnet onto Bracket

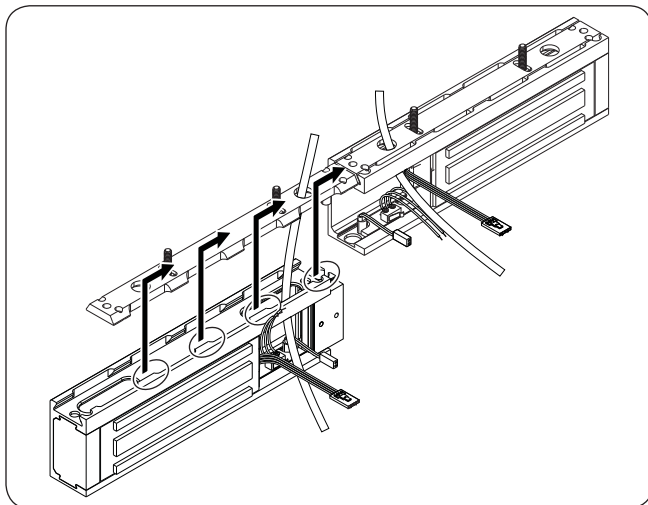


6b Install Joining Block into Lock

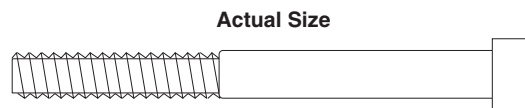
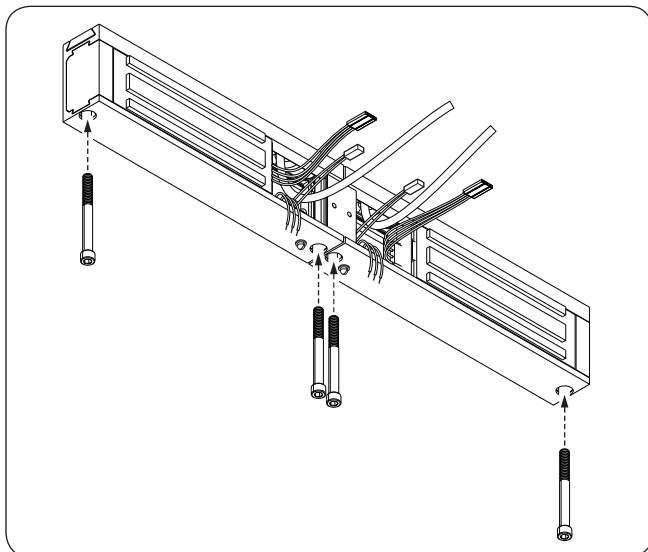


6c Slide Second Magnet onto Bracket

- Align with joining block.

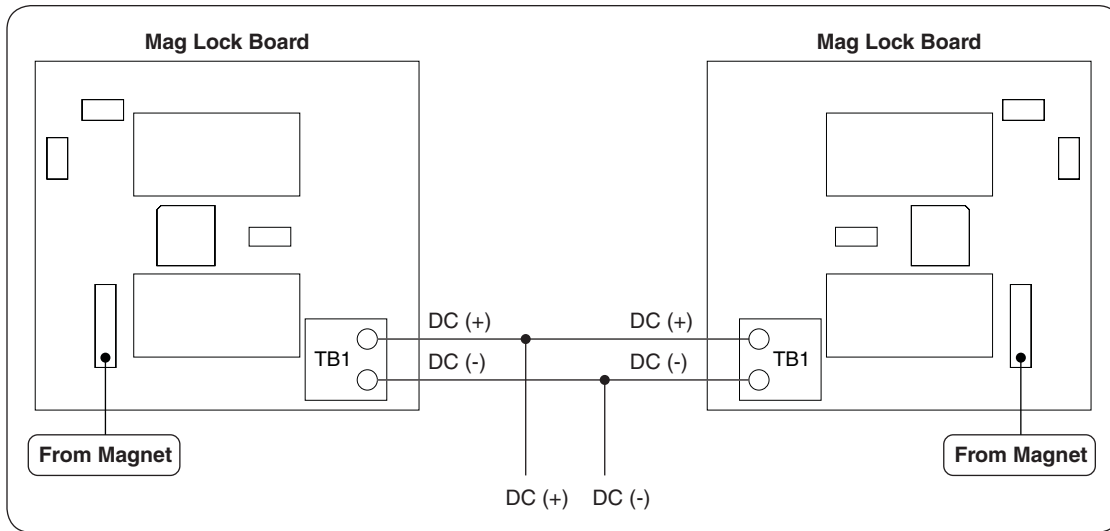


6d Secure Locks with Four (4) Screws

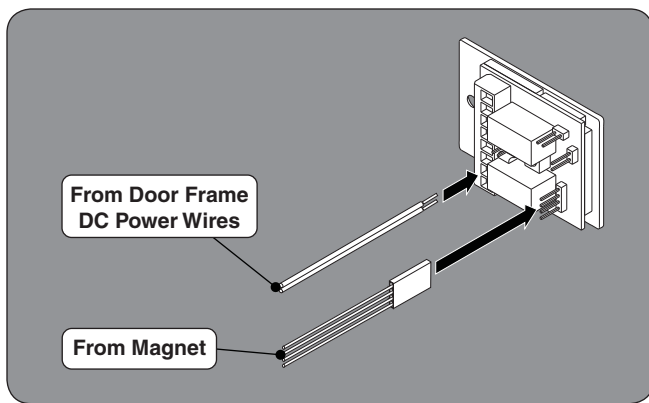


7 CONNECT WIRING TO BOARD (STANDARD MODEL)

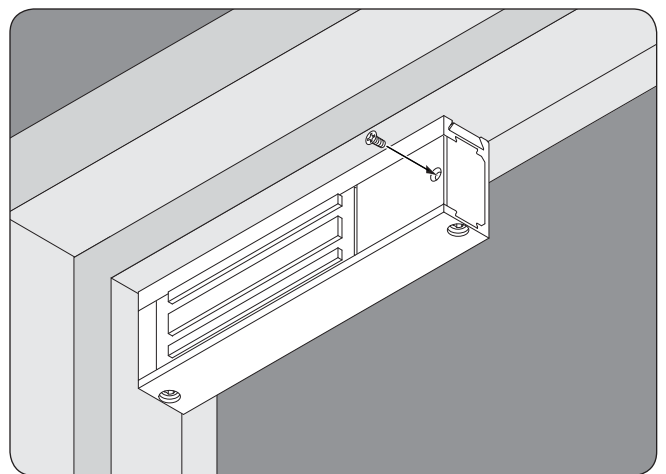
7a Review Wiring Connections



7b Connect Wires to Boards



7c Install Covers



8 CONNECT WIRING TO BOARD (PLUS MODEL)

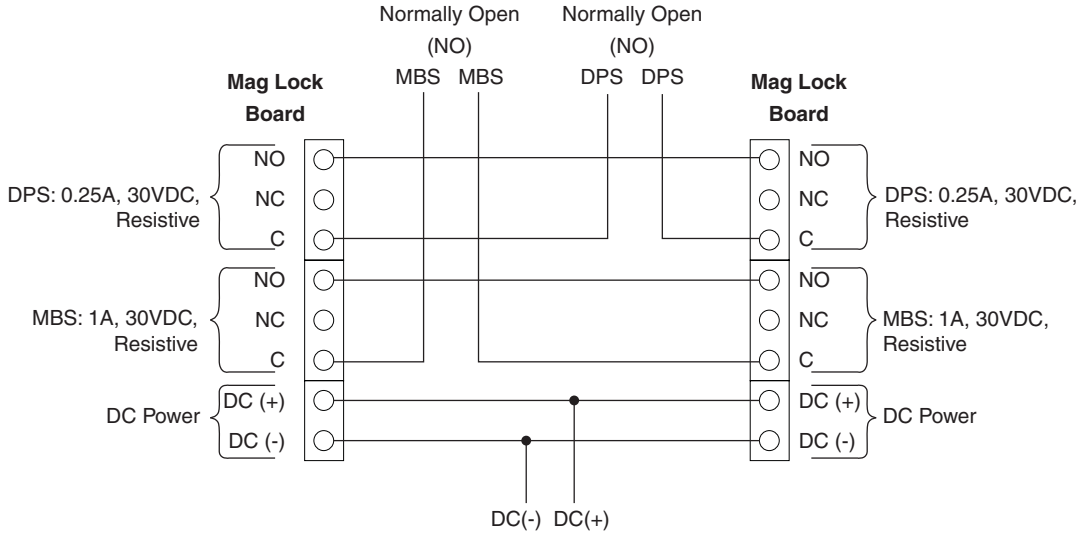
8a

Connect Outside Wires to Boards

- Choose between NO or NC.

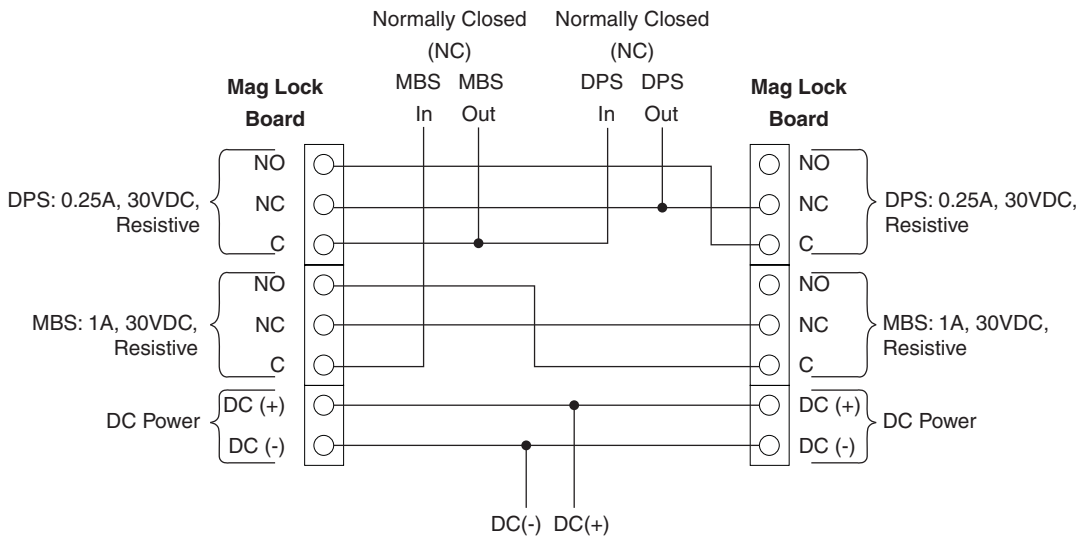
Normally Open (NO) Wiring in Parallel

Switch position will be closed when doors are closed and locked.
To be used with normally open terminals

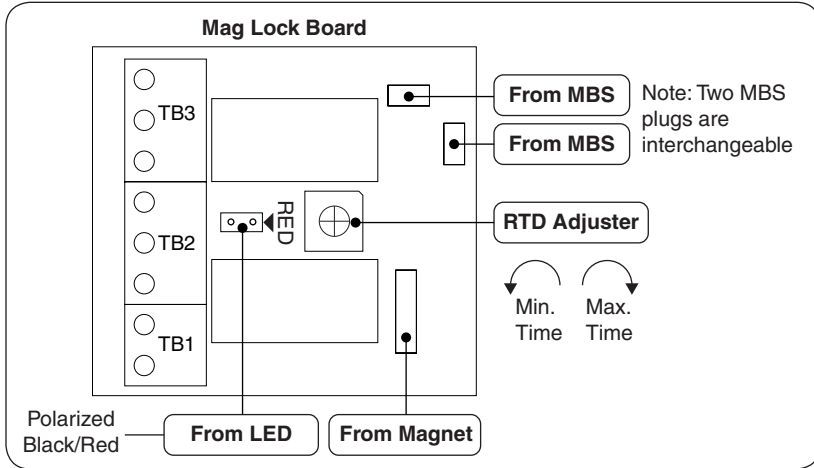


Normally Closed (NC) Wiring in Parallel

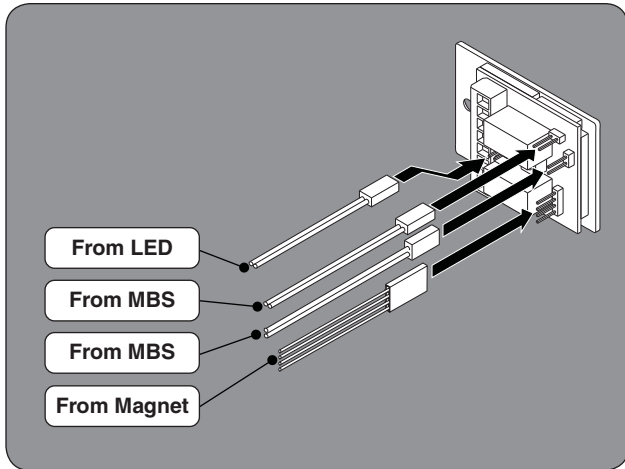
Switch position will be open when doors are closed and locked.
To be used with normally closed terminals



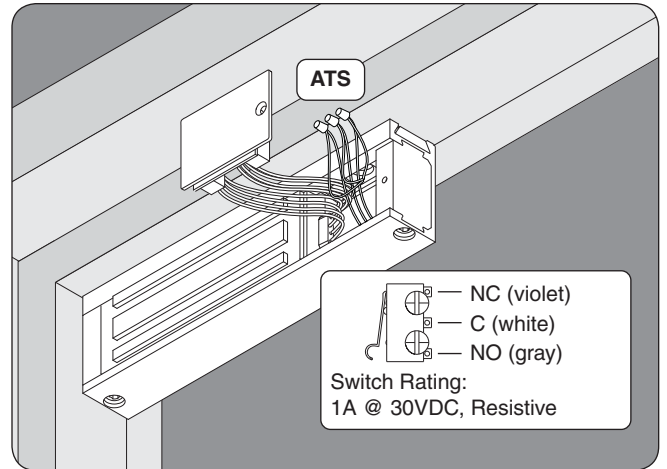
8b Review Plug Locations



8c Connect Plugs to Boards



8d Connect ATS Wires



8e Install Covers

