

**MOUNTING INSTRUCTIONS: TJ1107xD TOP JAMB Series  
 Electro-Magnetic Lock for In-Swing Doors**

**READ THOROUGHLY BEFORE INSTALLING REV#0001A**

*Handle electro-magnets and armatures carefully. Any damage to the mating surfaces may significantly reduce holding efficiency.*

The TJ1107 Series electro-magnet assembly mounts firmly and rigidly to the face of the header using an L-Bracket. The armature is held by the Z-Bracket which mounts to the interior face of the door. Special hardware is used to allow the armature to automatically align with the face of the electromagnet for maximum holding force when the magnet is energized.

A 2-1/4" wide flat surface is required to mount the TJ1107 series magnet and L-Bracket assembly (see Figure 1). For uneven or irregular surfaces, the use of shims or filler plates may be required. See the Application Bulletin (attached) for diagrams of typical door configurations and part numbers for spacers, filler blocks, shims and mounting brackets required for each type of installation.

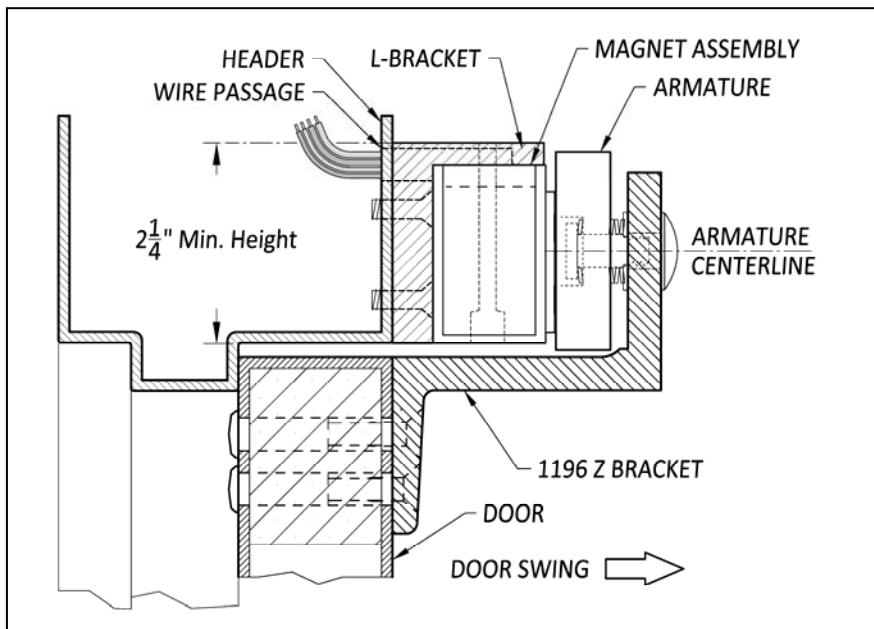
For hollow metal door and similar installations requiring drilling and tapping, the material thickness should be at least 1/8". Sheet metal screws may be used for wood doors and clad doors. For thinly clad doors or wooden doors without sufficient solid backing, a reinforcing plate may be required. Call Dortronics technical assistance for help with unusual mounting applications.

Before starting, make sure the correct drill template is available for the type of installation planned. Door swing and construction, door frame material and configuration must be considered before deciding on the proper mounting kit and method.

**STEP 1) DOOR FRAME PREPARATION**

The electromagnet assembly is carried by an L-Bracket that mounts directly to the header – see Figure 1. Before drilling any holes in the header, trial fit the bracket and magnet assembly to make sure that it will mount flush to the bottom of the header with sufficient clearance for the door to operate without interference.

Use the supplied template to mark the door frame header or drilling. Depending on the material, size the drill bit for **either #14 Sheet Metal screws or for tapping 1/4-20 machine screws**. Drill clearance hole through header for wire passage. Break all sharp edges to prevent damage to wire insulation and potential short circuits. Use the washers supplied to prevent the machine screws loosening over time.

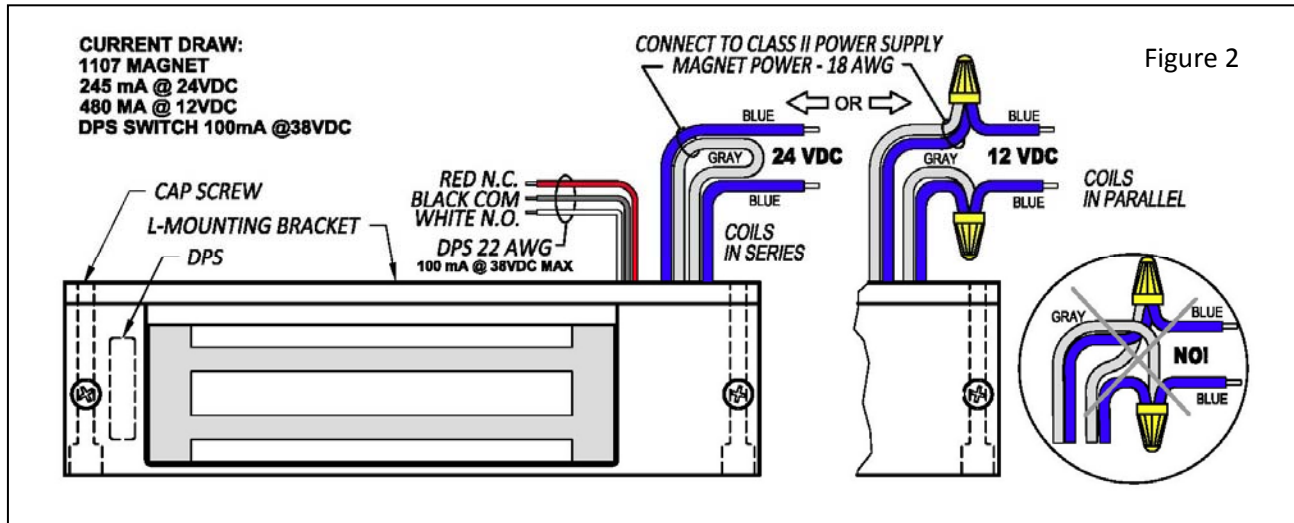


For wood jambs or clad door framing, the structure must be capable of carrying the holding force generated by the magnet. The use of reinforcing material or bolting through the header may be required.

Figure 1

**STEP 2) MAKE ELECTRICAL CONNECTIONS.**

The TJ1107 electro-magnetic lock should be connected to a Class 2 power supply. Leads are connected in series for 24 volt operation (as shipped from the factory) or connected in parallel for 12 volt operation. **For 12 volt operation**, cut the gray wire to make 2 equal lengths, strip back the insulation 3/8" on each lead and connect each gray wire end to the closer blue wire end – see Figure 2 below. **Note: For 12 VDC (parallel coils) the gray wire must be connected to the adjacent blue wire or the magnetic bond will be significantly reduced.**



If the Door Position Switch option is installed, connect the black 22 AWG wire to the common connection of the access control input for monitoring door status. Then connect either the red wire (for systems requiring normally closed contacts) or the white wire (for systems requiring normally open contacts). Refer to the device manual for details. Typically, Dortronics access control systems look for closed contacts to indicate that the door is secure (closed).

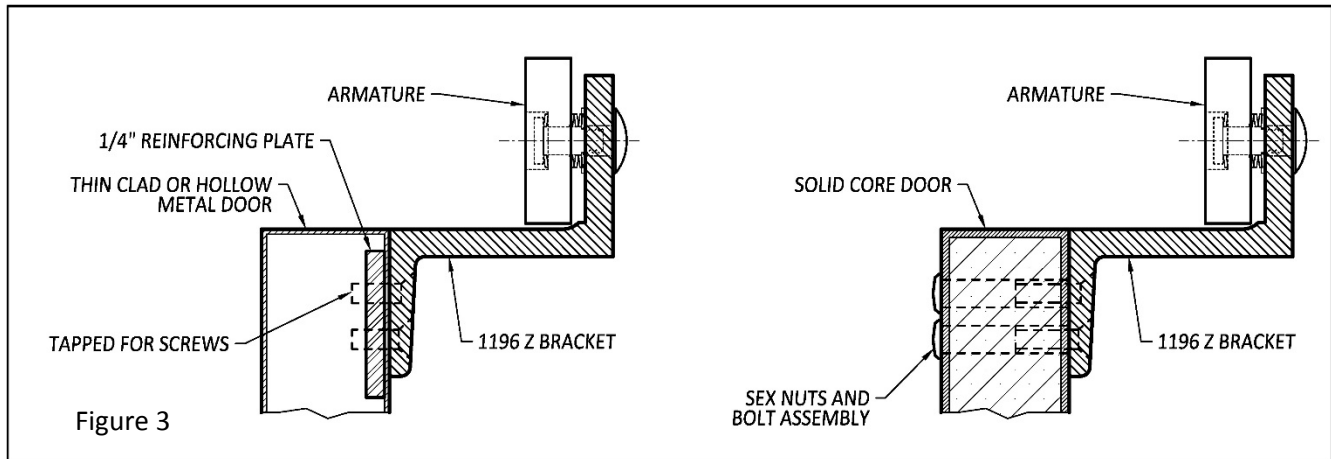
**STEP 3) INSTALLING THE Z-BRACKET**

The armature is carried by the Z-Bracket that mounts at the top edge of the door. The centerline of the armature should line up with the centerline of the face of the electromagnet. Use the supplied template to mark the door for drilling. Depending on the door structure and material, use either sex nuts and shoulder bolts or drill and tap the door for 1/4-20 machine screws.

**THRU BOLT MOUNTING IN HOLLOW METAL DOOR**

Utilizing the template **Drill (4) 11/32" holes** through door. Enlarge hole in outside face only to **1/2"** for knurled sex nut. Insert a 1/4-20 screw through the Z-bracket and the face of door. Hold firmly against door by pushing directly on head of screw. Insert sex nut from opposite face and assemble. Mount the armature to the Z-Bracket. When Z-Bracket and armature assembly is aligned correctly with the top of the door and the centerline of the electromagnet face, tighten the (4) 1/4 -20 screws fully and securely.

Hollow metal doors with insufficient material thickness (1/4" is the minimum recommended thickness) to withstand the holding force of the magnetic pull, or that might deform as the mounting hardware is tightened must be reinforced.



### THRU BOLT MOUNTING IN SOLID CORE WOOD DOOR

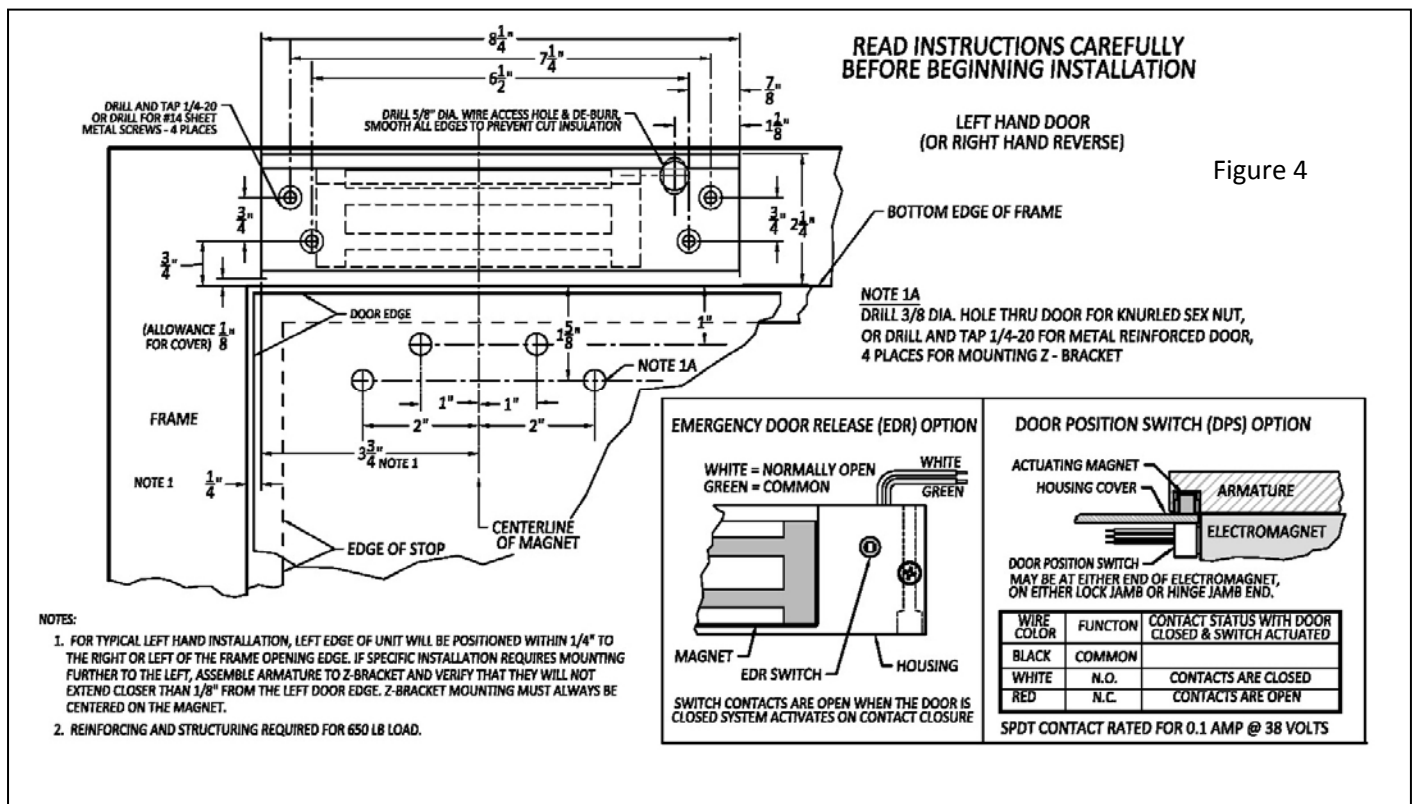
Utilizing the template, **Drill (4) 11/32" holes** through the door for the knurled sex nuts. Insert a 1/4-20 screw through the Z-bracket and the face of door. Hold firmly against door by pushing directly on head of screw. Insert sex nut from opposite face and assemble. Mount the armature to the Z-Bracket. When Z-Bracket and armature assembly is aligned correctly with the top of the door and the centerline of the electromagnet face, tighten the (4) 1/4 -20 screws fully and securely.

### MACHINE SCREW MOUNTING

Door must be properly reinforced to 1/4" minimum thickness. Drill and tap through reinforcing for 1/4 -20 machine screws.

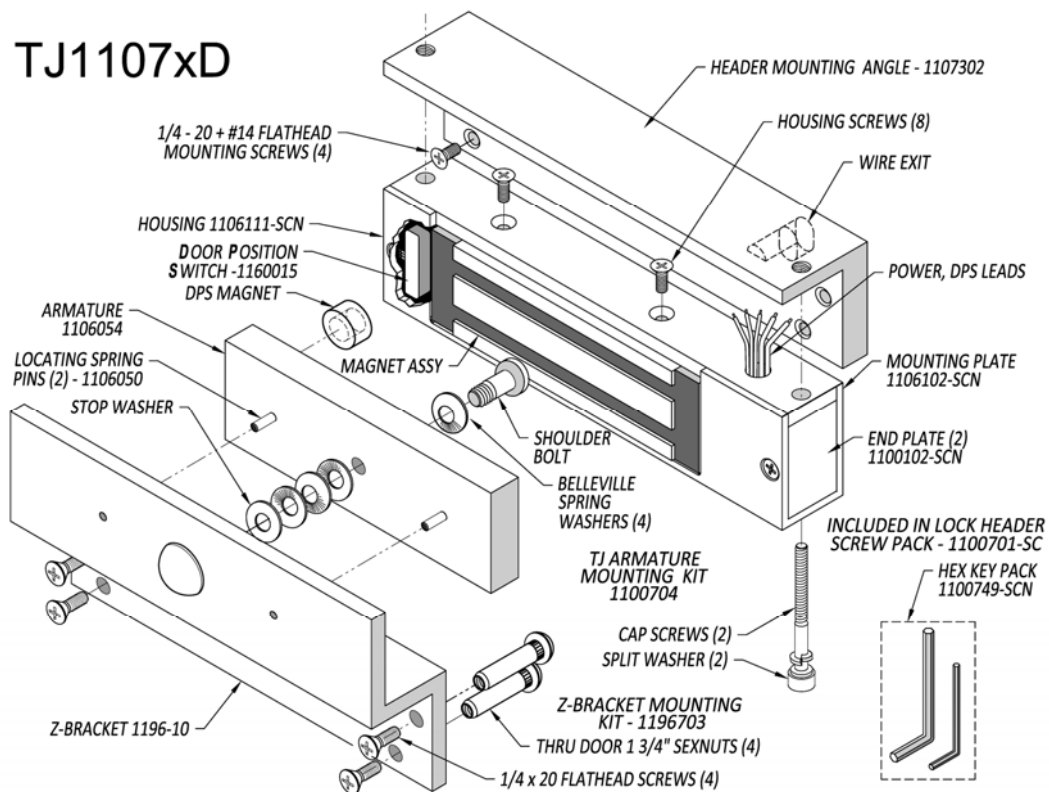
### STEP 4) VERIFY LOCK & ARMATURE ALIGNMENT

Check installation and alignment of armature and electro-magnet by opening and closing door while turning system on and off. Armature mounting surface must be in full contact with top and bottom rails of electro-magnet with center line of armature as shown on elevation profile drawings.

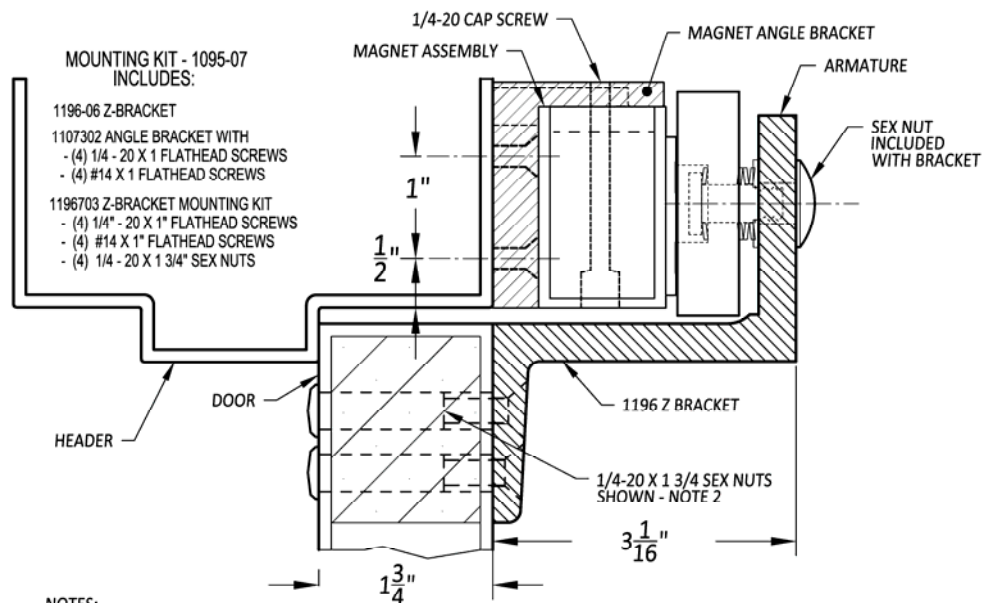




## TJ1107xD



## 1095-07 IN-SWING KIT



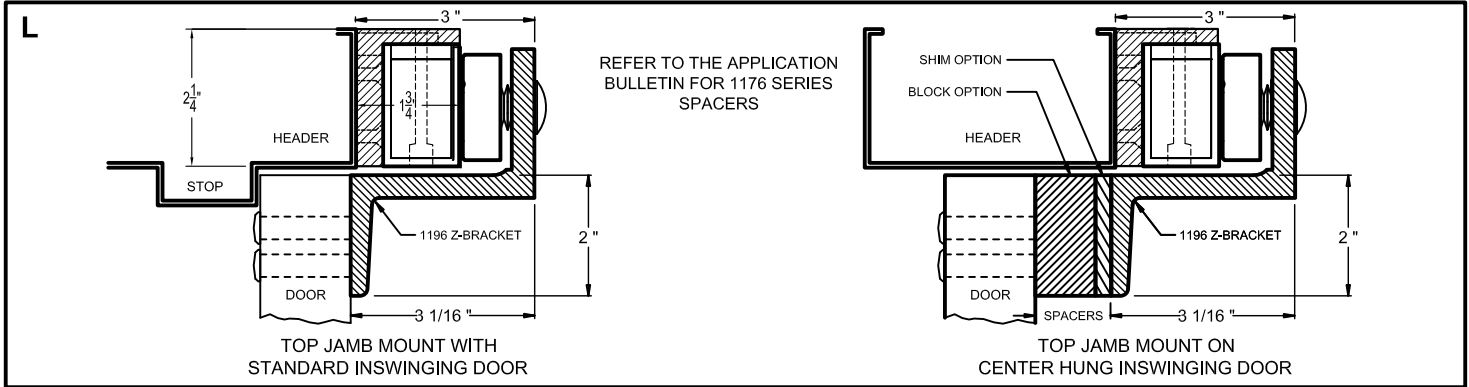
### NOTES:

1. IN TYPICAL INSTALLATION, BOTTOM OF UNIT COVER WILL BE FLUSH WITH BOTTOM OF TOP JAM.
2. IN METAL REINFORCED DOOR, Z-BRACKET MAY BE MOUNTED BY DRILLING & TAPPING FOR 1/4-20 MACHINE SCREWS.

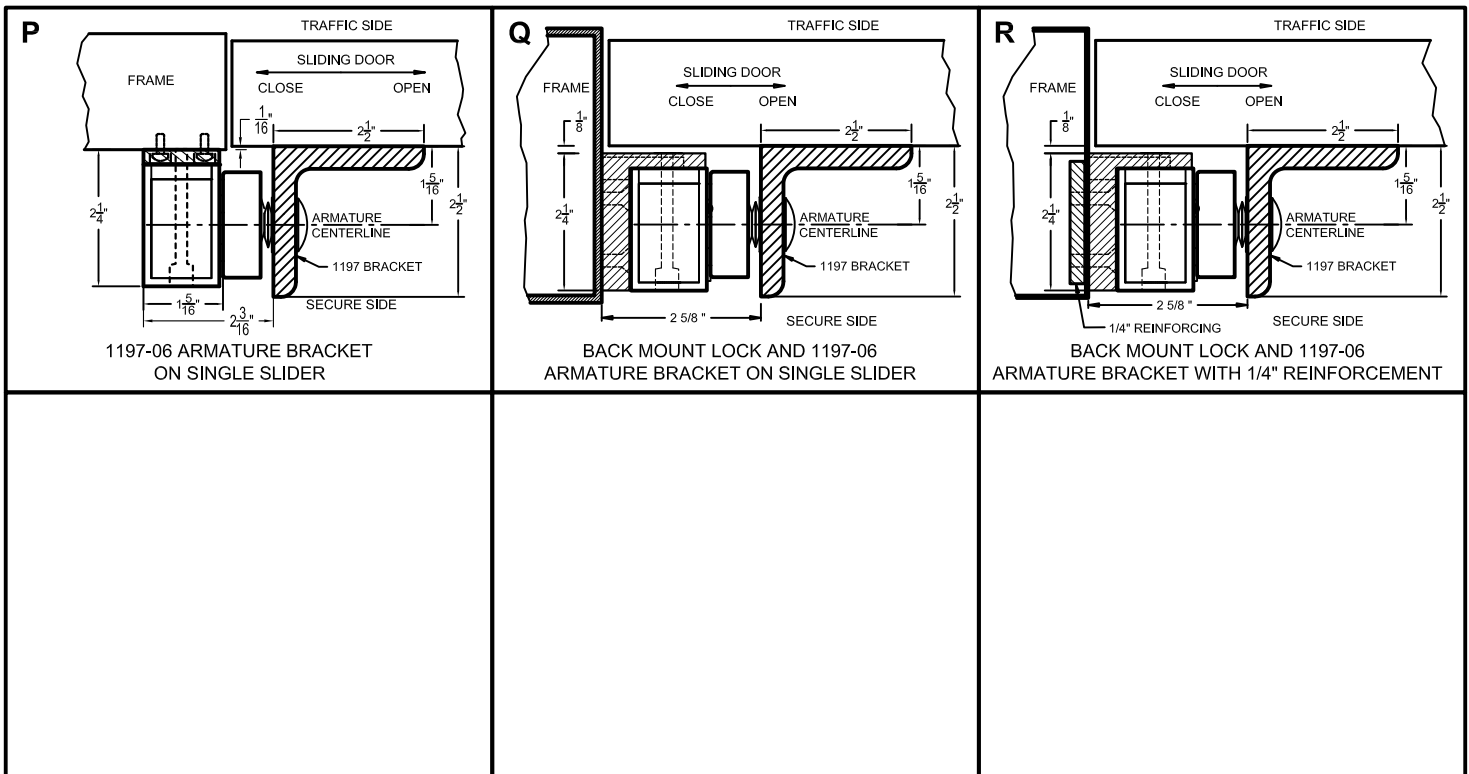
# Application Bulletin

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## 1107 SERIES INSWING DOORS



## SLIDING DOORS



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