

**MOUNTING INSTRUCTIONS: TJ1107xEDR TOP JAMB Series
 Electro-Magnetic Lock for In-Swing Doors**

READ THOROUGHLY BEFORE INSTALLING REV#0001A

IMPORTANT: 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 header using an L-Bracket. The armature is held by the Z-Bracket which mounts to the 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

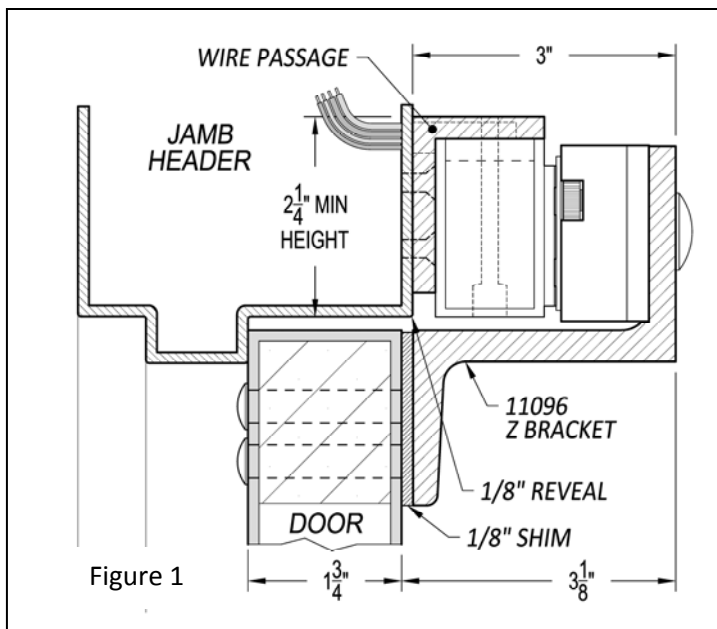
For hollow metal door and similar installations requiring drilling and tapping, the material thickness should be at least 1/8". Sheet metal screws may be used for wood doors and clad doors. For thinly clad doors or wooden doors without sufficient solid backing, a reinforcing plate may be required.

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) MARK AND DRILL JAMB HEADER & INSTALL L-BRACKET

The electromagnet assembly is carried by an L-Bracket that mounts directly to the header – see Figure 1. Before drilling 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.

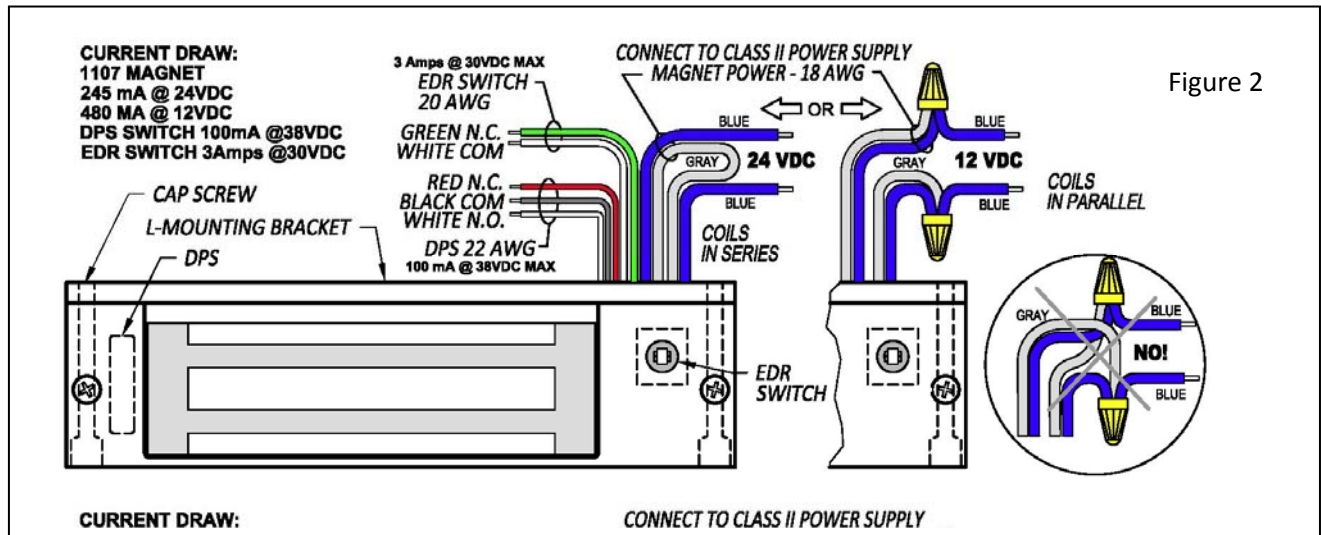
Use the supplied template to mark the door frame header for drilling. Depending on the material, size the drill bit for **either #14 Sheet Metal screws or for tapping 1/4-20 machine screws**. Drill clearance hole through header for wire passage. Break all sharp edges to prevent damage to wire insulation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

STEP 2) MAKE ELECTRICAL CONNECTIONS.

The TJ1107xEDR 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.**



Connect the 20 AWG Normally Closed white and green wires to the lock controller.

Connect the black 22 AWG wire to the common connection of the access control input for monitoring door status (DPS). Then connect either the white wire (for systems requiring normally closed contacts with door in closed position) or the red wire (for systems requiring normally open contacts with door in closed position). 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 ARMATURE MOUNT 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 1/4-20 machine screws 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.

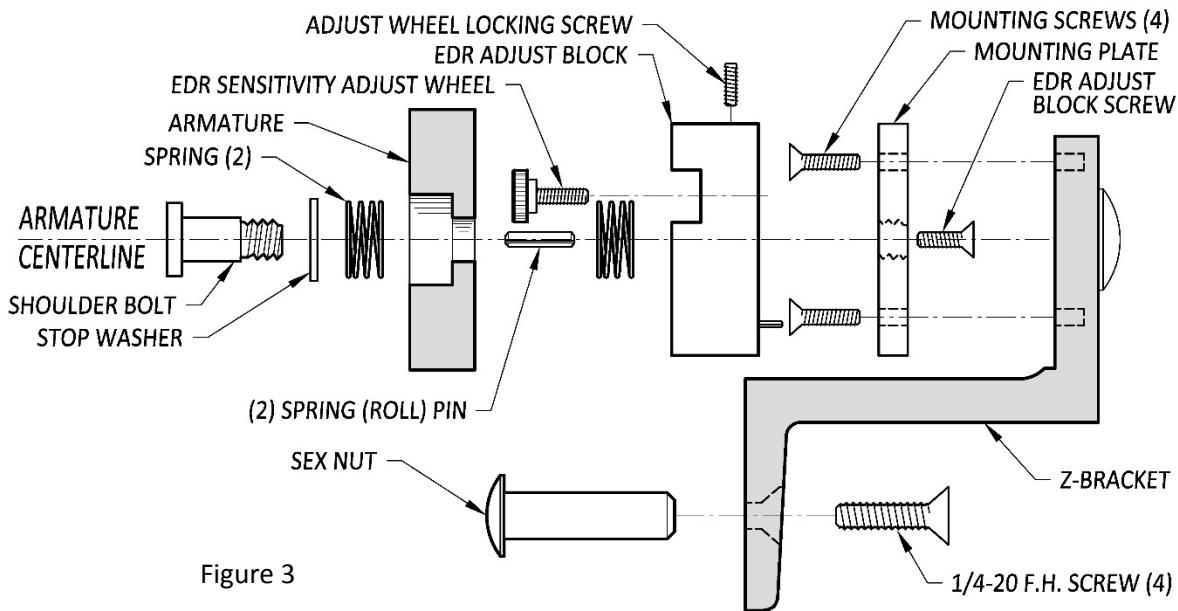


Figure 3

THRU BOLT MOUNTING IN SOLID CORE WOOD DOOR

Utilizing the template **Drill (4) 11/32"** holes through door 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

MACHINE SCREW MOUNTING

Door must be properly reinforced to 1/4" minimum thickness and structured for the load. Drill and tap thru reinforcing for 1/4-20 machine screws. Insert shoulder screw/armature assembly, being sure that spring washers remain over shoulder and flat washer is between shoulder and face of door. When armature is properly aligned with the centerline of the face of the electromagnet, tighten the 1/4-20 machine screws fully and securely.

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.

ADJUSTING THE EDR SWITCH SENSITIVITY

If the Emergency Door Release option is installed, the EDR switch must be adjusted for correct operation. Turn the EDR Adjust Wheel so that the switch contacts are open when the door is closed and unattended. The armature is designed to allow a small amount of play when pressure is applied to the door in the direction of travel. Turn the EDR Adjust Wheel until the switch contacts close when not more than 15 lbs. of force is applied in the direction of travel. Note: Local building codes may differ. It is the installer's responsibility to make sure that all work is in compliance with applicable guidelines.

Once the EDR Adjust Wheel has been set for correct operation, lock it in place by using the supplied hex key to tighten the set screw.

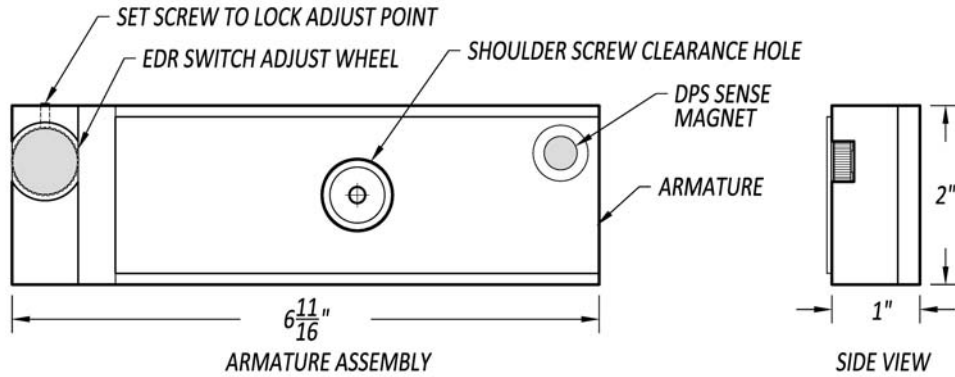
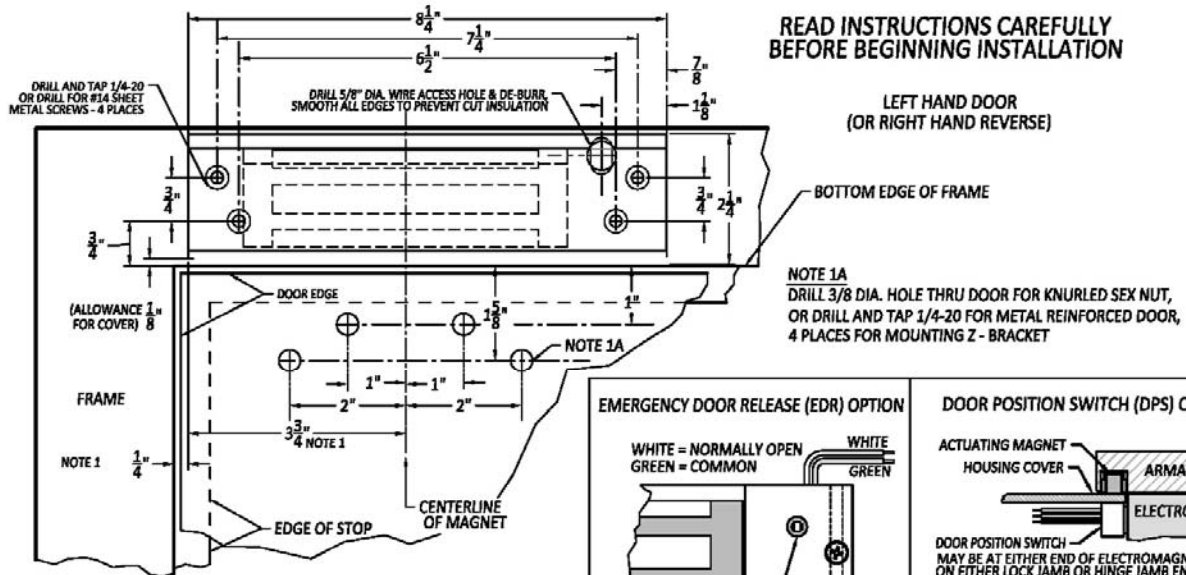


Figure 4

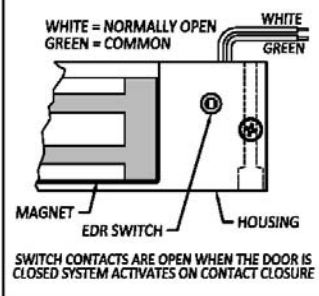


READ INSTRUCTIONS CAREFULLY BEFORE BEGINNING INSTALLATION

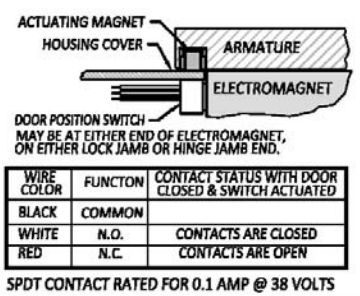
LEFT HAND DOOR
(OR RIGHT HAND REVERSE)

NOTE 1A
DRILL 3/8 DIA. HOLE THRU DOOR FOR KNURLED SEX NUT, OR DRILL AND TAP 1/4-20 FOR METAL REINFORCED DOOR, 4 PLACES FOR MOUNTING Z-BRACKET

EMERGENCY DOOR RELEASE (EDR) OPTION



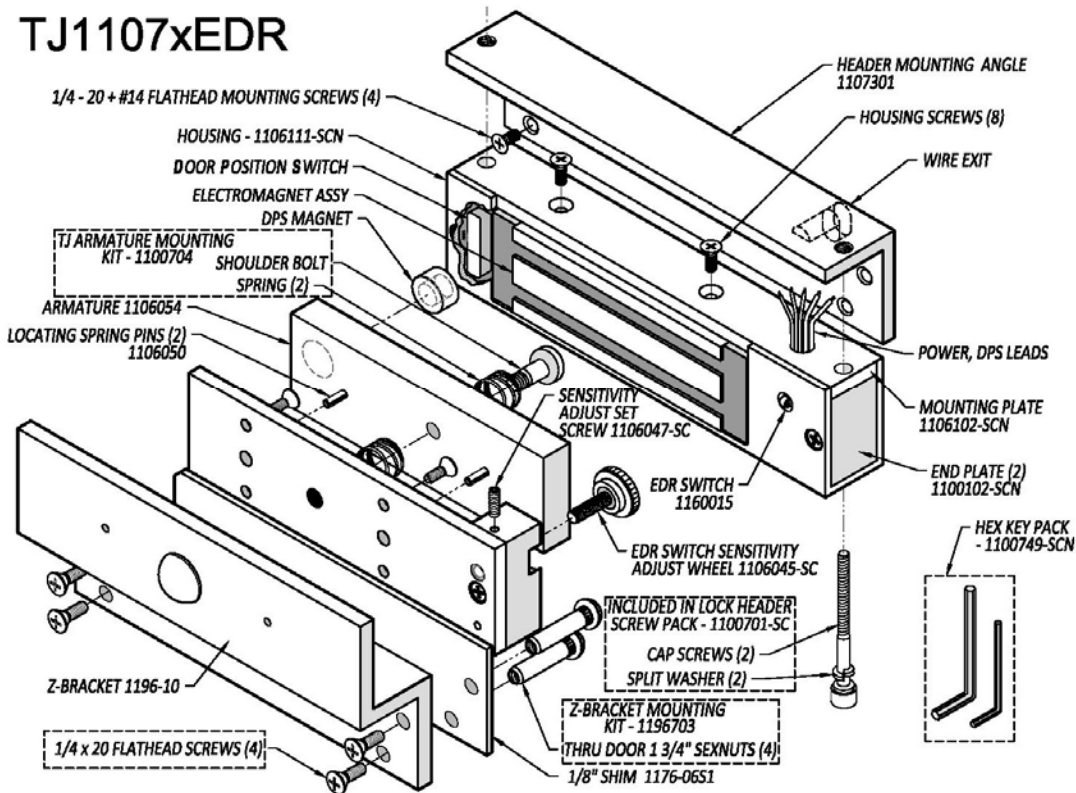
DOOR POSITION SWITCH (DPS) OPTION



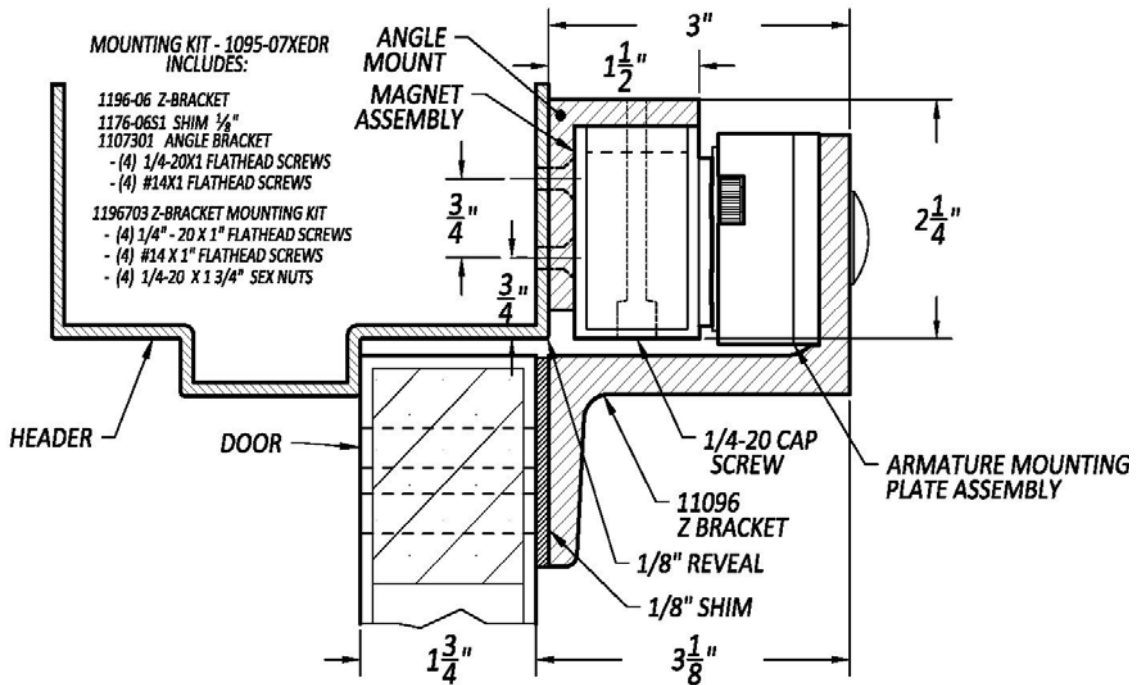
- NOTES:**
- FOR TYPICAL LEFT HAND INSTALLATION, LEFT EDGE OF UNIT WILL BE POSITIONED WITHIN 1/4" TO THE RIGHT OR LEFT OF THE FRAME OPENING EDGE. IF SPECIFIC INSTALLATION REQUIRES MOUNTING FURTHER TO THE LEFT, ASSEMBLE ARMATURE TO Z-BRACKET AND VERIFY THAT THEY WILL NOT EXTEND CLOSER THAN 1/8" FROM THE LEFT DOOR EDGE. Z-BRACKET MOUNTING MUST ALWAYS BE CENTERED ON THE MAGNET.
 - REINFORCING AND STRUCTURING REQUIRED FOR 650 LB LOAD.



TJ1107xEDR



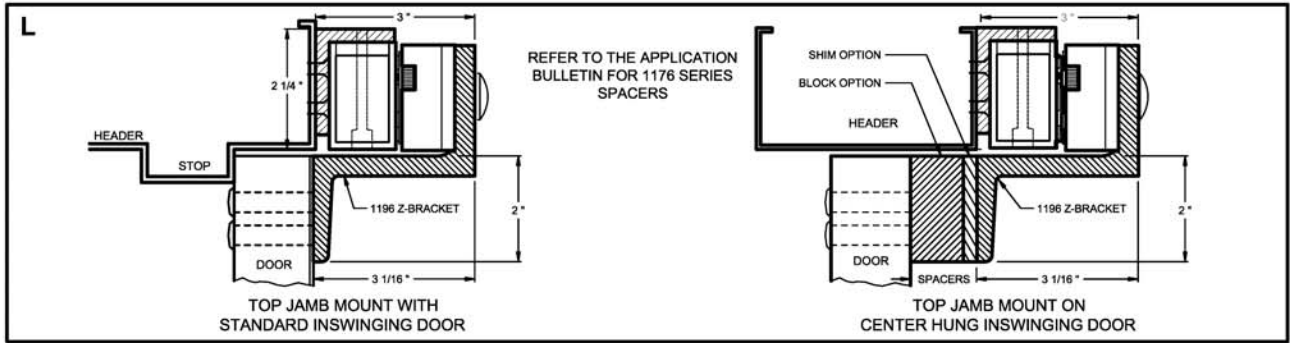
1095-07xEDR IN-SWING KIT





Application Bulletin

TJ1107xEDR SERIES IN-SWING DOORS



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