

INSTALLATION

RCI 171HD MAGNETIC LOCK FOR HAZARDOUS LOCATIONS

Pre-Installation Instructions

IMPORTANT! Read thoroughly before attempting installation. Do not damage or mark magnetic lock or armature face - may reduce holding efficiency.

This product is intended to be used in Class I Division 2 hazardous locations. The following guidelines must be observed to reduce the risk of fire explosion.

All national and local codes must be followed in the installation of the magnetic lock assembly. For code interpretation, consult a local code authority

This unit must be connected to an NEC (National Electric code, NFPA 70) Class 2 Supply. Operating temperature for the magnetic lock will not exceed 185° F (85° C). Maximum ambient temperature is not to exceed 104° F (40° C).

For supply connections, use a suitable wire with a minimum insulation temperature rating of 167° F (75° C)

To reduce the risk of the ignition of hazardous atmosphere, disconnect the magnetic lock assembly from the supply circuit before opening the magnetic lock housing. Keep the unit properly sealed while in operation. To reduce the risk of fire or explosion, do not install the unit where the operating temperature exceeds the ignition temperature of the hazardous atmosphere.

This unit is intended to be used in the following atmospheres; Acetone, Ammonium Hydroxide, ATSM fuel C, Benzene, Methyl-Ethylketone, Diethyl-Ether, 2-Nitropropane, Ethyl-Acetate, Furfural, Normal Hexane, Methyl Alcohol

The product should be installed in a location that will not hinder or create a potential safety hazard to authorized personnel accessing the protected area.

Because electromagnetic locks are used in a variety of applications and different door frame configurations, an experienced installer with knowledge of this product must make a determination of the optimal mounting method for this specific application.

Do not install this product on the exterior of buildings.

Do not use as a doorstop. This will void warranty.

NOTE: It is highly recommended that thread locking compound be applied to all screws during installation to reduce chance of screws loosening over extended time.

PLEASE DELIVER ALL INSTALLATION INSTRUCTIONS TO THE END-USER UPON COMPLETION OF THE INSTALLATION.

See Figure 1 elevation profiles to determine mounting application requirements for each individual application.

Note: A 2-1/2" (64mm) reveal is required to assure rigid mounting of the RCI 171HD magnetic lock assembly.

1. Mark door according to armature template and dimensions on reverse side.
2. Drill and prep holes in door per armature template on reverse side.
3. Gently tap (2) 3/16" (5mm) diameter spring pins into rear side of armature(s).
4. Insert one (1) spring washer over 5/16"-18 special shoulder screw, insert the screw through the armature. Add three(3) conical spring washers and one (1) flat washer over the shoulder screw. Carefully apply thread locking compound to exposed thread. See Figure 2 details for each type of installation. All parts must be assembled properly before installing the armature to the door. Install complete armature assembly on the door per Figure 2 detail.
5. Tighten shoulder screw securely with allen wrench. (Do not overtighten.)

Note: All armatures are normally equipped with a permanent magnet on one end. Be certain to install armature so magnet lines up with magnet switch inside housing of magnetic lock assembly. See Figure 3.

6. Mark frame per magnetic lock template and dimensions on reverse side.
7. Remove housing cover of Magnetic Lock Assembly.
8. Drill and prep frame per "D" of Magnetic Lock template. Attach Magnetic Lock Assembly to the frame using either (2) #14 sheet metal screws or (2) 1/4"-20 machine screws and external tooth lock washers. Tighten only enough to hold the unit in place. (If filler plate is used, assure that the screws go through both the filler plate and the door frame.)
9. Drill 7/8" (22mm) diameter hole through filler plate and frame per template for wire harness.
10. Make all electrical connections per Electrical Specifications box on page 2. Use wire nuts, crimp connectors or solder to assure good connections.
11. Energize Magnetic Lock Assembly; Adjust assembly so door is snug against door stop, tighten (2) preliminary screws securely.
12. De-energize system. Using mounting plate as a template, drill #21 drill and tap for 10-32 screws (minimum (2) places). Carefully apply thread locking compound to exposed threads. See Magnetic Lock template. Install screws and tighten securely. Re-energize system, recheck alignment of Magnetic Lock Assembly to Armature by opening and closing door(s).
13. Install Magnetic Lock housing cover.

Use with Underwriters Laboratories Listed (ULC/UL) compatible power supply

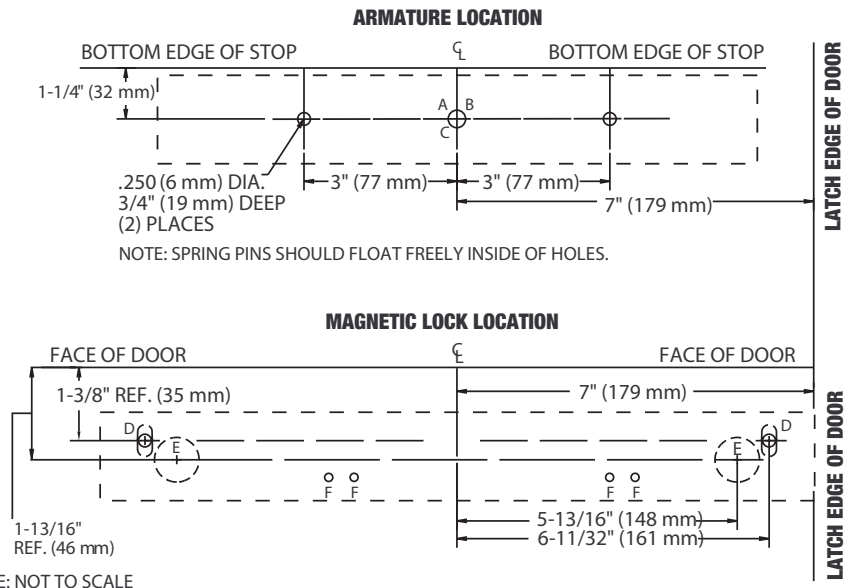
Inspection and Maintenance

This product and all related accessories or parts must be inspected and maintained on a quarterly basis. Contacting surfaces of the electromagnetic lock and armature plate must be kept free of contaminating materials. Surfaces must be cleaned periodically with a non-abrasive cleaner.

All mounting fasteners must be inspected on a quarterly basis. When properly installed, the ends of the armature plate allow a slight movement but the plate will feel secure when grasped at the bolt. There should be no movement to the mounting bracket or housing of the electromagnetic lock.

For added safety, thread locking compound has been provided for the armature plate bolt and the electromagnetic lock mounting screws.

- A. For THRU BOLT mounting in hollow metal door(s) drill 11/32" (9 mm) DIA. hole thru door, enlarge hole in outside face to 1/2" (13 mm) DIA.
- B. For THRU BOLT mounting in solid core wood door(s), drill 11/32" (9 mm) DIA. hole thru door(s), enlarge hole in outside face to 1/2" (13 mm) DIA. 1" (25 mm) deep.
- C. For REINFORCED DOOR (Minimum 3/8" (10 mm) thickness) drill and tap thru reinforcement for 5/16-18 screw.
- D. Drill for No. 14 sheet metal screws or drill and tap for 1/4"-20 machine screws.
- E. 1/2-14 NPT, Drill 7/8" (22 mm) DIA. hole thru filler (if used) and frame in either of locations marked (E) for rigid conduit containing wiring harness. Use filler plug in location not used.
- F. Using actual Magnetic Lock as template, drill and tap per STEP 12 of installation instructions.



NOTE: FOR MACHINE SCREW MOUNTING; REINFORCEMENT AND STRUCTURING ARE REQUIRED TO WITHSTAND A 1200 LB (544 KG) LOAD. CLEARANCE HOLES FOR FILLER PLATE TO BE SPOTTED AT JOB SITE. CAUTION: "DO NOT ATTACH MOUNTING PLATE TO FILLER PLATE ONLY!"

REINFORCEMENT BY OTHERS
(3/8" (10 MM) MIN.) TYPICAL

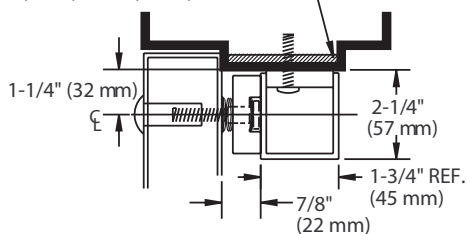


FIGURE 1A STANDARD INSTALLATION

MAGNETIC LOCK MOUNTING TO FRAME FIGURE 1

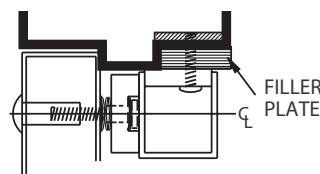


FIGURE 1B
with an FP-178 FILLER PLATE ACCESSORY

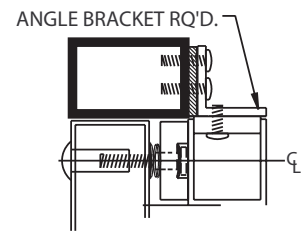


FIGURE 1C
with an AB-179 ANGLE BRACKET ACCESSORY

ARMATURE MOUNTING TO DOOR(S) FIGURE 2

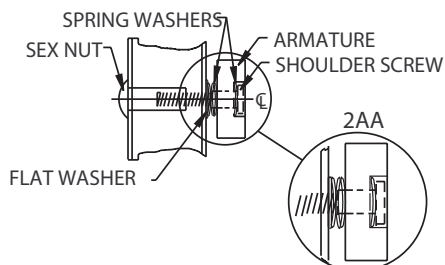


FIGURE 2A HOLLOW METAL DOOR

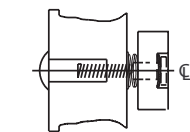


FIGURE 2B WOOD DOOR

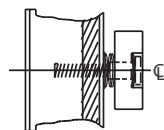


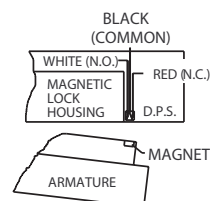
FIGURE 2C REINFORCED DOOR

ELECTRICAL SPECIFICATIONS:

CURRENT DRAW: 0.50 AMPS @ 12 VDC
0.26 AMPS @ 24 VDC

NOTE: units are voltage specific

WIRE COLOR CODE: ORANGE/ORANGE (12VDC)
(NON-POLARIZED) RED/RED (24VDC)
HOLDING FORCE: 1200 LB (544 KG)



DRAWING SHOWS DOOR
IN OPEN POSITION

D.P.S. CONTACT RATING
0.1 AMP @ 30 VDC MAX.

FIGURE 3
WIRING FOR D.P.S. (DOOR POSITION SWITCH).