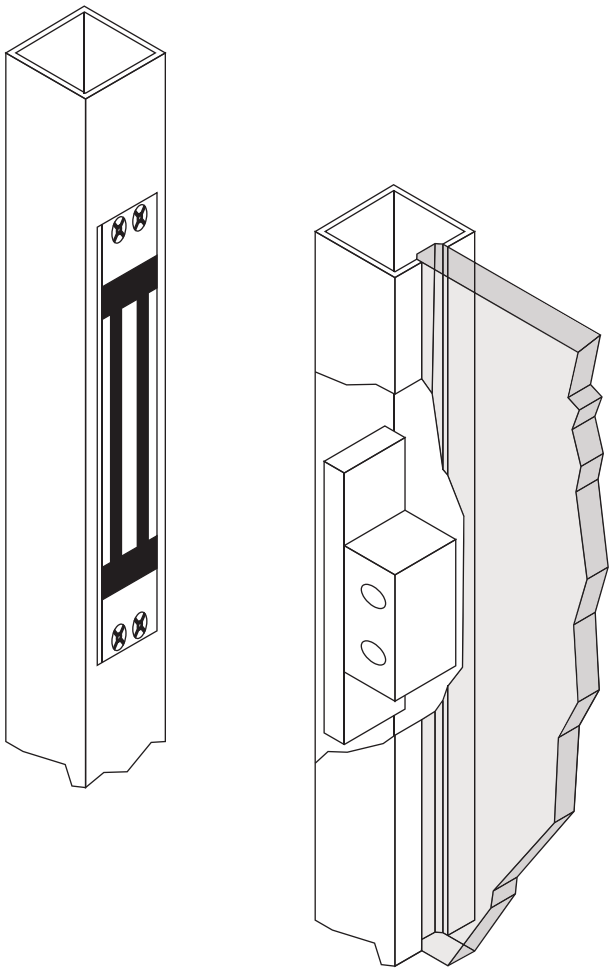
30020

SCHLAGE

320 SERIES
320M INSTALLATION MANUAL



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Ingersoll Rand

Description

The 320M (MiniLine, Electromagnetic Lock) is a medium security, mortise mounted, high performance lock, which was designed for sliding doors. Because the 320M has no moving parts, it requires minimal maintenance. The 320M meets Security and Life Safety requirements and is Field Selectable for 12VDC or 24VDC.

Product Specifications

- **Voltage:** 12VDC or 24VDC Field Selectable
- **Current:** 0.225A @ 12VDC (for wood frames), 0.450A @ 24VDC
- **Rated Holding Force:** 500lbs @12VDC, 650lbs @ 24VDC

General Information

- Carefully handle all equipment. Damage to mating surfaces of electromagnet or armature might reduce locking efficiency.
- The electromagnet is mortised into door frame vertically. Armature mounts to door and is designed to pivot about its center, compensating for any door misalignment.
- When installing an electromagnetic lock with DSM option, make certain permanent magnet is directly opposite DSM switch in magnet assembly.

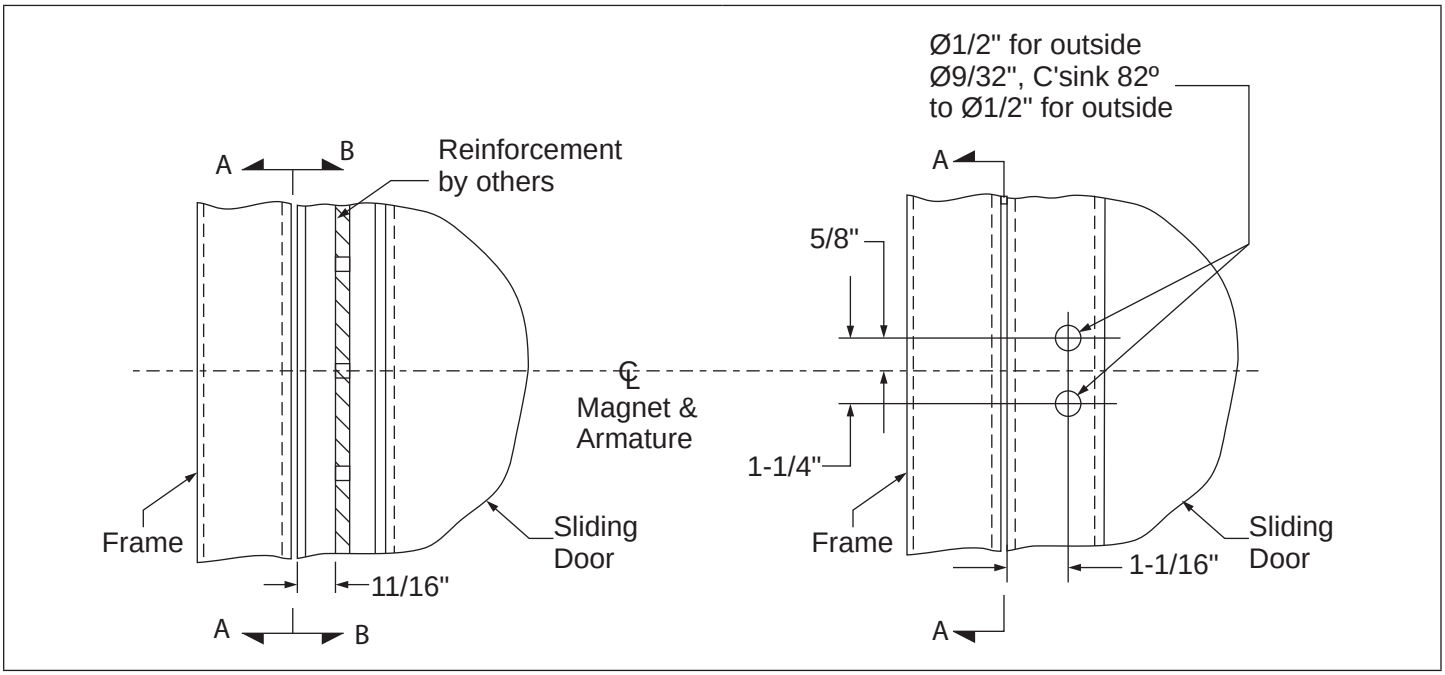
CAUTION: Failure to secure armature to door might result in serious injury to door user. For safety, security and proper operation, sex bolt/nut assembly, washers and spacers must be assembled in order illustrated and securely tightened 1/8 to 1/4 turn past hand-tight.

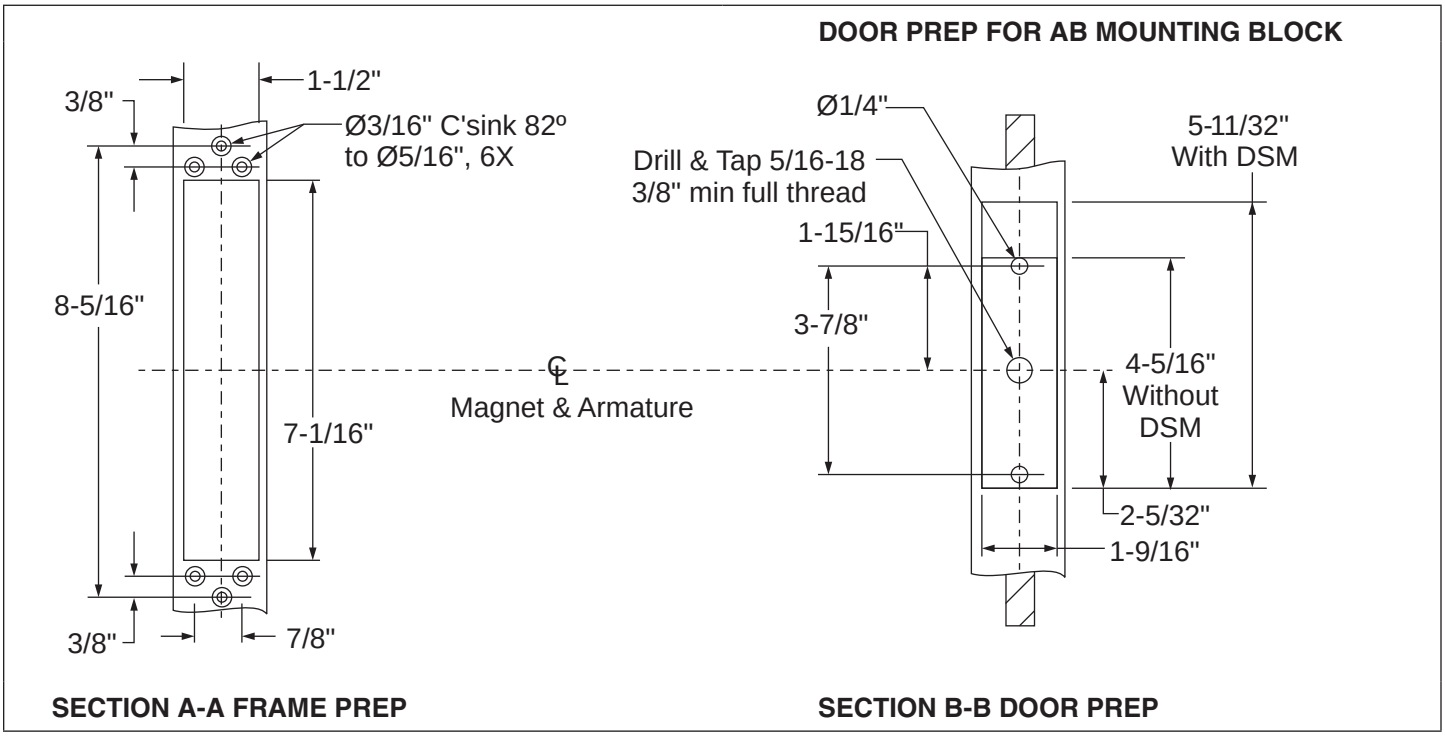
Maintenance

The electromagnet and armature are plated for corrosion resistance and require little maintenance.

For maximum performance, it is recommended that the electromagnet and armature be occasionally cleaned. Perform the following as required: *Clean all functional surfaces of the electromagnet and armature by applying a light coating of silicon lubricant and wipe with a clean cloth.*

Door and Frame Prep

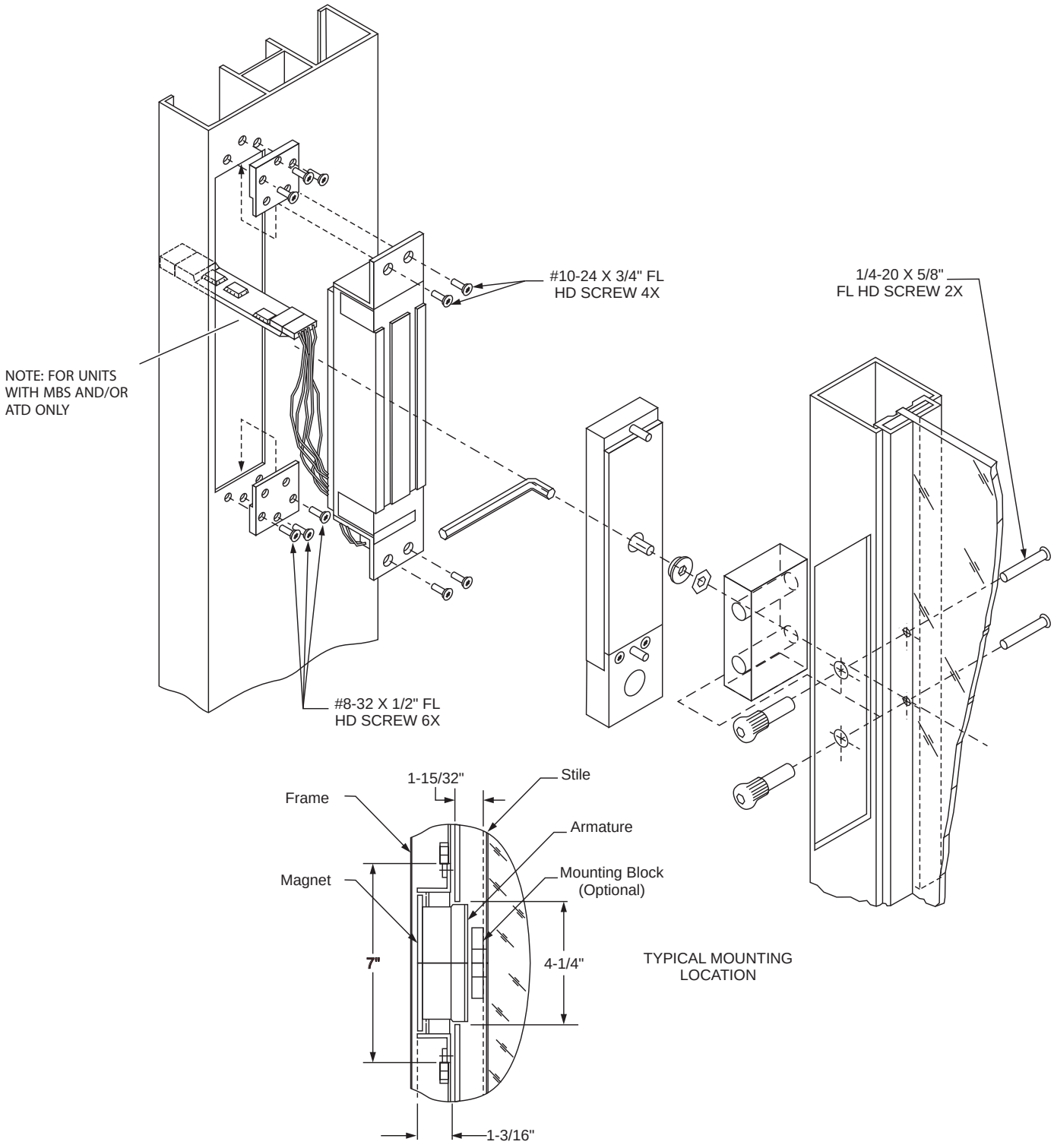




Installing the 320M

Follow instructions on paper template and prepare door and frame accordingly.

- Refer to the exploded view below to complete the mechanical installation.
- Refer to wiring instructions on page 6 and 7 and other applicable instructions to complete the installation.



Electrical Options

ATD (Adjustable Time Delay)

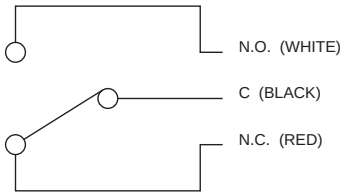
ATD can be set to delay relock from 0 to 30 seconds. To increase time, turn adjustment potentiometer clockwise (CW). To decrease time, turn adjustment potentiometer counterclockwise (CCW). ATD will operate whenever input power is interrupted and then reapplied. For potentiometer location, see Figures 7, 8 and 10.

DSM (Door Status Switch)

The DSM provides a signal to indicate whether door is open or closed. The lock's mounting instructions should be followed closely to ensure reliable performance. DSM provides a signal via a set of form "C" dry contacts rated 100mA, resistive at 24VDC. These contacts, which are labeled in an open door condition are accessed by three (3) wires:

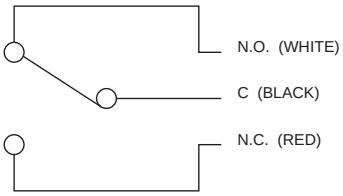
- White - N.O. (Normally Open)
- Black - C (Common)
- Red - N.C. (Normally Closed).

When the door closes, black and white wire contacts close and black and red wire contacts open. See Figures 1, 2 and 3 below.



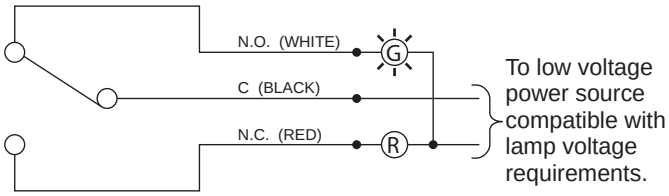
Contact configuration when door is open

Figure 1



Contact configuration when door is closed

Figure 2



Wiring example of contacts used to switch external indicators (not included). Shown door closed. Green LED lit.

Figure 3

MBS (Magnetic Bond Sensor)

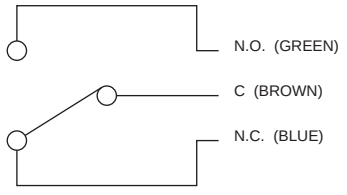
The MBS senses whether sufficient magnetic holding force exists for adequate locking. It responds to low line voltage, foreign materials in magnetic gap, and damaged or dirty magnet and/or armature surfaces. The MBS option provides a signal via a set of form "C" dry contacts rated 1A @ 30VDC resistive load maximum. Dry contacts, which are labeld in a deenergized/no bond condition are accessed by three (3) wires:

Green - N.O. (Normally Open)

Brown - C (Common)

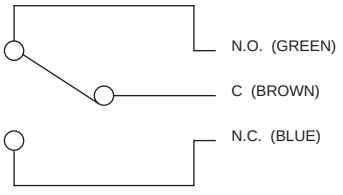
Blue - N.C. (Normally Closed)

Once the lock is energized with magnet and armature properly bonded, C and N.O. contacts close and C and N.C. contacts open. See Figures 4, 5 and 6 below.



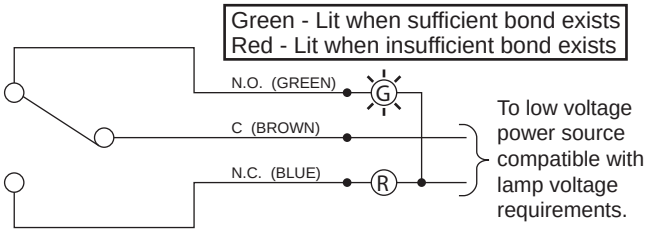
Contact configuration when insufficient or no bond exists

Figure 4



Contact configuration when sufficient bond exists

Figure 5



Wiring example of contacts used to switch external indicators (not included). Shown door closed. Green LED lit.

Figure 6

Wiring Details

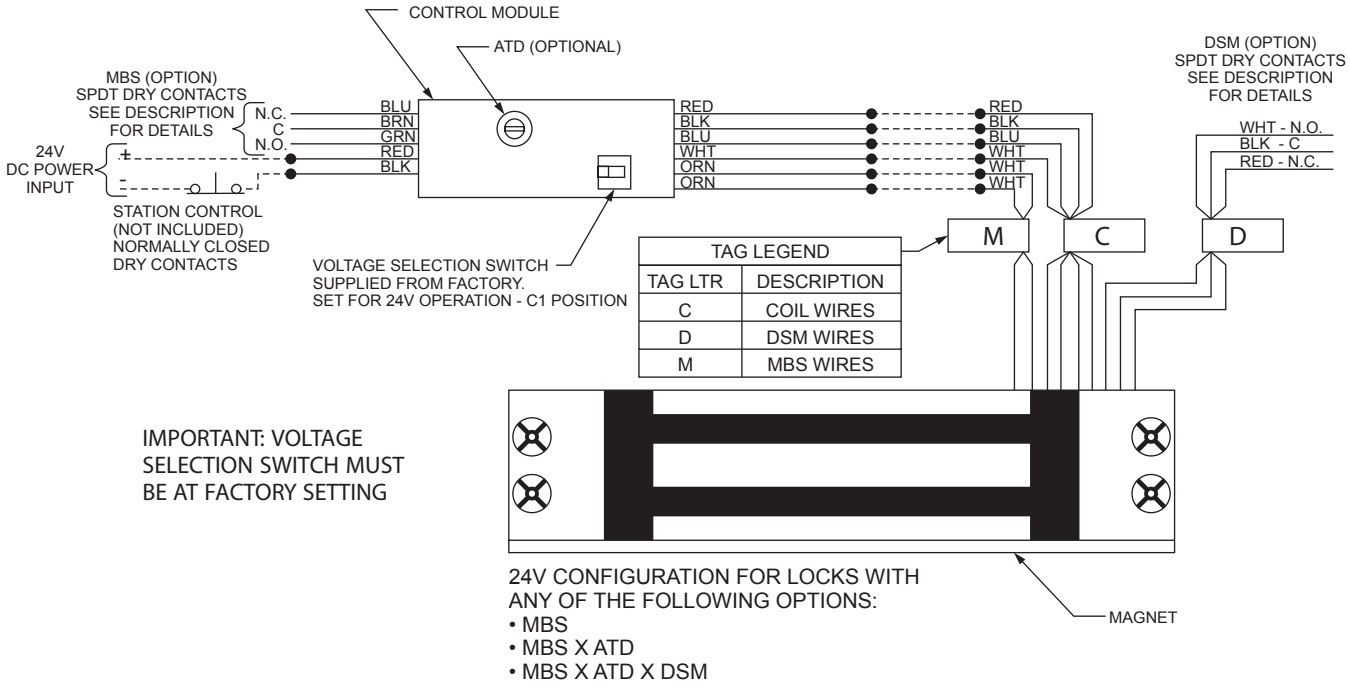


Figure 7

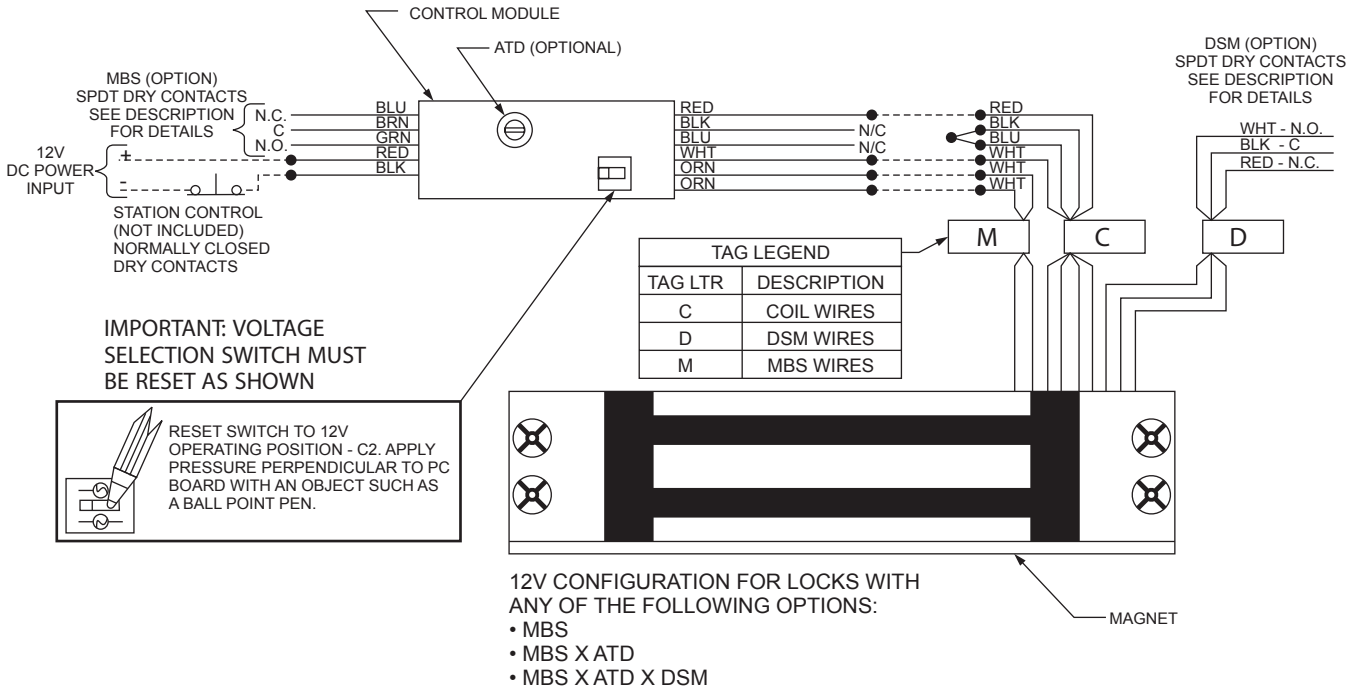
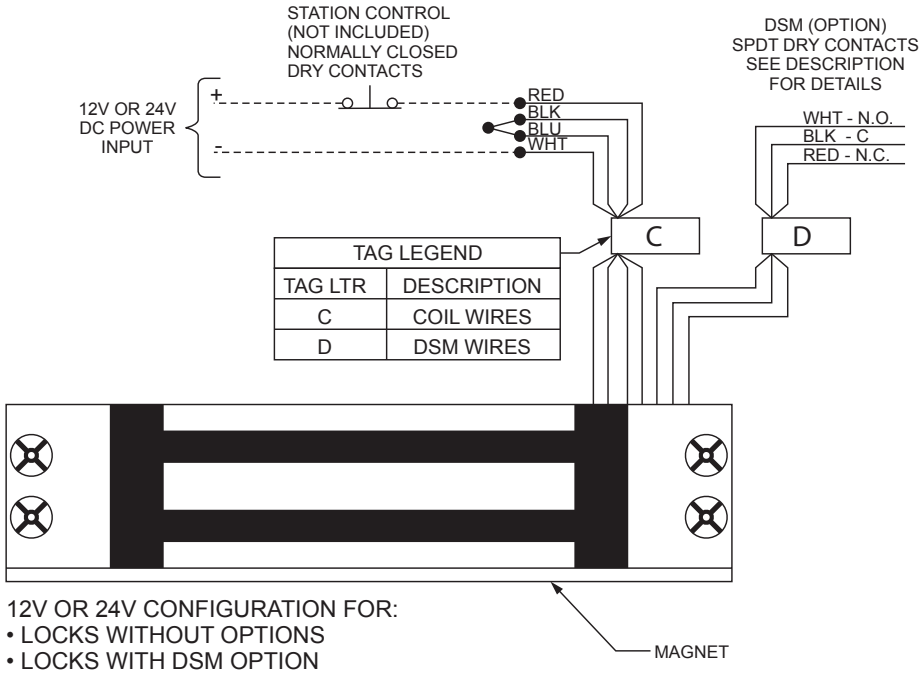
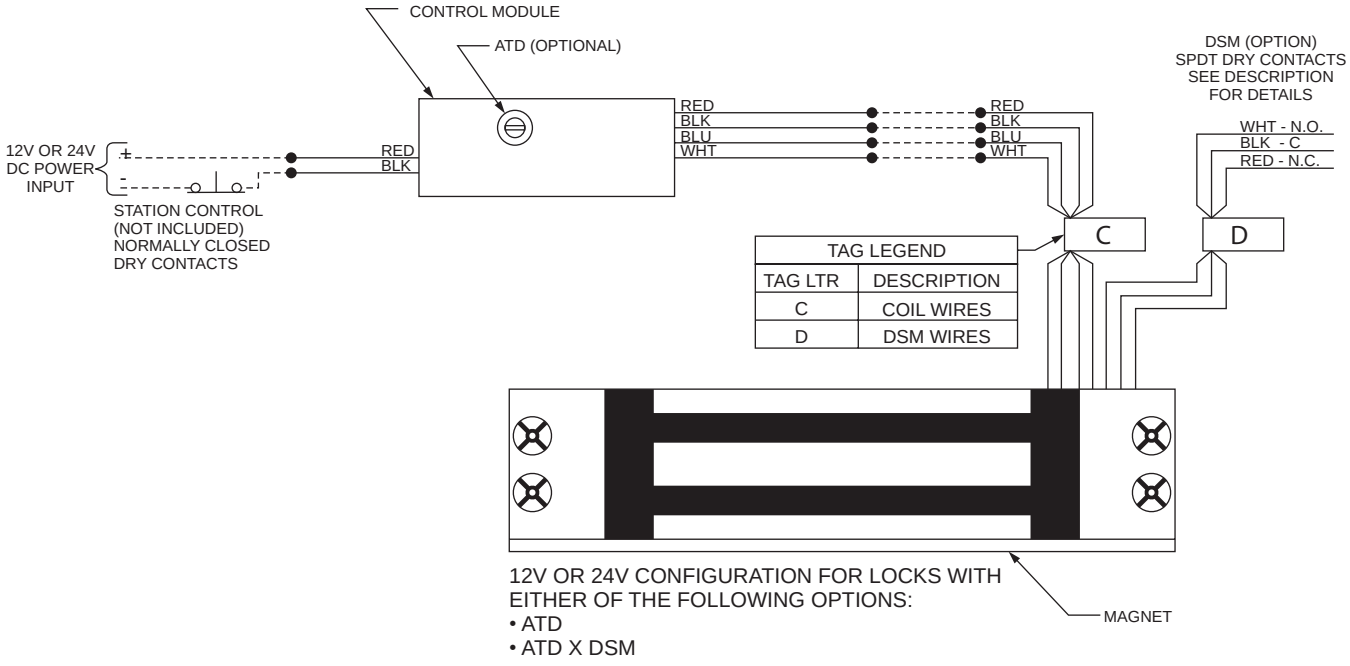


Figure 8



12V OR 24V CONFIGURATION FOR:
- LOCKS WITHOUT OPTIONS
- LOCKS WITH DSM OPTION

Figure 9



12V OR 24V CONFIGURATION FOR LOCKS WITH
EITHER OF THE FOLLOWING OPTIONS:
- ATD
- ATD X DSM

Figure 10

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