The 2950 Series MagLock is mounted to the underside of the header, on the stop side of the door. A top jamb mounting kit (optional) can be used when mounting on the hinge side of the door. (Fig. 1D)

The armature is mounted to the door. A hardware kit is provided to compensate for misalignment and wear of the door, by allowing the armature to pivot on its center point.

1. Inspect the frame header to determine if an angle bracket or filler plate is required. See Figure 1A, 1B, 1C.

2. Fold template as indicated by dotted line. For single doors, locate template against the door and header on the lock jamb side of the frame.

3. Mark and drill holes as indicated by template. For armature plate hole preparation, see Figure 2A, 2B, 2C.

4. Mount armature to door. To determine proper hardware (provided), see Figure 2A, 2B, 2C.

5. Install mounting plate to header with the interlock detail away from the door side of the stop, with #10 Flt Hd. Screws provided.

6. Holding the magnet housing at each end, engage the entire length of the interlock detail, by pushing towards the door. (If necessary, tap with a soft hammer to ensure proper alignment and engagement).

**Caution: The lock body must be held in place until secured with mounting screws.** Screws provided inside the housing at each end. Tighten the screws and check alignment.

7. Test operation. When all is operating properly, tighten all screws. Install anti-tamper plugs over socket head screw using a soft hammer to avoid damage to the housing.

Electromagnet and armature should be handled carefully. Any damage to the surface such as paint, burns, dirt and rust may hinder bonding of surface and reduce holding power.

**SHOULD THE SURFACE PLATING BE DAMAGED:**

Do not touch the lock face with your hands.

Using a soft, clean, dry cloth or abrasive cloth (i.e., Scotch-Brite), clean lock face. Do not use sand paper.

A rust inhibitor such as M1, manufactured by Starret, or LPS3, manufactured by LPS Laboratories (available at most hardware stores) can then be applied.

Apply a coat of inhibitor to armature face also.

---

**FIG. 2A HOLLOW METAL DOOR**

From Sexnut side of door, drill exactly 1/2” hole thru one metal thickness only. From Armature side of door, drill 5/8” hole to insert reinforcement tube. Press in Sexnut and reinforcement tube all the way and mount armature to door using hardware provided per Figure 2B.

**FIG. 2B SOLID DOOR**

Drill 3/8” hole thru door. From Sexnut side of door, drill exactly 1/2” hole, 1-3/8” deep. Mount armature to door with hardware provided per Figure 2A.

**FIG. 2C REINFORCED DOOR**

Drill and tap for 5/16-18 machine screw. Mount armature to door with hardware provided per Figure 2C.

---

Always visit www.hagerco.com for the latest Installation Instructions

Rev 2, Rev Date: 12/12/13

HAGER COMPANIES 139 Victor Street, St. Louis, MO 63104 • (800) 325-9995

Page 1 of 3
ELECTRICAL SPECIFICATIONS
Voltage kickback protection standard

<table>
<thead>
<tr>
<th>SERIES</th>
<th>2951/2952</th>
<th>2953/2954</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT VOLTAGE (VDC)</td>
<td>12/24</td>
<td>12/24</td>
</tr>
<tr>
<td>POWER CONSUMPTION (mA)</td>
<td>700/350</td>
<td>250/125</td>
</tr>
<tr>
<td>COIL RESISTANCE (OHMS)</td>
<td>35*(PER COIL)</td>
<td>100*(PER COIL)</td>
</tr>
<tr>
<td>HOLDING FORCE (LBS)</td>
<td>1650</td>
<td>1200</td>
</tr>
</tbody>
</table>

*NOTE: For a proper coil resistance reading, turn off the DC voltage. Use an ohmmeter and measure the resistance between the pins of the plug connector positions E1-E2 and E3-E4.

AVAILABLE OPTIONS
ATS - Anti-Tamper Switch (2-679-0112) SPDT, DRY,
MBS - Magnetic Bond Sensor (2-679-0111) SPDT, DRY,
DPS - Door Position Switch (2-679-0110) SPDT, DRY,
Time - TIME DELAY (1-30 sec) (2-679-0109) 20 mA

All switches rated @ 250 mA @ 30 VDC

ELECTRICAL INSTALLATION

1. Use jacketed cable for all wire runs. Refer to the Hager wire gauge chart for proper lock power wire size (18 AWG gauge minimum).
2. Use only shielded cable for all signal wires. 22 AWG gauge (minimum) may be used for signal wires up to 1,000 feet.
3. All wires must be colored coded.
4. Use properly fused power source only. See Electrical Specifications.
5. Make all MagLock terminal connections according to Figure 3A.

IMPORTANT NOTES

INDOOR USE ONLY
Do not run power wires and signal wires in the same cable or conduit.

Do not install a diode in parallel with any magnetic lock. A diode will cause a delay when releasing the door and residual magnetism to occur.

Although Hager recommends the use of a DC power supply, a transformer with an adjacent mounted full wave bridge rectifier may be used. A significant voltage drop will occur when using a full wave bridge rectifier.

Any low voltage condition will cause erratic operation of the optional bond sensor.

When using a full wave bridge rectifier, all access controls and/or release contacts must be located between the Emlock and rectifier to ensure quick release.
AWG WIRE CHART

To determine the correct wire gauge to use on "one circuit" the following information is required:

1. The quantity, voltage, and current draw of all lock(s) to be used.
2. The distance in feet from the power supply to the furthest lock.

Add together the current draw (amps) of all locks on the same circuit. Cross reference the total amps with the distance between the power source and the furthest lock to determine the wire gauge required. All wiring must be installed in accordance with all state and local codes.

**DISTANCE IN FEET FROM POWER SOURCE TO FARTHEST LOCKING DEVICE**

<table>
<thead>
<tr>
<th>AMPS</th>
<th>25</th>
<th>50</th>
<th>75</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.75</td>
<td>18</td>
<td>18</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.50</td>
<td>18</td>
<td>14</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>16</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.50</td>
<td>16</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISTANCE IN FEET FROM POWER SOURCE TO FARTHEST LOCKING DEVICE**

<table>
<thead>
<tr>
<th>AMPS</th>
<th>25</th>
<th>50</th>
<th>75</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>0.50</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>0.75</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.50</td>
<td>18</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>16</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.50</td>
<td>16</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TROUBLE SHOOTING**

**PROBLEM** Mag Lock releases slowly. (residual magnetism)

**CAUSE** Control switch wired on AC side of power source.

**SOLUTION** Control switch must be wired on DC side of power supply.

Field installed diode in parallel with power input.

Remove diode.

**Poor holding force.**

**CAUSE** Armature installed rigidly.

**SOLUTION** Armature must pivot loosely from its center mounting point to permit full armature contact.

Check for proper voltage at the MagLock input. If low, determine if the correct wire gauge is being used to prevent excessive voltage drop.

Check power supply load capacity. It must meet or exceed the combined current rating of all locks on the circuit.

MagLocks require DC input voltage. When AC voltage from a transformer is used, a full wave bridge rectifier must be installed to convert the AC voltage to DC voltage.

Check voltage polarity. Terminal (-) is: Negative. Terminal (+) is: Positive.

Coil shorts or incorrect wiring will blow fuses. Measure the coil for correct resistance. See Fig. 3A and the Resistance Specifications.

**No holding force. Door does not lock.**

**CAUSE** No power.

**SOLUTION** Check the voltage at the MagLock. If the voltage is low or zero, double check all wire connections and the power supply.

Check coil continuity with OHM meter. If reading is high or open, replace the magnet coil. See Fig. 3A and the Resistance Specifications.