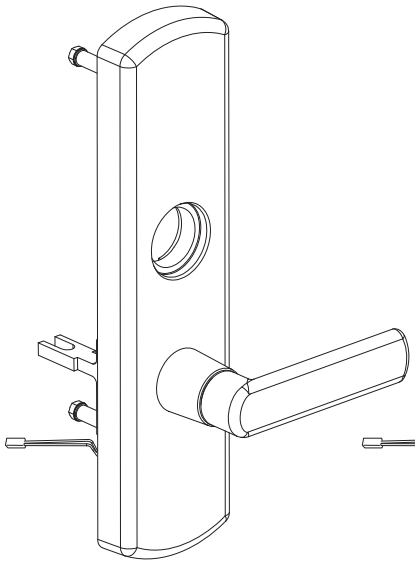
941369-00

M996L Series

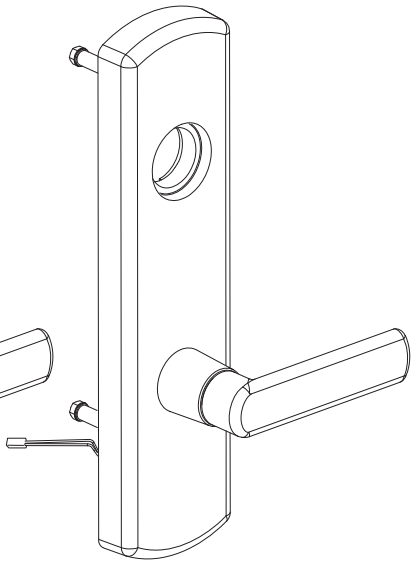
VON DUPRIN

Motorized Locking Trim

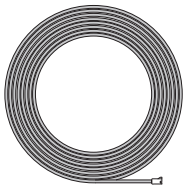
Installation Instructions



M996L for Rim/Vertical



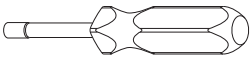
M996L for Mortise



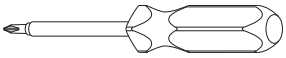
M996 Wire Harness Cable.10038 (included)

Tools Needed

5⁄16" Nut driver



#2 Phillips screwdriver



1 If replacing E996 solenoid, see M996L Series Retrofit, 941389-00.

2 Change function (Fail Safe or Fail Secure) if necessary.

CAUTION

Product is shipped in Fail Safe (FS) configuration. Fail Safe configuration is required by code in some applications (typically fire stairwells). Consult building codes before converting to Fail Secure (FSE) configuration. See page 8 for FS/FSE function information.

2.1. To change function, use the tip of a small screwdriver to CAREFULLY move the switch to the desired position. The switch is factory set to fail safe (FS). Moving the switch changes the function to fail secure (FSE). See Figure 2-1.

2.2. After changing FS/FSE switch position, power cycle the unit two or more times when wired in Step 12.

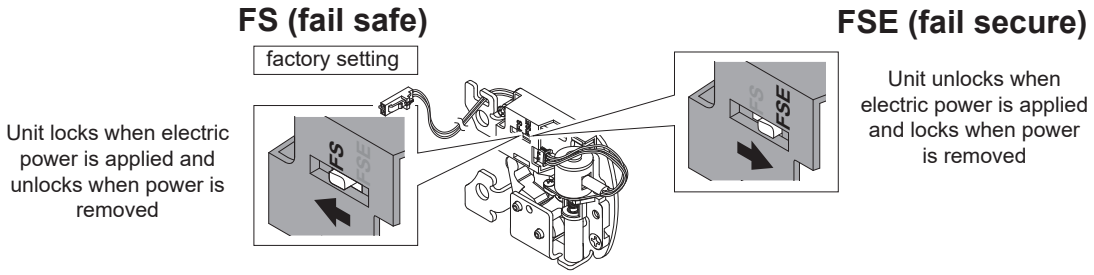


Fig. 2-1

3 Check exit device NL drive screw.

For rim/vertical device applications, make sure the NL drive screw is installed in the exit device center case cam with the exit device lock slide in the up position. See figure 3-1 for LHR applications and Figure 3-2 for RHR applications. (Device is shipped from factory with NL drive screw installed.)

For mortise device applications see Figure 3-3.

Installation of the NL drive screw sets the exit device for NL (night latch) operation, which is required for use with the M996L rim/vertical trim.

Rim/Vertical

NOTE

If the exit device lock slide is not in the up position: Remove NL drive screw and use a Phillips head screwdriver to rotate the exit device center case cam to move the lock slide into the up position. Then reinstall NL drive screw.

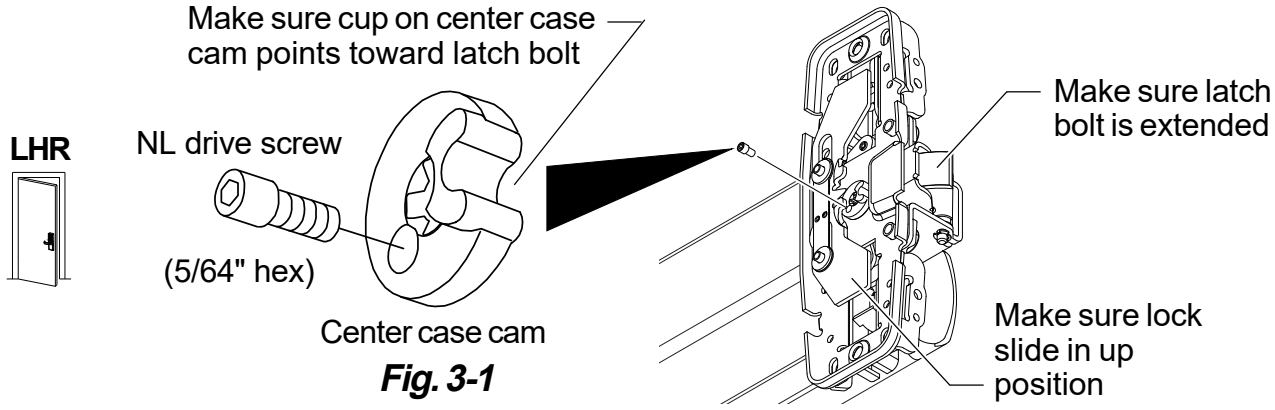


Fig. 3-1

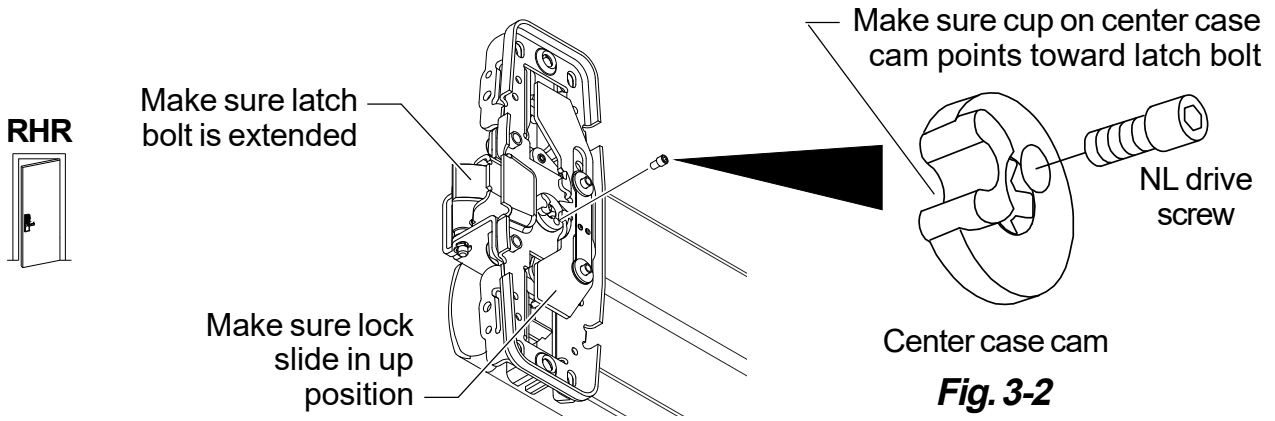
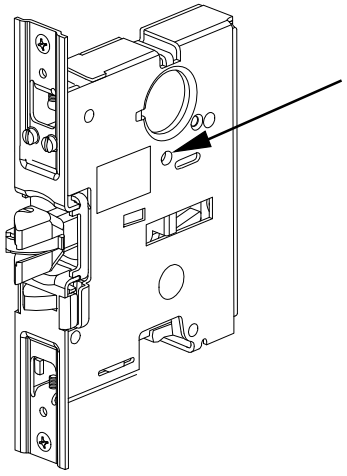


Fig. 3-2

Mortise



For mortise device applications, NL screw located on side of 7500 mortise lock remains as shipped for NL operation. As shipped position is when NL screw is turned out counterclockwise. For any questions, contact technical support.

Fig. 3-3

4 Prepare holes and cut-outs on door.

4.1. Prepare exit device side of door using instructions and template provided with exit device.

4.2. Prepare trim side of door using dimensions on front side of instruction sheet 921003/921006.

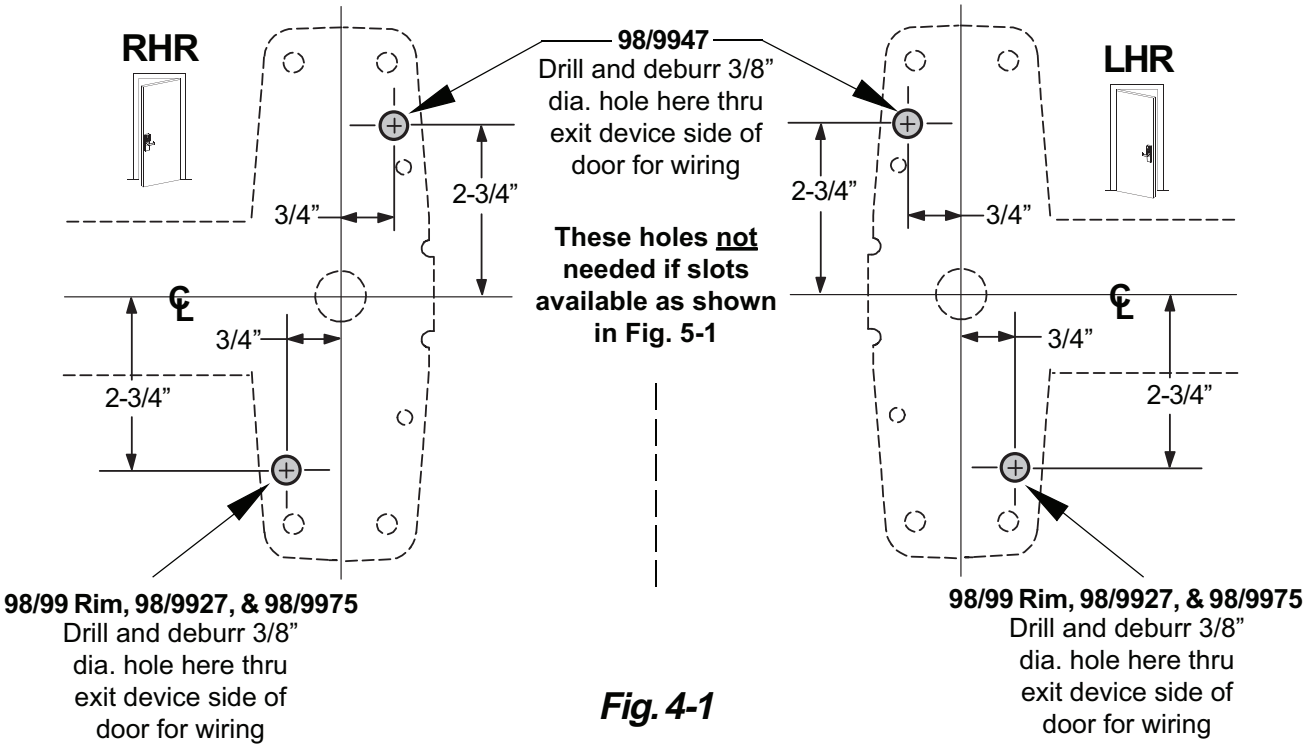


Fig. 4-1

5 Locate wire access slots.

Note: Each center case has 4 slots that can be used for wire access.
Some slots may be obstructed by optional equipment.

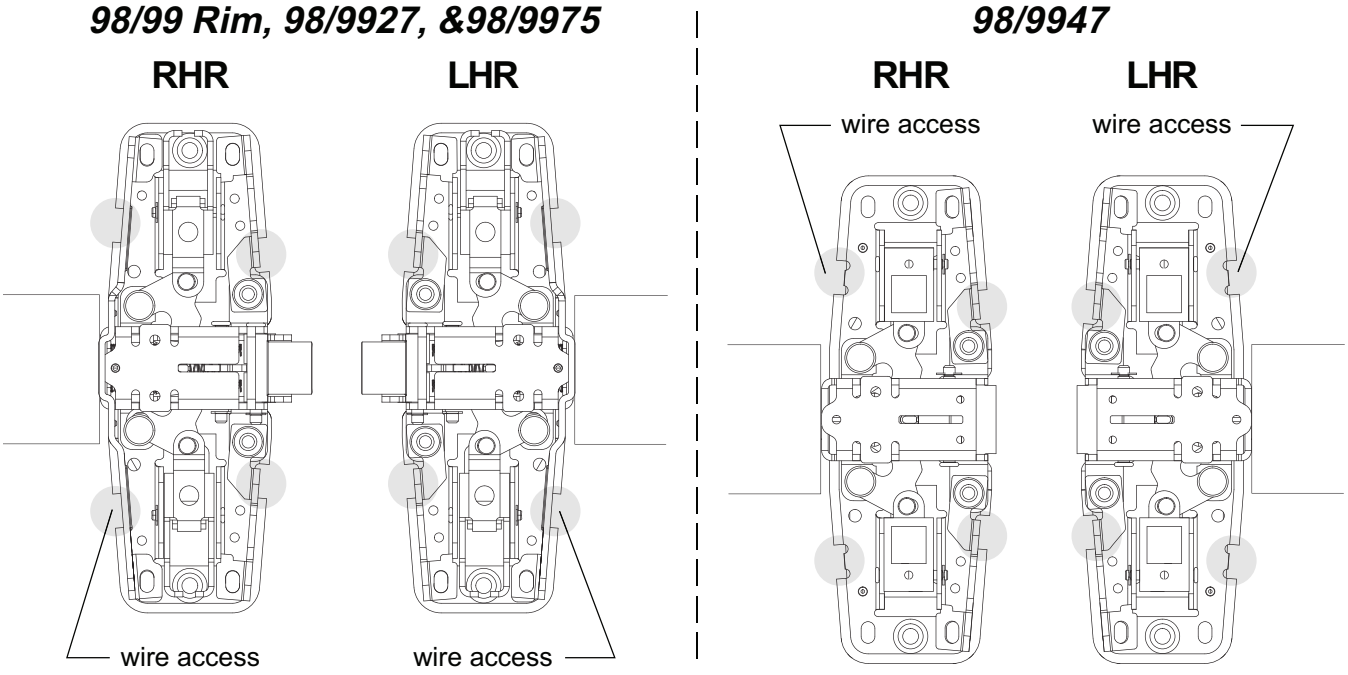


Fig. 5-1

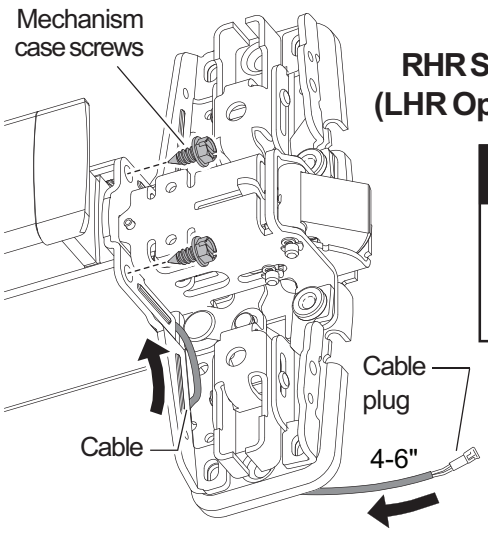
6 Route M996L cable through 98/99 series exit device.

6.1. Remove two mechanism case screws (Figure 6-1).

6.2. Slide mechanism case off baseplate assembly (Figure 6-2).

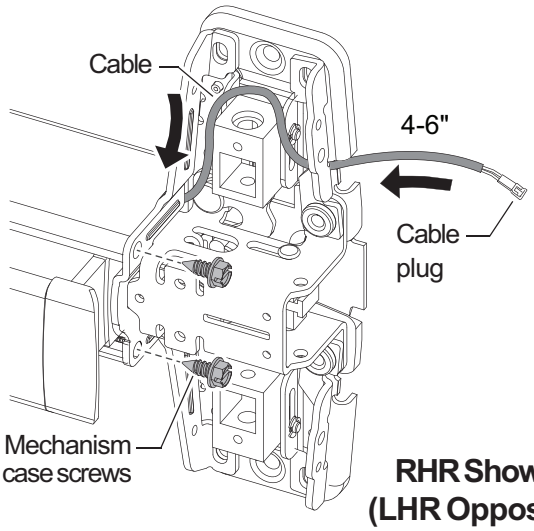
6.3. Route M996L cable through center case slots as shown (Figure 6-1). Cable plug should be on door side of center case as shown (Figure 6-1).

98/99 Rim, 98/9927, &98/9975



RHR Shown (LHR Opposite)

98/9947



RHR Shown (LHR Opposite)

⚠ CAUTION

Ensure wire will not interfere with moving components.

Fig. 6-1

6.4. Place M996L cable in groove on bottom of baseplate (Figure 6-3).
Optional: Use electrical tape to hold cable in place.

6.5. Slide mechanism case back on device. Align two plastic pushbar guides while installing mechanism case (Figure 6-2).

6.6. Slide mechanism case back against center case. Leave 4-6” of cable protruding from center case end of device (Figure 6-4).

6.7. Reinstall two mechanism case screws (Figure 6-1).

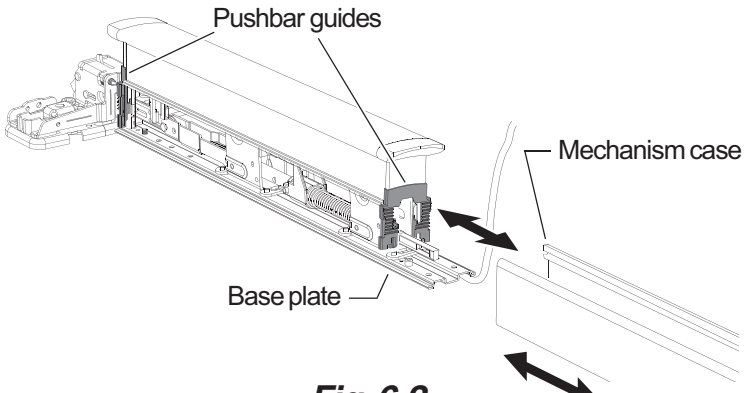


Fig. 6-2

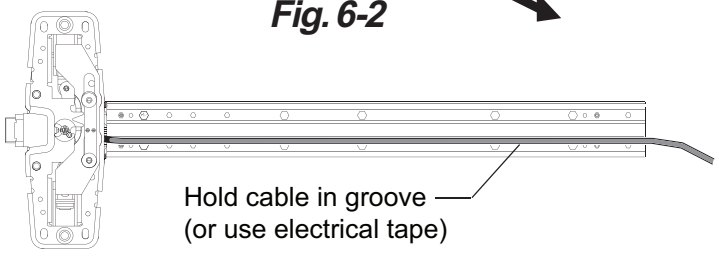


Fig. 6-3

⚠ CAUTION

Be careful not to pinch cable when sliding mechanism case back against center case.

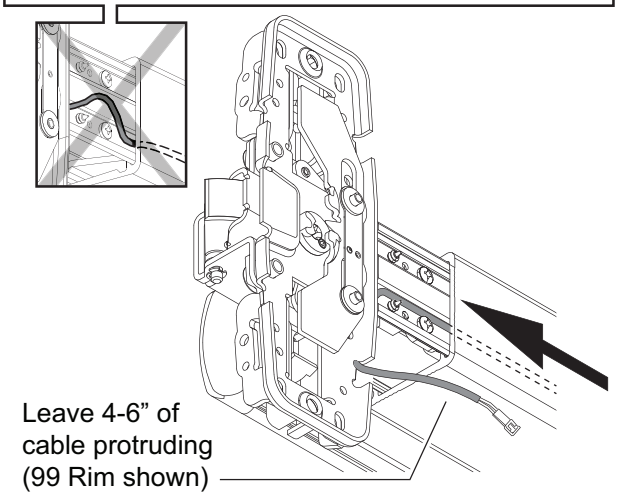


Fig. 6-4

7 Locate end cap bracket on door and prepare second wiring access hole.

7.1. Temporarily attach trim and device to door with 4 screws (Figure 7-1).

7.2. Slide mounting bracket in end of mechanism case and level device, then mark two mounting holes on door through bracket holes (Figure 7-2).

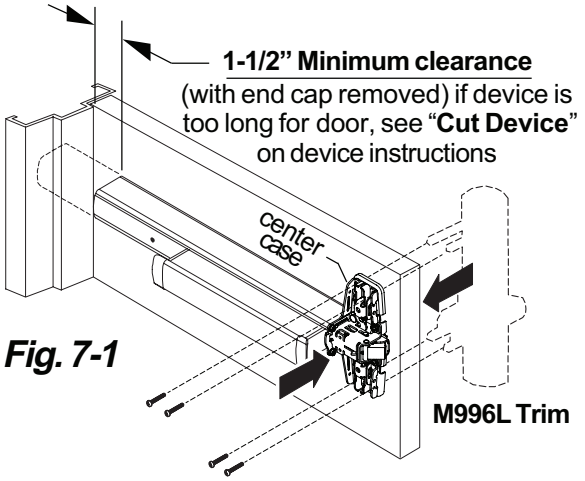


Fig. 7-1

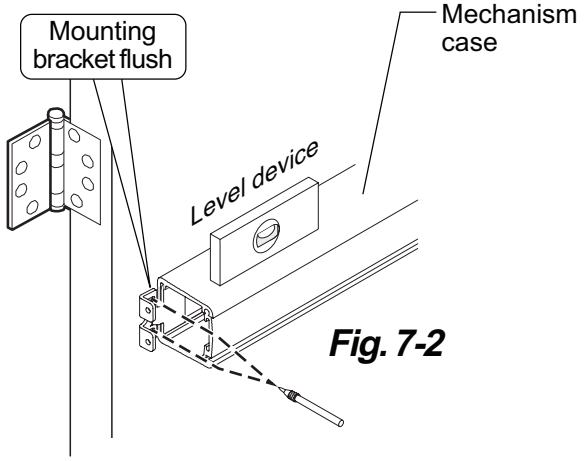


Fig. 7-2

7.3. Mark and prepare two holes for mounting bracket screws (Figure 7-3).

7.4. Mark, drill, and deburr 5/8" hole for wiring access (Figure 7-4).

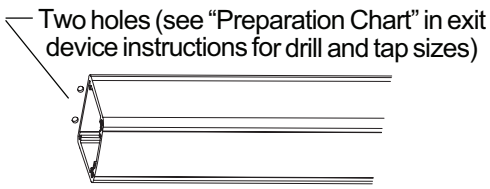


Fig. 7-3

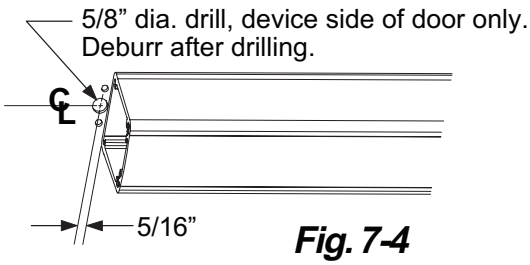


Fig. 7-4

8 Install end cap bracket and route wiring through power transfer.

8.1. Install mounting bracket into mechanism case and install two screws loosely (Figure 8-1).

8.2. Slide cable into 5/8" wiring access hole under mounting bracket. (Figure 8-1).

8.3. Route cable through door and attach wiring to power transfer. (Figure 8-2).

Note: EPT recommended for new construction; electric hinge or door loop recommended for retrofit.

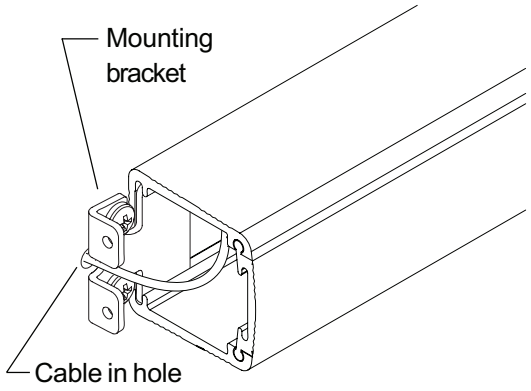


Fig. 8-1

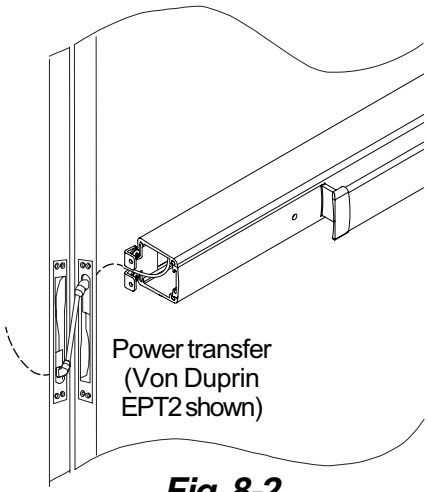


Fig. 8-2

9 For vertical or mortise devices, install vertical rods or mortise lock in door.

10 Attach center case to door.

10.1. Support hinge side of device in mounting bracket.

10.2. If trim has been temporarily installed, remove 4 screws in center case and remove trim.

10.3. Pull center case away from door and route M996L cable plug through wire access hole in door (Figure 10-1).

10.4. For 98/99 Rim, 98/9957, and 98/9975 secure center case to door using two support screws (Figure 10-1) or by some other temporary means (use clamps, have a helper hold the device, etc.).

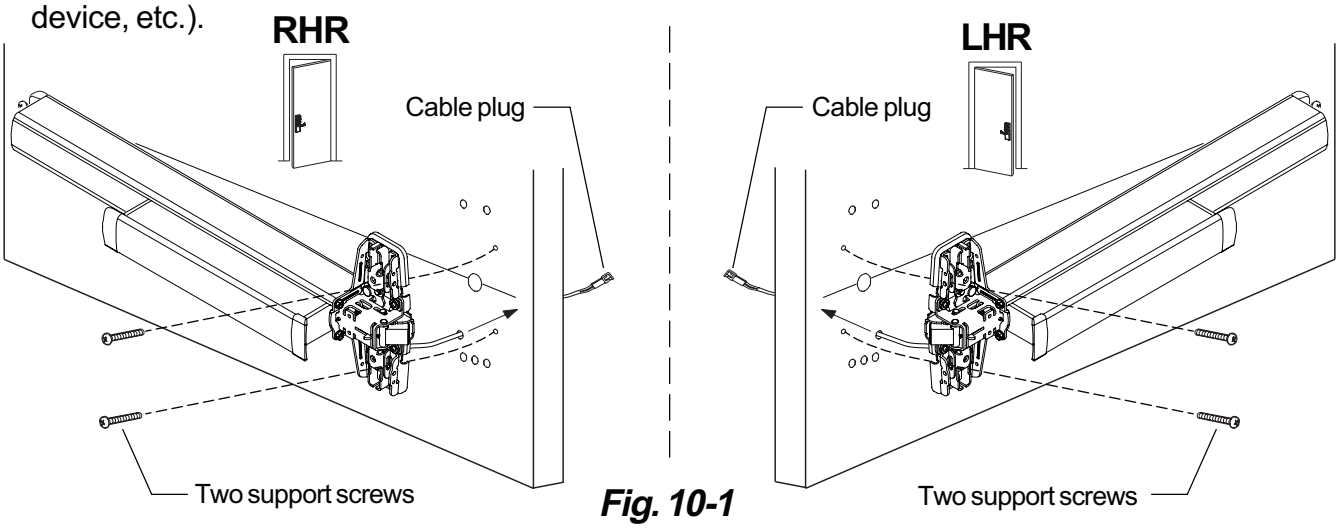


Fig. 10-1

11 Install trim on door.

11.1. Connect trim plug to cable plug (Figure 11-1).

11.2. Route wires into corner of the cutout near post. Push the wires down into the door to ensure they do not contact the slider (Figure 11-1).

Note: For 98/9947 or 98/9949 device, hold trim in door and lift center case away from the door surface while rods and trim remain in place. Route wiring as shown in Figure 11-2. Verify that the wires do not get wrapped around or pinched in rods or slider, then align center case and attach rods.

11.3. Attach trim to door using four screws through device center case (Figure 11-3).

11.4. Install center case cover (see device instructions if necessary).

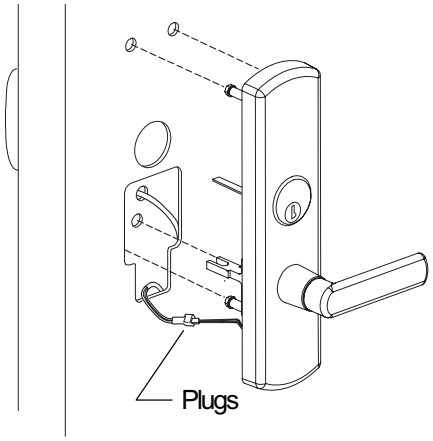


Fig. 11-1

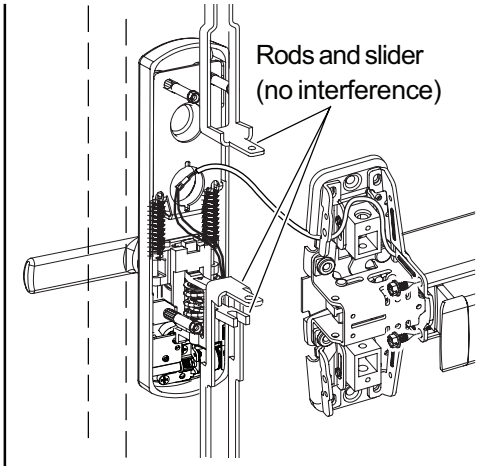


Fig. 11-2

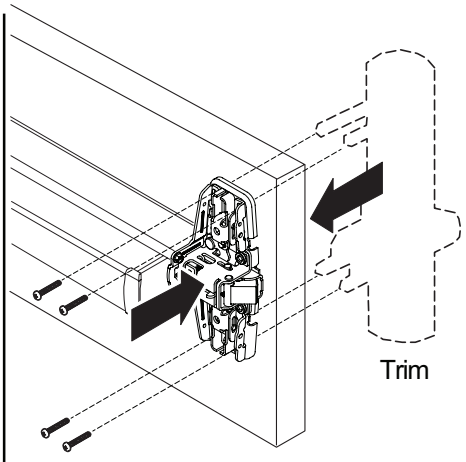


Fig. 11-3

12 Basic wiring information.

The two wires are non-polarized 12/24 VDC input. One wire connects directly to a 12/24 VDC power source (power supply) and the other wire connects to a control device (card reader, key pad, push button, dry contact, etc.) and then to the power supply. See diagram below.

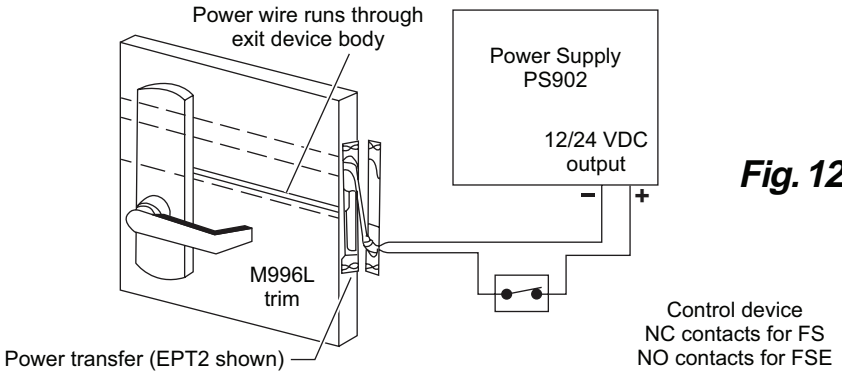


Fig. 12-1

13 Power control requirements.

- A 12/24 VDC 1A minimum power signal
- A 1-second minimum on-time signal
- A 1-second minimum off-time signal

14 Test trim function.

For FS (Fail Safe) trim (factory default):

A. With the power applied, the trim will move to the locked position. The trim's lever must be allowed to be in the resting or home position for the trim to lock.
B. Removing power will cause the trim to move to the unlocked position. The trim's lever must be allowed to be in the resting or home position for the trim to unlock. Once the trim unlocks, the lever may be turned.
C. When key cylinder is present on trim, with power engaged, check to ensure that the key override feature (night latch) functions properly. Inserting and turning key will temporarily unlock door while trim lever remains rigid. Door locks when key is removed.

For FSE (Fail Secure):

A. With the power applied, the trim will move to the unlocked position. The trim's lever must be allowed to be in the resting or home position for the trim to unlock. Once the trim unlocks, the lever may be turned.
B. Removing power will cause the trim to move to the locked position. The trim's lever must be allowed to be in the resting or home position for the trim to lock.
C. When key cylinder is present on trim, with power disengaged, check to ensure that the key override feature (night latch) functions properly. Inserting and turning key will temporarily unlock door while trim lever remains rigid. Door locks when key is removed.

15 Troubleshooting.

LED's on M996 module show current state. Remove trim from door to view.

GREEN LED Indicates the Power status
ON= M996 is powered by the control signal.
OFF= M996 is not powered by the control signal (if power was recently disconnected, it can take up to one minute for LED to turn off).

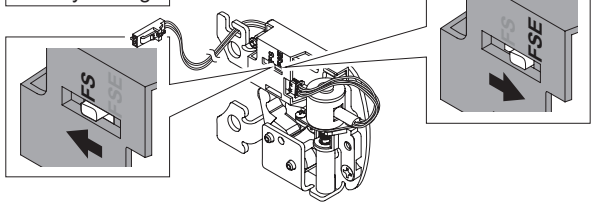
RED LED Flashes ON= Mechanism is moving to the unlocked or locked position.

- **The locked/unlocked operation is dependent on the Fail-Safe or Fail-Secure Switch Position.**

FS (fail safe)

factory setting

Unit locks when electric power is applied and unlocks when power is removed



FSE (fail secure)

Unit unlocks when electric power is applied and locks when power is removed

Explanation of warnings and cautions used in this booklet

Warnings look like this:

WARNING

Warnings indicate potentially hazardous conditions, which if not avoided or corrected, may cause death or serious injury.

Cautions look like this:

CAUTION

Cautions indicate potentially hazardous conditions, which if not avoided or corrected, may cause minor or moderate injury. Cautions may also warn against unsafe practices.

Notices look like this:

Notices indicate a condition that may cause equipment or property damage only.

Directions look like this:

Directions identify a step that may or may not apply to your product configuration. It also may direct you to another part of the instruction.

Customer Service
1-877-671-7011 www.allegion.com/us

ALLEGION

© Allegion 2020
Printed in U.S.A.
941369-00 Rev. 08/20-b