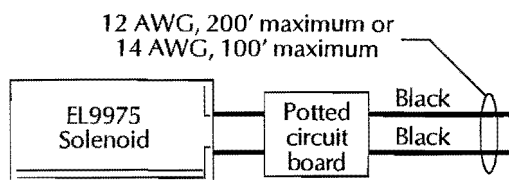


OPTIONAL EQUIPMENT

EL WIRING



ELECTRICAL SPECIFICATIONS

Voltage: 24 VDC
Current: 16 A inrush (0.3 sec.)
0.25 A holding

NOTE

When power is applied to the **potted circuit board**, the solenoid receives a momentary signal to retract and a separate signal to hold as long as power is applied. When attempting to retract solenoid again, power must be removed from the circuit and reapplied.

Solenoid must be wired to a PS873 logic board:



If 871-2 logic board, refer to Von Duprin instructions 941352.



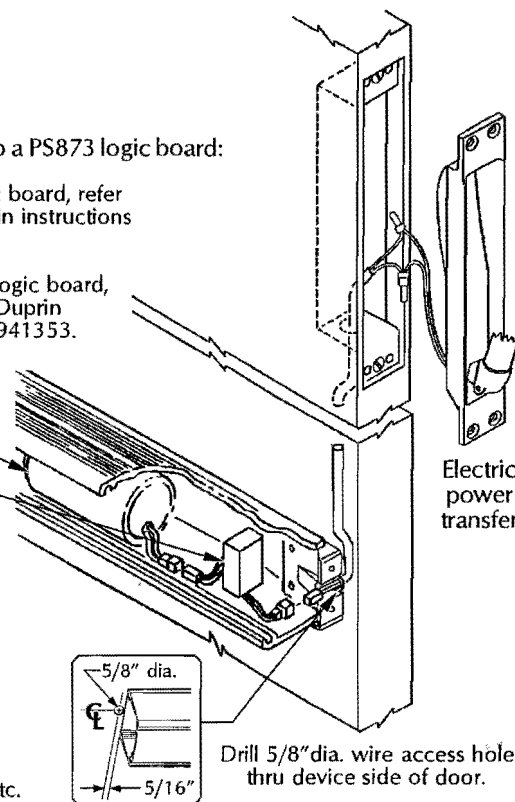
If other 873 logic board, refer to Von Duprin instructions 941353.

Solenoid

Potted Circuit Board

Install after device has been mounted on door

Do not cut device with potted circuit board installed



Troubleshooting solenoid operation

If the solenoid fails to retract the latch bolt when power is applied, recheck wiring for proper connections.

If solenoid retracts latch bolt momentarily but will not remain in energized position:

1. Check wiring for proper connections, gauge, and distances.
2. Check for latch bolt binding caused by improper strike installation, warped door, etc.

EL ADJUSTMENT PROCEDURE

A. Check for proper function:

1. Make sure device is not dogged.
2. Depress pushbar and make sure latch bolts retract and extends fully (see Figure 3).
3. Electrically energize solenoid and hold.
4. Check latch bolt(s) for full retraction (must clear strike (see Figure 3).
5. Release solenoid and check latch bolt extension (see Figure 3).
6. Continue to Section B if device does not function electrically.

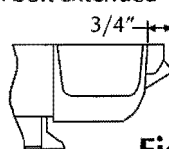
B. Determine if dogging rod adjustment is too long or short:

1. The dogging rod adjustment is too **long** if latch bolt does not retract and clear strike (see Section C for adjustment).
2. The dogging rod adjustment is too **short** if latch bolt does not fully extend or latch bolt fully retracts but solenoid releases while energized (see Section D for adjustment).

C. Adjust solenoid if dogging rod is too **long** (see Figure 4):

1. Remove end cap ① and dogging cover ②.
2. Loosen cap screw ③.
3. Hold plunger ⑤ depressed in solenoid housing ⑥.
Note: Push hard against plunger ⑤ to overcome an internal spring in solenoid housing ⑥.
4. Turned threaded bushing ④ in to shorten dogging rod ⑦ so latch bolt fully retracts.
5. Tighten cap screw ③.
Note: Cap screw ③ must be tightened against flat on threaded bushing ④. Apply a few drops of Loc-Tite 222 to threads of cap screw ③.
6. Replace dogging cover ② and end cap ①.
7. Return to Section A to check for proper function.

Latch bolt extended



Latch bolt retracted

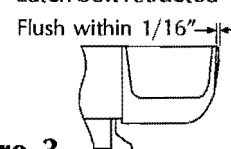
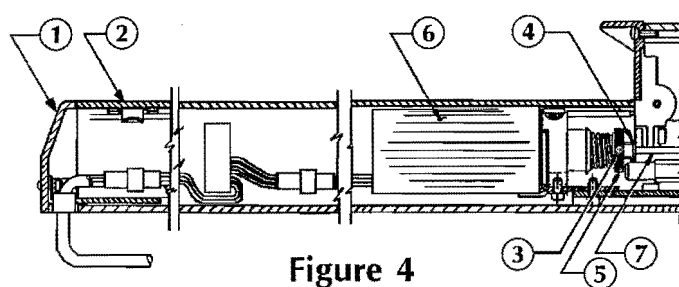


Figure 3

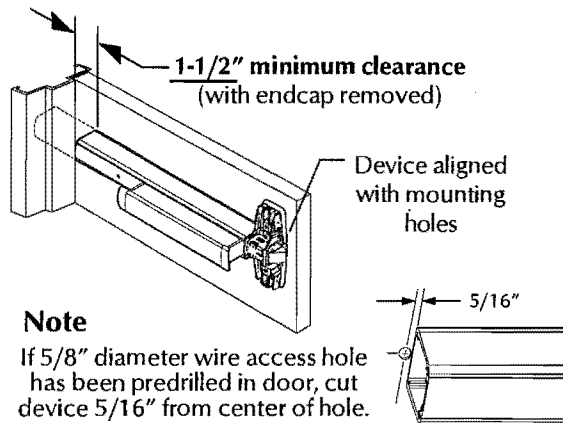


D. Solenoid adjustment if dogging rod adjustment is too **short** (see Figure 4):

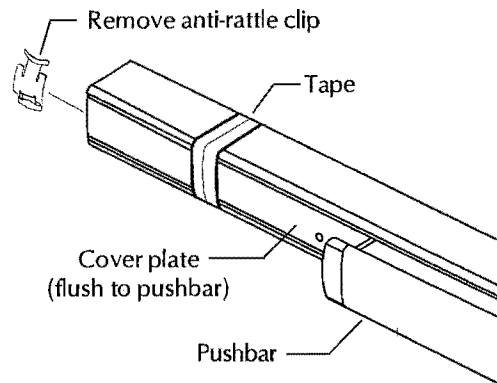
1. Remove end cap ① and dogging cover ②.
2. Loosen cap screw ③.
3. Hold plunger ⑤ depressed in solenoid housing ⑥.
Note: Push hard against plunger ⑤ to overcome an internal spring in solenoid housing ⑥.
4. Turn threaded bushing ④ out to lengthen dogging rod ⑦ so plunger ⑤ just bottoms in solenoid housing ⑥ and latch bolt is fully retracted.
Note: Push hard against plunger ⑤ to overcome an internal spring in solenoid housing ⑥.
5. Tighten cap screw ③.
Note: Cap screw ③ must be tightened against flat on threaded bushing ④. Apply a few drops of Loc-Tite 222 to threads of cap screw ③.
6. Replace dogging cover ② and end cap ①.
7. Return to Section A to check for proper function.

CUT DEVICE

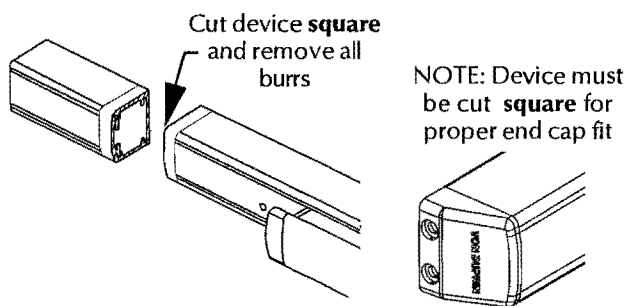
1 Measure amount to cut off device.



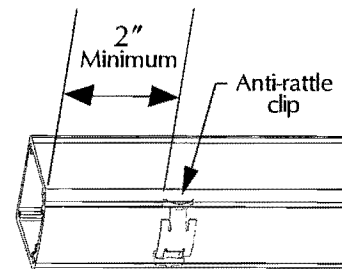
2 Tape and mark area being cut.



3 Cut device square.

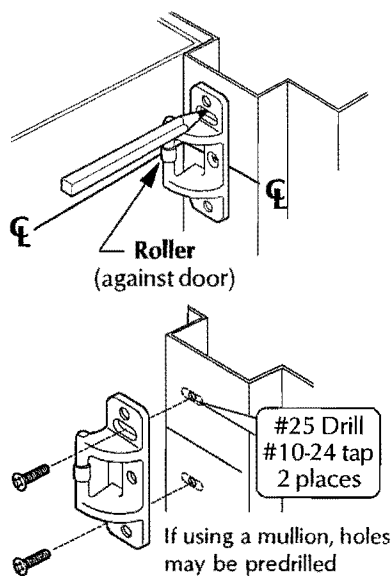


4 Slide anti-rattle clip into device.

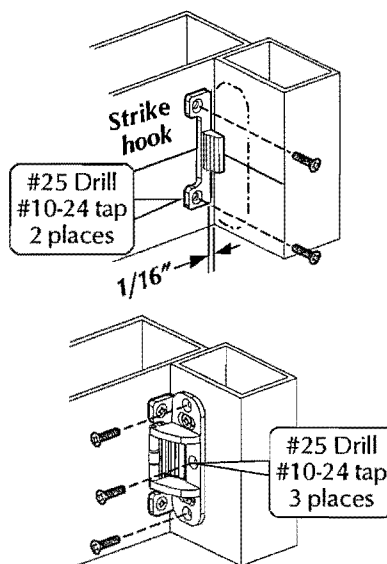


499F STRIKE INSTALLATION

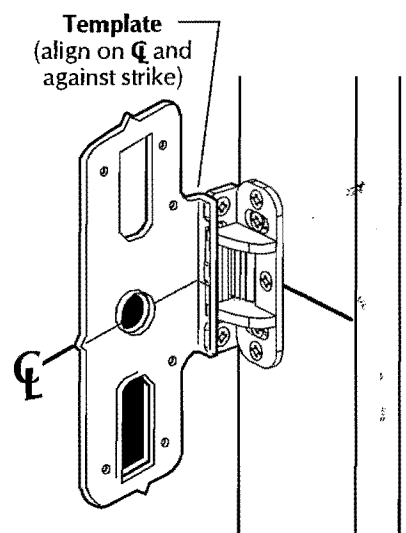
1 Prepare and install screws through 2 strike slots.



2 Install strike hook and additional strike screws.



3 Template aligns as shown.



VON DUPRIN® INSTALLATION INSTRUCTIONS

LX/LX-LC Switch Retrofit Kit

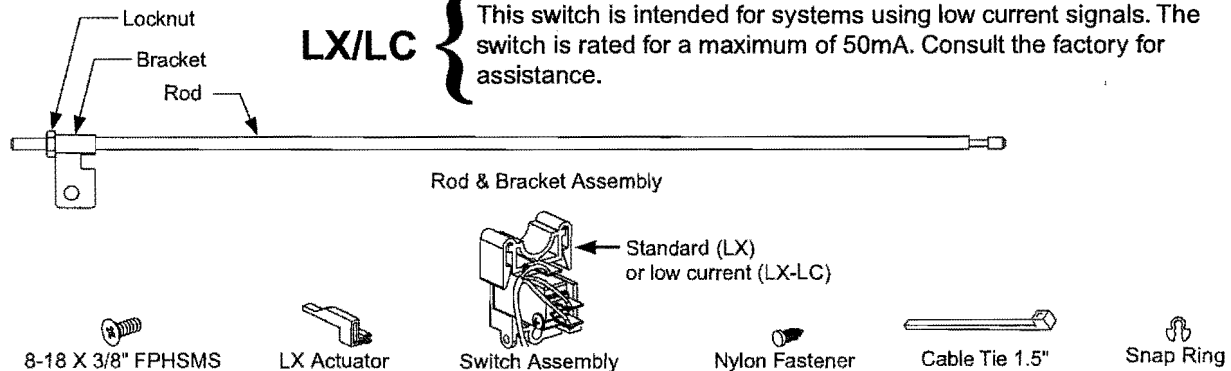
This kit includes the following parts:

LX

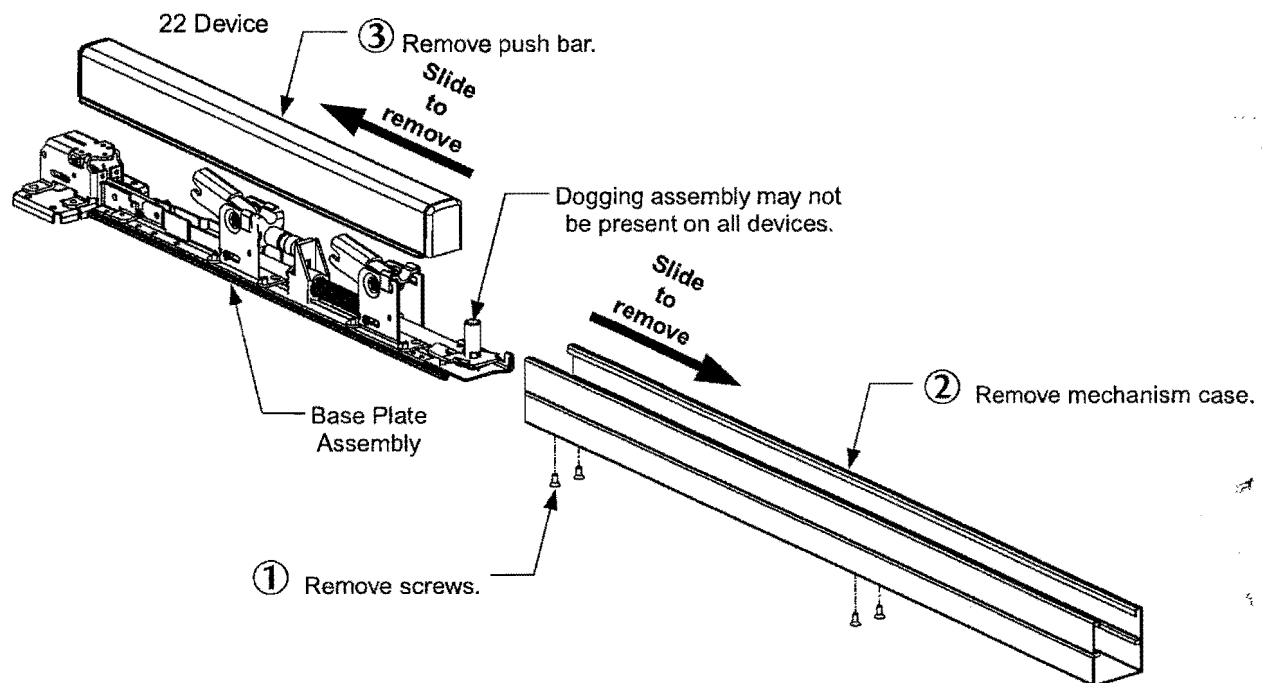
This switch is intended for signaling purposes only and is rated for a maximum 3 ampere resistive load at 24VDC/AC. Use with inductive or capacitive loads (magnetic locks or solenoid devices) derates the capacity of the switch. Consult the factory for assistance.

LX/LC

This switch is intended for systems using low current signals. The switch is rated for a maximum of 50mA. Consult the factory for assistance.

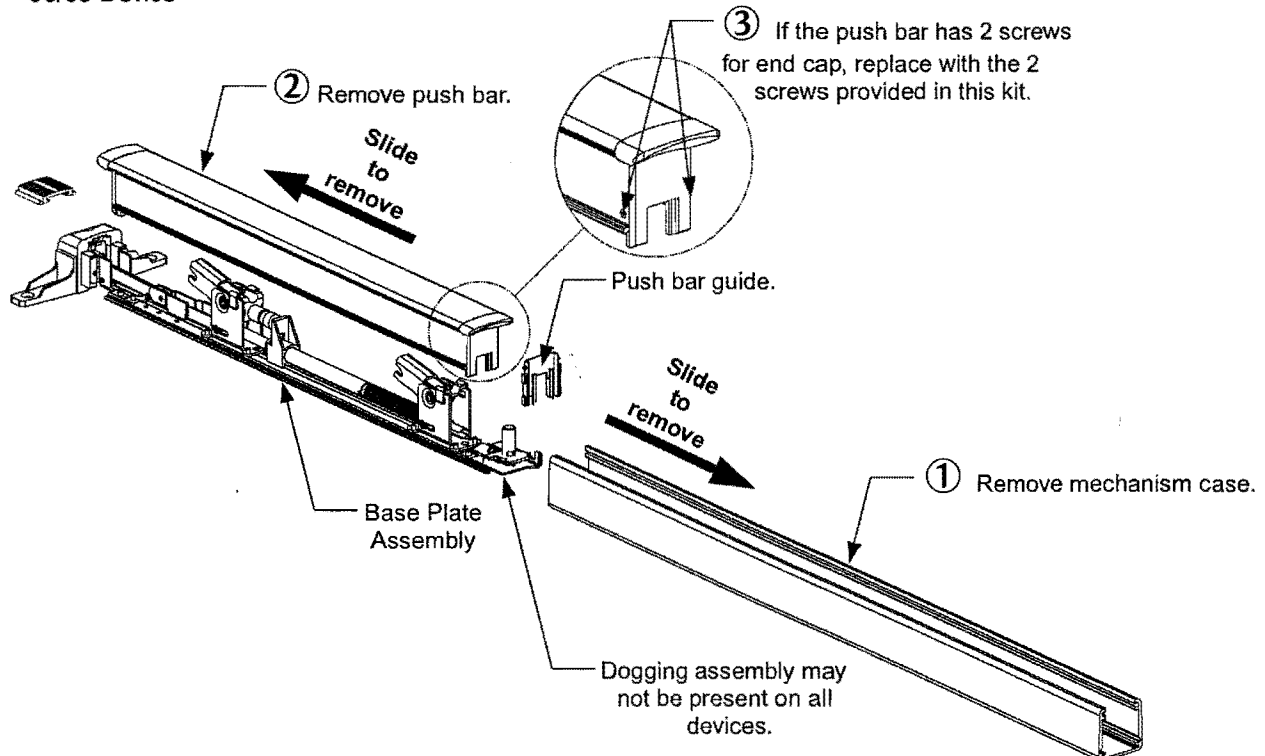


Step 1 Disassemble the device. (Remove from door if mounted.)

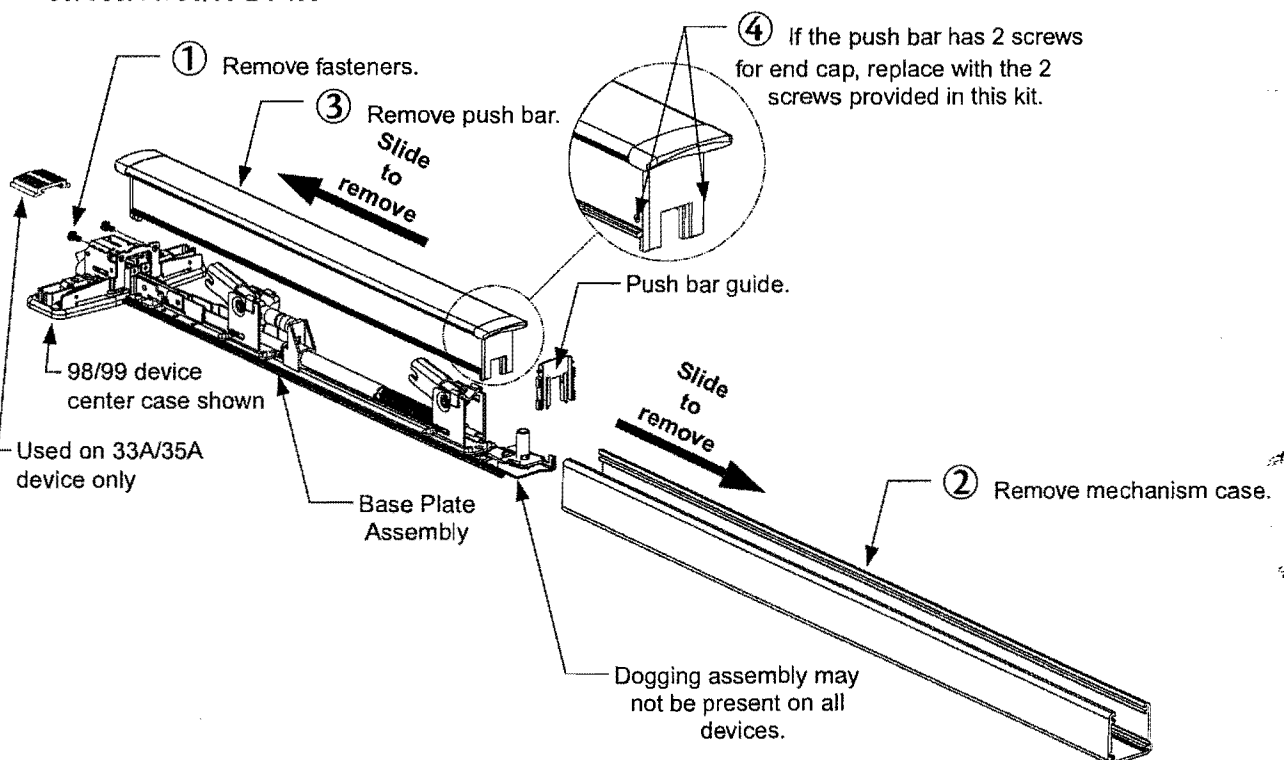


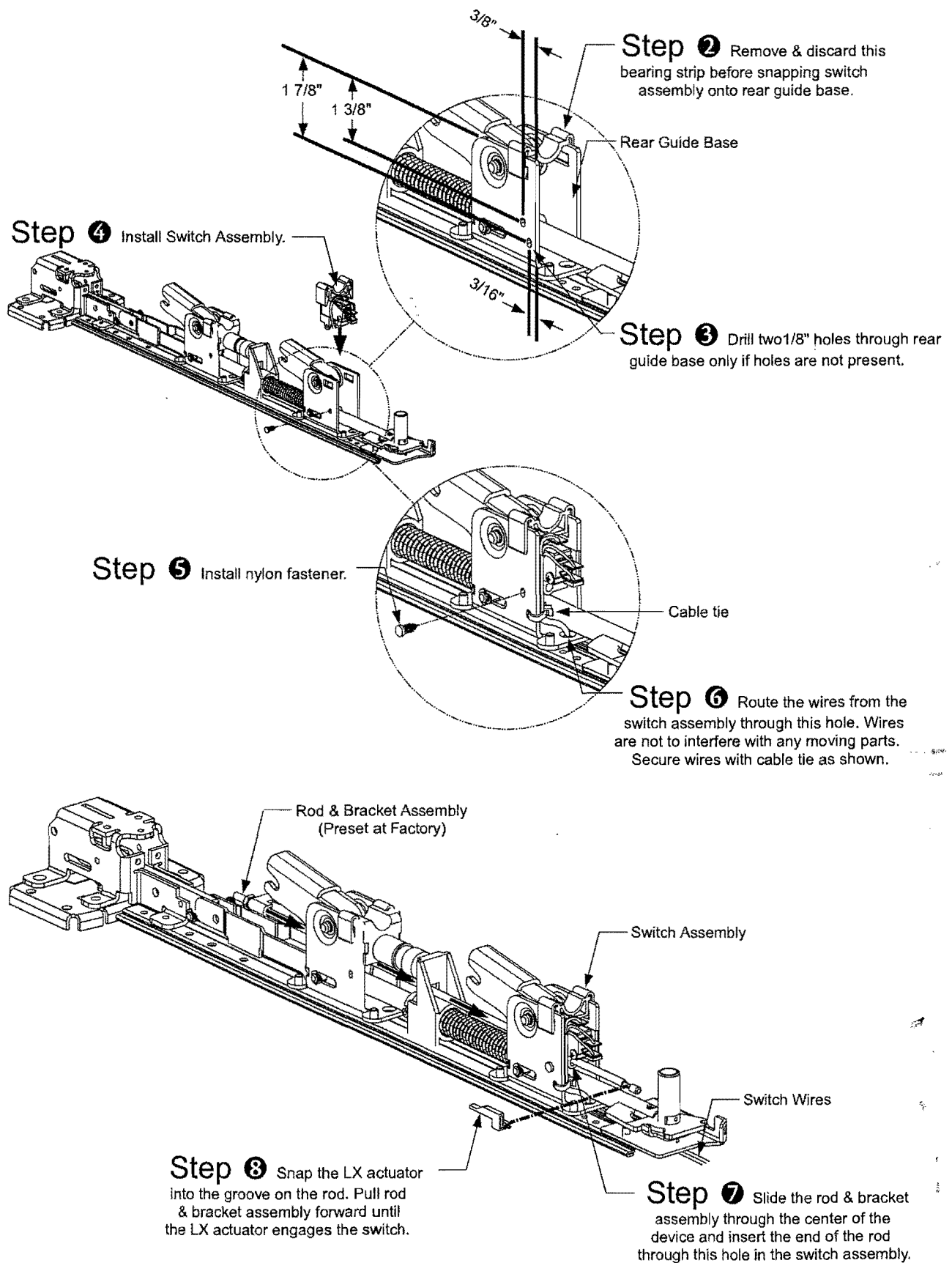
IR VON DUPRIN®

33/35 Device

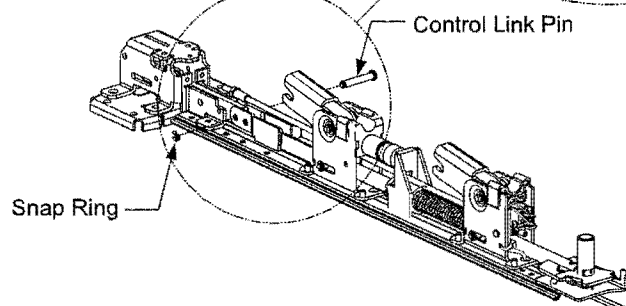
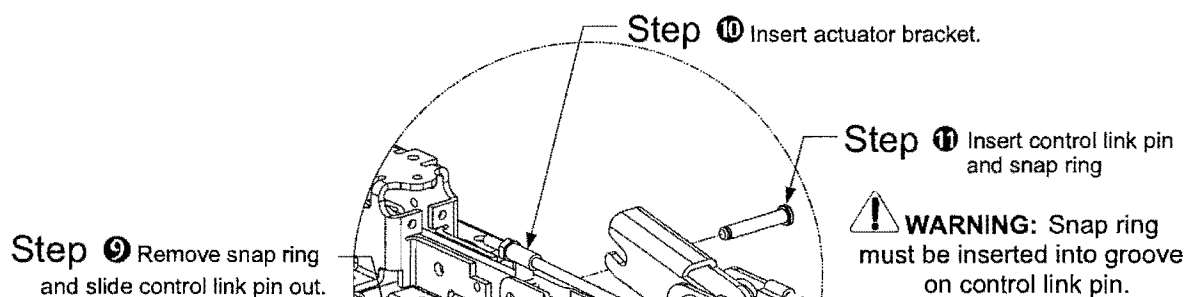
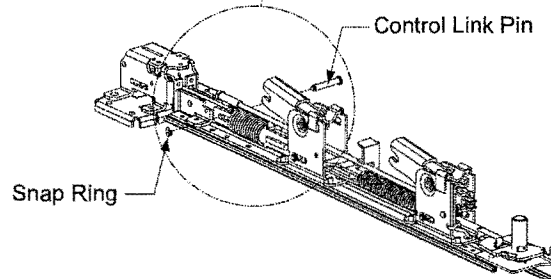
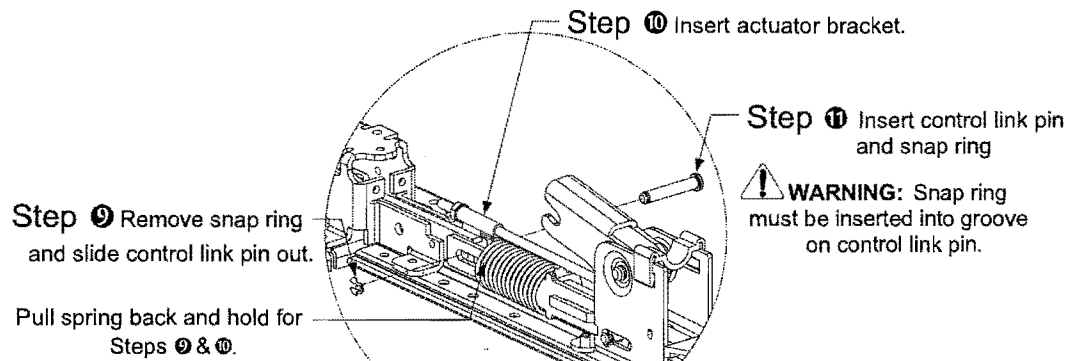


33A/35A & 98/99 Device

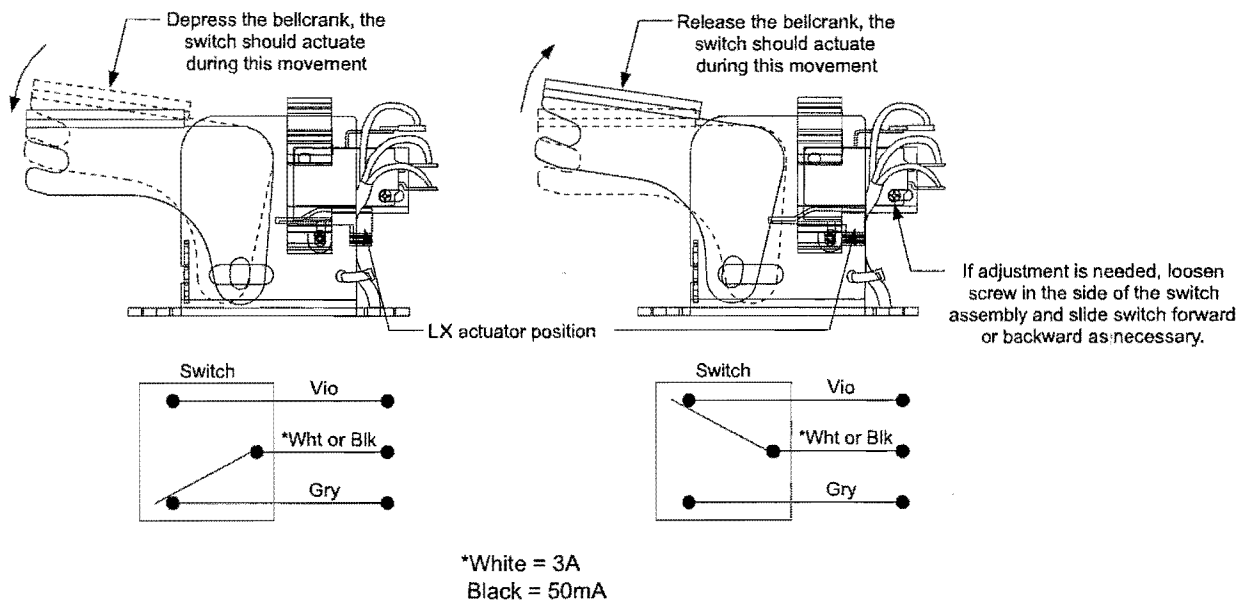




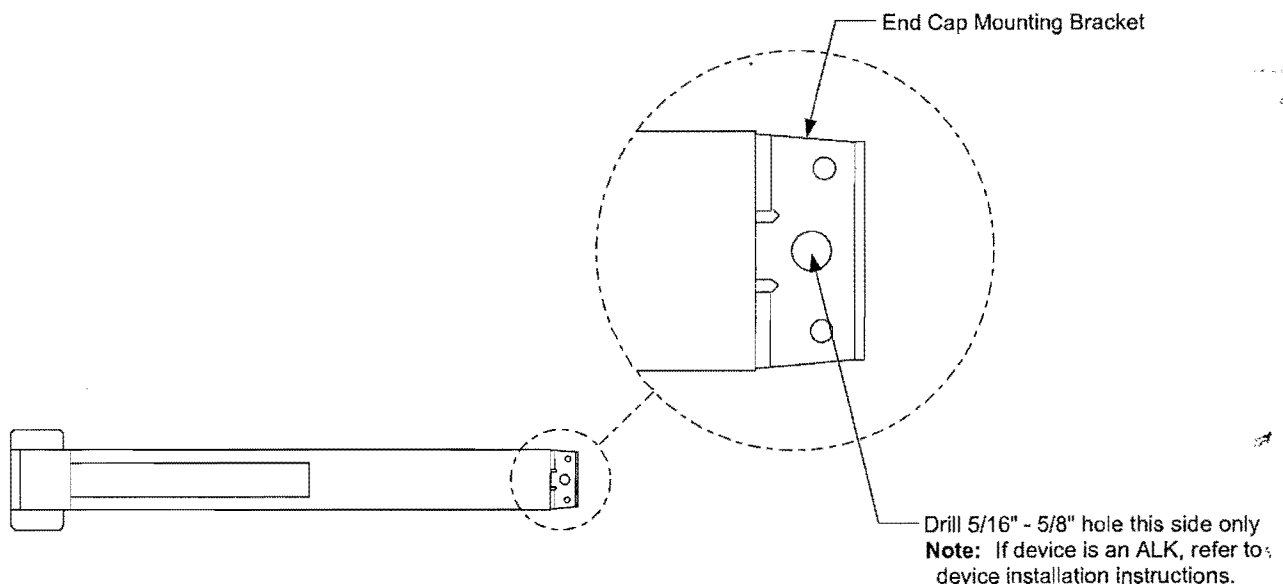
This illustration is for a 22 Device with a composite action rod only. All others go to next illustration.



Step 12 Check the switch for proper actuation.



Step 13 Prep door for device wiring.



VON DUPRIN® INSTALLATION INSTRUCTIONS

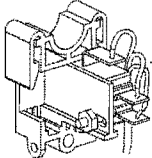
RX/RX-LC/S1 Switch Retrofit Kit

This kit includes the following parts:

RX { This switch is intended for signaling purposes only and is rated for a .1 ampere to 3 ampere resistive load at 24VDC/AC. Use with inductive or capacitive loads (magnetic locks or solenoid devices) derates the capacity of the switch. Consult the factory for assistance.

RX-LC { This switch is intended for systems using low current signals. The switch is rated for a maximum of 50mA. Consult the factory for assistance.

 8-18 X 3/8" Flat Head Screw (2)

 Switch Assembly

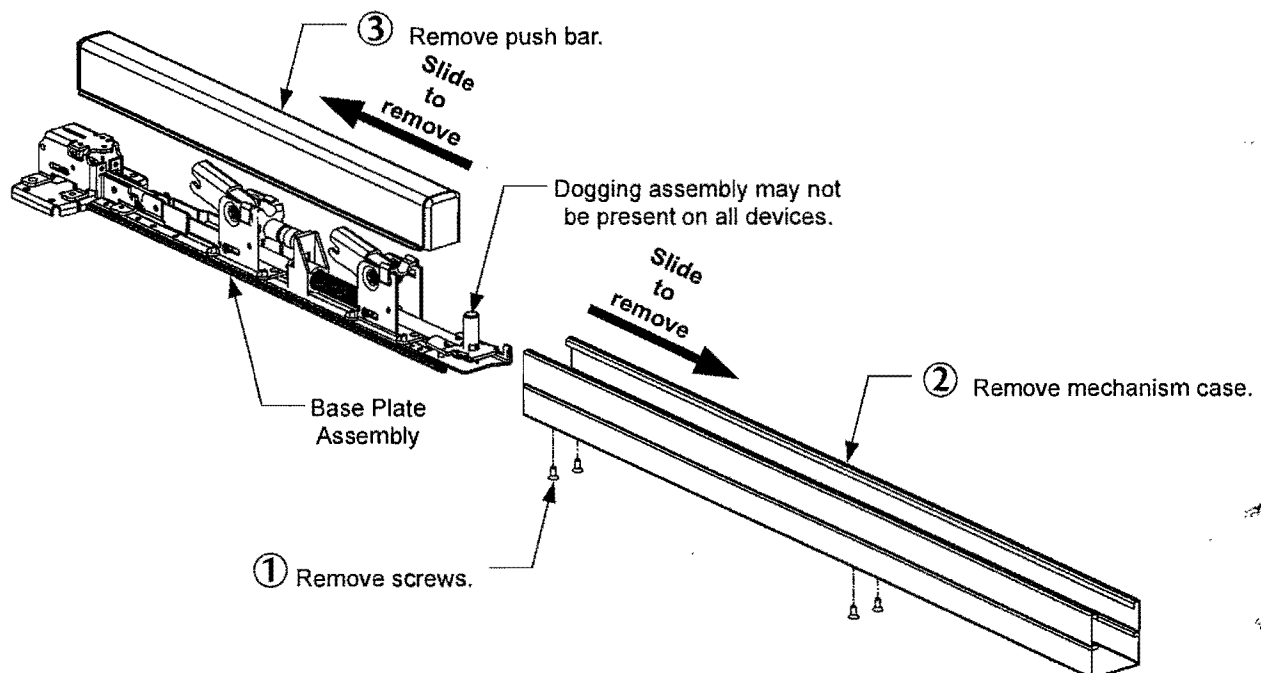
Standard (RX)
or low current (RX-LC)

 Cable Tie 1.5"

 Nylon Fastener

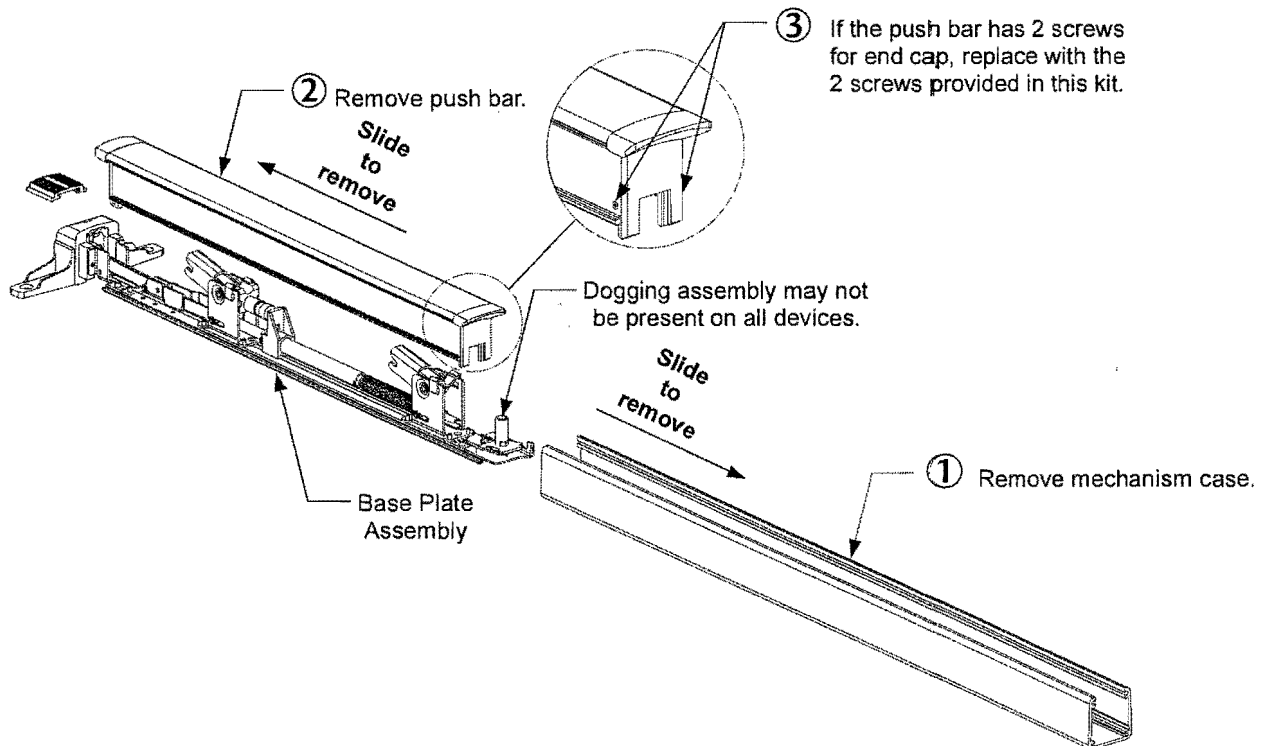
Step 1 Disassemble the device. (Remove from door if mounted.)

22 Device

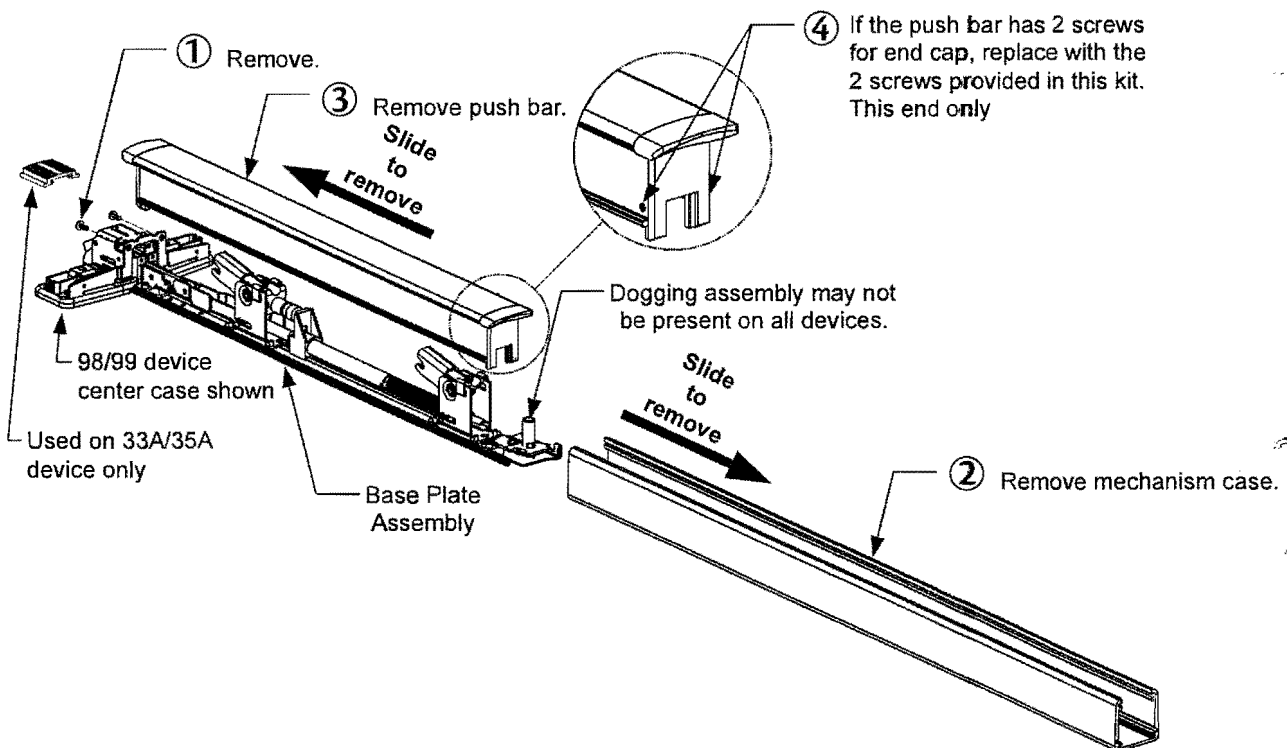


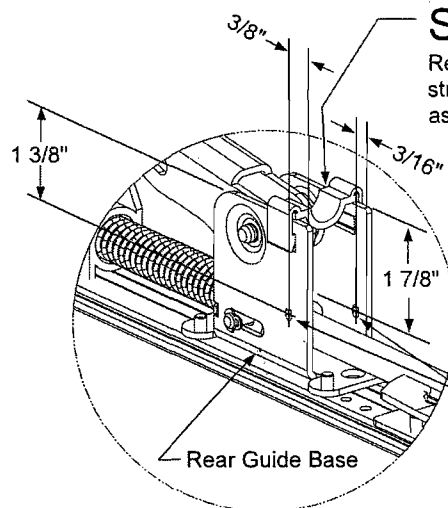
IR VON DUPRIN®

33/35 Device



33A/35A & 98/99 Device





Step 2

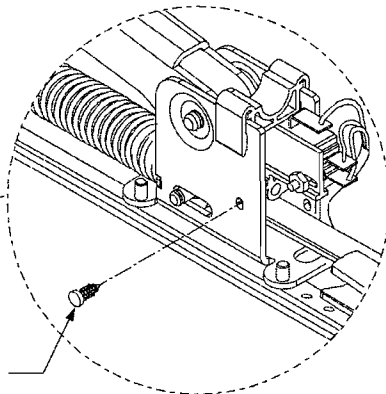
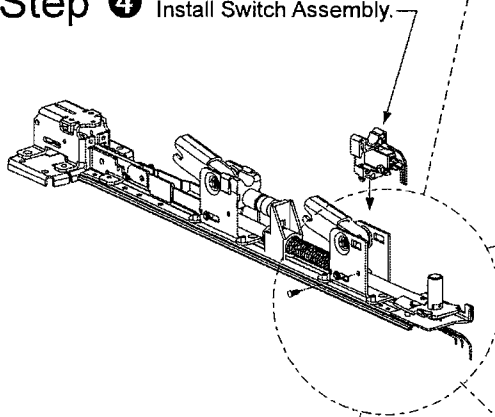
Remove & discard this bearing strip before snapping switch assembly onto rear guide base.

Step 3

Drill two 1/8" holes through rear guide base only if holes are not present.

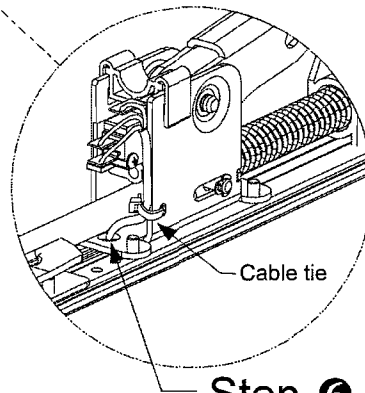
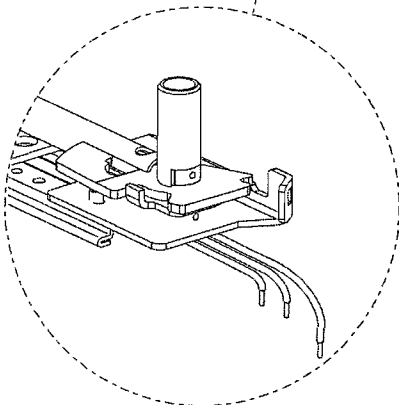
Step 4

Install Switch Assembly.



Step 5

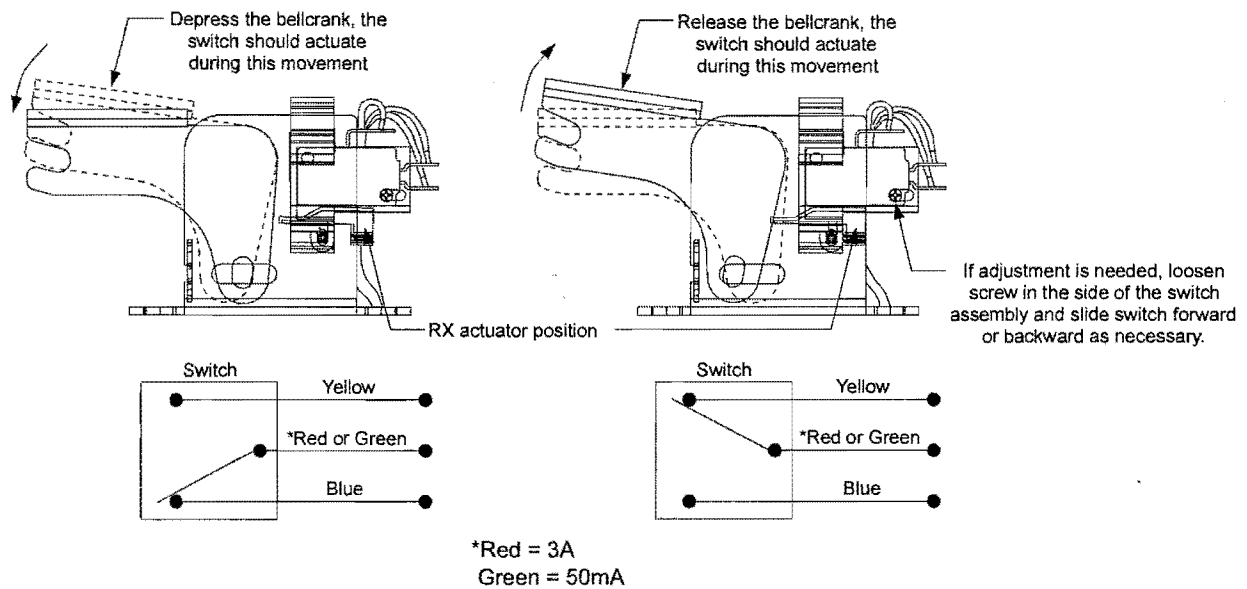
Install nylon fastener.



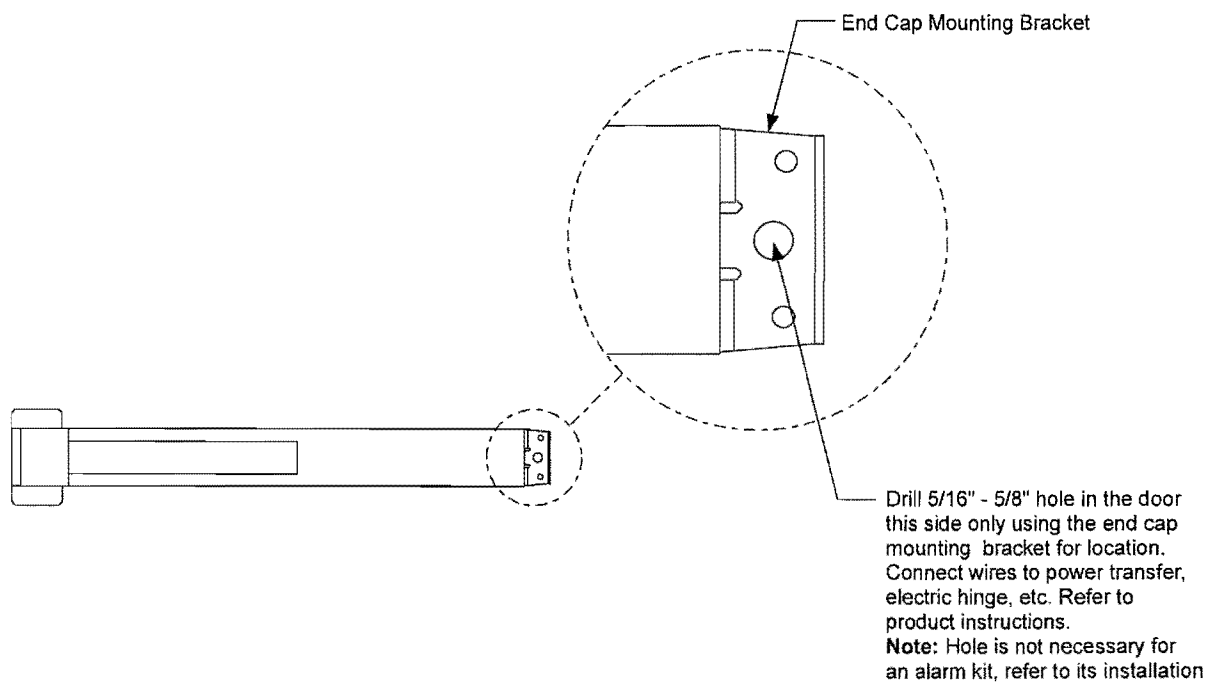
Step 6

Route the wires from the switch assembly through this hole. Wires are not to interfere with any moving parts. Secure wires with a cable tie.

Step 7 Check the switch for proper actuation.



Step 8 Prep door for device wiring.



871-2 INSTALLATION

The 871-2 option provides control over two zones. One or two 871-2 boards can be installed on each PS873.

INSTALLATION:

Step ① Ensure PS873 breaker is open. (Disconnect batteries if you have this option.)

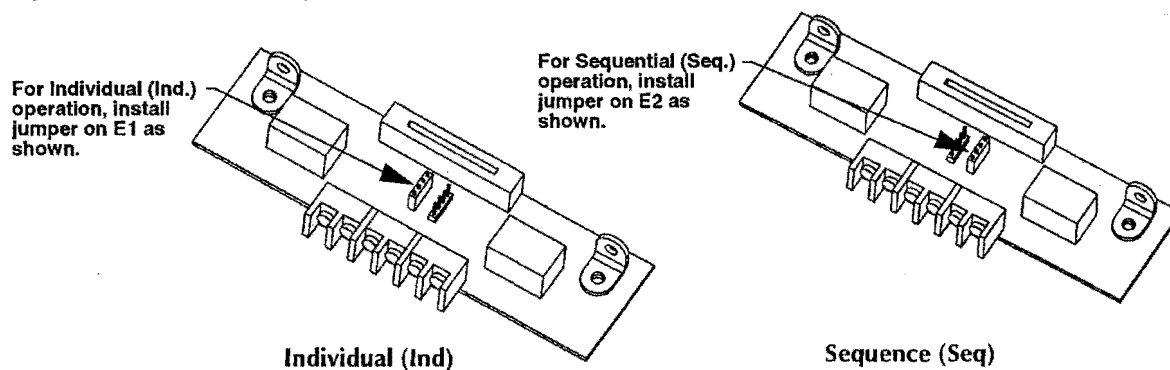
Step ② Select between individual or sequential outputs.

Sequential outputs (factory shipped):

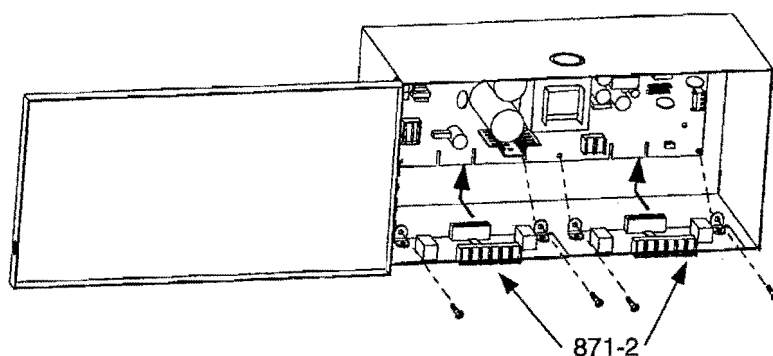
- Input 1 will sequence both outputs. (02 followed by 01)

Individual outputs (must be field programmed):

- Input 1 will control output 1.
- Input 2 will control output 2.



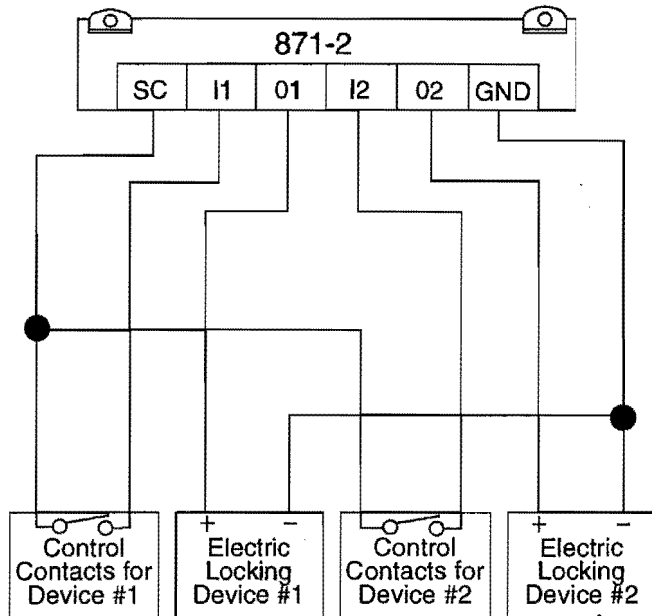
Step ③ Install 871-2 onto either PS873 receptacle as shown.



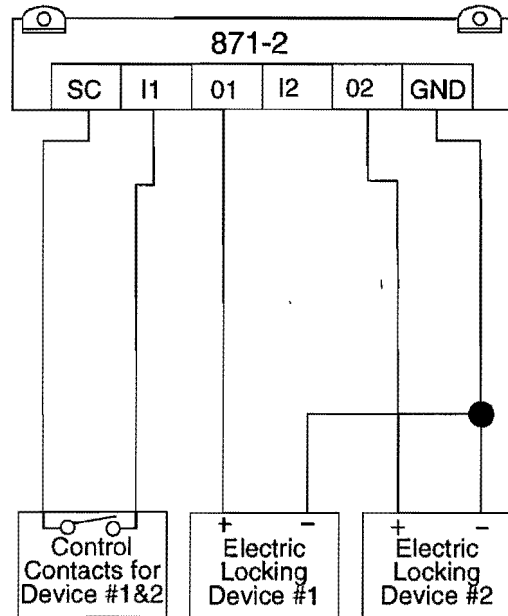
Step 4 Connect inputs and outputs (wire as individual or sequential mode).

NOTE: When using EL type devices (such as EL33, EL99, etc), then:
Use 12 AWG wire, 200 feet maximum, for outputs 01 and 02.
Use 18 AWG wire for control contact inputs I1 and I2.

TYPICAL WIRING - INDIVIDUAL MODE



TYPICAL WIRING - SEQUENTIAL MODE



Step 5 Apply AC voltage to PS873 and test devices.

Step 6 Operation Summary

871-2 OPERATION SUMMARY		
871-2 MODE	IF	THEN
SEQUENTIAL	I1 = 0V I2 = 0V	01 = 0V AND 02 = 0V
	I1 = 24V	I2 = 24, 01 = 24V AND 02 = 24V
	I2 = 24V	I1 = 24, 01 = 24V AND 02 = 24V
INDIVIDUAL	I1 = 0V I2 = 0V	01 = 0V AND 02 = 0V
	I1 = 0V I2 = 24V	01 = 0V AND 02 = 24V
	I1 = 24V I2 = 0V	01 = 24V AND 02 = 0V
	I1 = 24V I2 = 24V	01 = 24V AND 02 = 24V

ALL DC VOLTAGES REFERENCED TO 871-2 GROUND TERMINAL.

871-2 INSTALLATION

The 871-2 option provides control over two zones. One or two 871-2 boards can be installed on each PS873.

INSTALLATION:

Step 1 Ensure PS873 breaker is open. (Disconnect batteries if you have this option.)

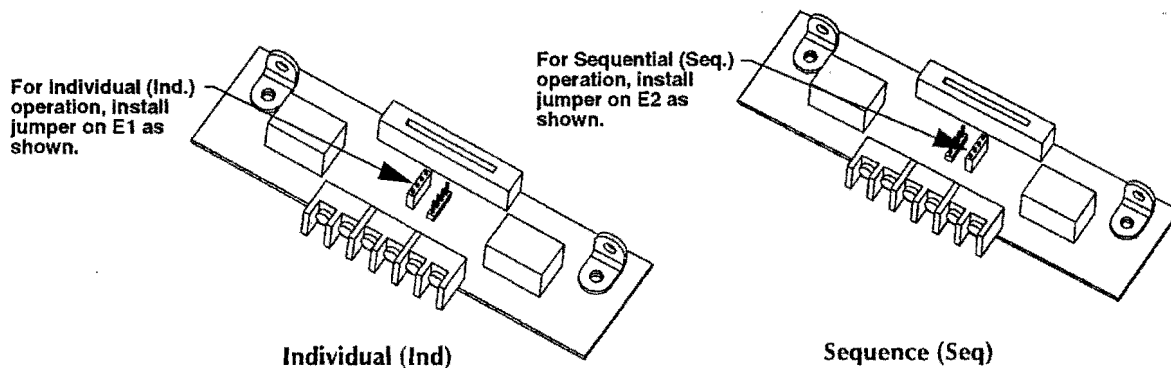
Step 2 Select between individual or sequential outputs.

Sequential outputs (factory shipped):

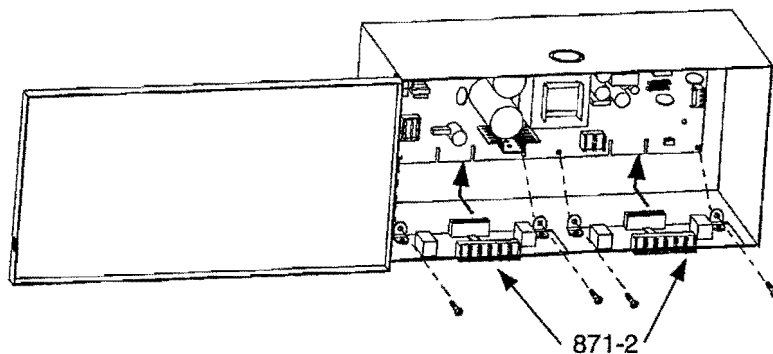
- Input 1 will sequence both outputs. (02 followed by 01)

Individual outputs (must be field programmed):

- Input 1 will control output 1.
- Input 2 will control output 2.



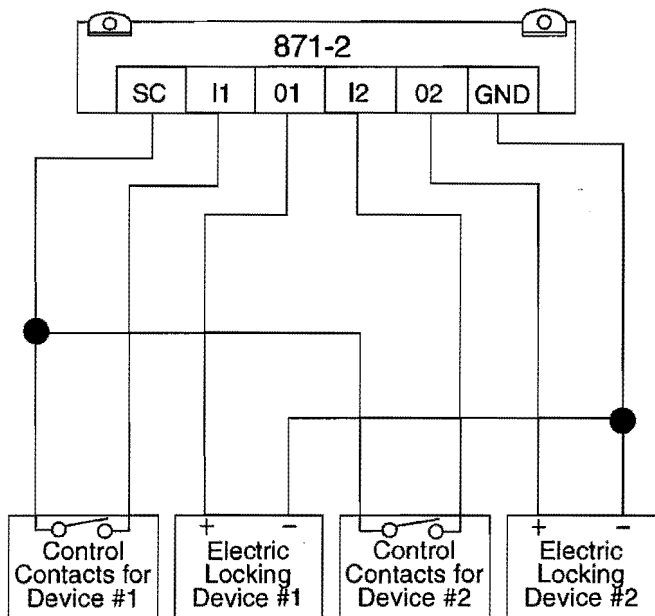
Step 3 Install 871-2 onto either PS873 receptacle as shown.



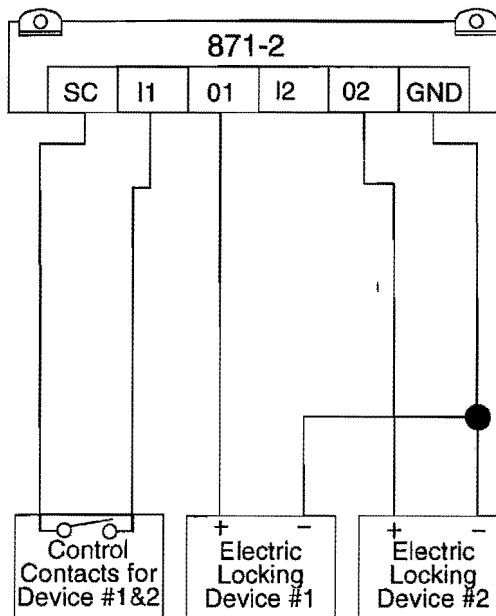
Step 4 Connect inputs and outputs (wire as individual or sequential mode).

NOTE: When using EL type devices (such as EL33, EL99, etc), then:
Use 12 AWG wire, 200 feet maximum, for outputs 01 and 02.
Use 18 AWG wire for control contact inputs I1 and I2.

TYPICAL WIRING - INDIVIDUAL MODE



TYPICAL WIRING - SEQUENTIAL MODE



Step 5 Apply AC voltage to PS873 and test devices.

Step 6 Operation Summary

871-2 OPERATION SUMMARY		
871-2 MODE	IF	THEN
SEQUENTIAL	I1 = 0V I2 = 0V	01 = 0V AND 02 = 0V
	I1 = 24V	I2 = 24, 01 = 24V AND 02 = 24V
	I2 = 24V	I1 = 24, 01 = 24V AND 02 = 24V
INDIVIDUAL	I1 = 0V I2 = 0V	01 = 0V AND 02 = 0V
	I1 = 0V I2 = 24V	01 = 0V AND 02 = 24V
	I1 = 24V I2 = 0V	01 = 24V AND 02 = 0V
	I1 = 24V I2 = 24V	01 = 24V AND 02 = 24V

ALL DC VOLTAGES REFERENCED TO 871-2 GROUND TERMINAL.