VON DUPRIN®
Installation Instructions

98/9975 Series Mortise Exit Device

Devices covered by these instructions:
98/9975 Mortise Exit Device
98/9975-F (Fire) Mortise Exit Device
CD98/9975 (Cylinder Dogging) Mortise Exit Device
EL98/9975 (Electric Latch Retraction) Mortise Exit Device
98/9975-2 (Double Cylinder) Mortise Exit Device

Please give these instructions to building owner after device is installed

Special tools needed:
#10-24 tap
#12-24 tap
Drill bits: #25, 1/8”, 1/4”, 5/16”, 13/32”

Index:
• Screw chart ......................... 2
• Preparation chart ................... 3
• Device installation .................4-5
• Optional equipment ...............6-7
• Cut device ......................... 8

This product is covered by the following patent numbers:
3,767,238  4,427,223
3,854,763  4,466,643
4,167,280  4,741,563
# SCREW CHART

| B | #10-24 X 1” | Surface mount or Sex bolts (1-3/4” door) |
|   | #10-24 X 1-1/2” | Sex bolts (2-1/4” door) |
|   | #10 x 1-1/4” Wood screw | Surface mount (wood) |

- PACKAGED WITH TRIM -

|   | #10-24 X 1-3/8” | 990 Trims (1-3/4” door) |
|   | #10-24 X 1-7/8” | 990 Trims (2-1/4” door) |

| C | #12-12 x 12-24 x 1” Combination | Metal or wood frame |

| D | #8-32 X 1/4” | Strike plate |

| E | #10-24 X 3/4” | Surface mount or Sex bolts (1-3/4” door) |
|   | #10-24 X 1-1/8” | Sex bolts 2-1/4” door |
|   | #10 x 1-1/4” Wood screw | Surface mount (wood) |

| F | #10-16 x 3/8” Thread cutting | End cap |

| G | #8-18 x 3/8” Thread cutting | Center case cover |
**PREPARATION CHART**

Go to instructions on next page before using Preparation Chart

### Center case - 4 holes

<table>
<thead>
<tr>
<th>Surface mount</th>
<th>Sex bolts or 990 trims</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>#25 Drill #10-24 tap</td>
</tr>
<tr>
<td>Wood</td>
<td>1/8&quot; Drill pilot 1&quot; deep</td>
</tr>
</tbody>
</table>

- 1/4" Drill (device side)
- 13/32" Drill (trim side)
- 1/2" dia. hole
- for 98/9975-2 double cylinder devices only

### End cap bracket - 2 holes

<table>
<thead>
<tr>
<th>Surface mount</th>
<th>Sex bolts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>#25 Drill #10-24 tap</td>
</tr>
<tr>
<td>Wood</td>
<td>1/8&quot; Drill pilot 1&quot; deep</td>
</tr>
</tbody>
</table>

- 1/4" Drill (device side)
- 13/32" Drill (trim side)
- *Prepare end cap holes after lock side of device is mounted and hinge side of device is leveled

### STRIKE PREPARATION

**575 Strike**
- 575 Strike
- 5/32" Dia. Drill Pilot for Wood Frame

**575-2 Strike**
- 4 7/8" Deep 1/8" Deep
- 14 Drill #12-24 Tap

**576A/B Strike**
- 2 1/16" 3 3/8"
- 4 1/8" Deep
1. Draw horizontal device center line (C) and mark it on the door.

2. Align template along center line (C) and mark door.

3. Prepare 4 center case holes and cutouts.

See "Preparation Chart" on page 3 for drill, tap, and cut-out information.

See trim instructions for pull side door preparation.

4. Install mortise lock into door.

See "#941019, 7500 mortise lock instructions".

With TP, K, and L trims with outside cylinder to lock and unlock trim function, turn this set screw all the way in.

With EO, DT, NL, and "double cylinder" applications, screw remains as shipped.

See "Screw Chart" on page 2 for screw types and sizes.
5 Install trim (if using) and secure device center case to door.

- 1-1/2" Minimum clearance (with endcap removed) if device is too long for door, see "Cut Device" on back cover.

6 Install outside locking cylinder (if using) and finish installing mortise lock.

See 7500 Mortise Lock Instructions #941019

7 Install supplied strike to frame or other door.

See “Strike Preparation” on page 3 for preparation information.

- 575 Strike (single door application)
- 575/575-2 Strike (double door application)
- 576A/576B Strike (double door application)

8 Install mounting bracket and end cap.

- Mounting bracket flush
- Mark and prepare 2 mounting holes
- Secure mounting bracket and end cap

See “Preparation Chart” on page 3 for preparation information.
9. Adjust latch bolt.

Loosen adjustment screws and adjust finger in or out until latchbolt is fully retracted (with pushbar down) and fully extended 3/4” (with pushbar up).

10. Install center case cover.

Remove protective film from pushbar.
CD (CYLINDER DOGGING)

1. Remove mortise cylinder cam and reinstall in reverse (Figure 1).
2. Insert key and rotate cam to install the cylinder to the cover plate (Figure 2).
3. Remove key to slide cover plate in position in the mechanism case.

**Figure 1**

**Dogging procedure**

Turn cylinder key clockwise approx. 1/8 turn for standard dogging

Figure 2

99-2 (DOUBLE CYLINDER)

1. Remove center case cover.
2. Mount rim cylinder to cylinder bracket as shown.
3. Mount cylinder and bracket assembly to center case with two #8-32 screws as shown.
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 page 5, step 9).
3. Electrically energize solenoid and hold.
4. Check latch bolt(s) for full retraction (must clear strike (see page 5, step 9).
5. Release solenoid and check latch bolt extension (see page 5, step 9).
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).
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 3):
1. Remove end cap and dogging cover.
2. Loosen cap screw.
3. Hold plunger depressed in solenoid housing.
   Note: Push hard against plunger to overcome an internal spring in solenoid housing.
4. Turned threaded bushing in to shorten dogging rod so latch bolt fully retracts.
5. Tighten cap screw.
   Note: Cap screw must be tightened against flat on threaded bushing. Apply a few drops of Loc-Tite 222 to threads of cap screw.
6. Replace dogging cover and end cap.
7. Return to Section A to check for proper function.

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

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 WIRING

Solenoid draws 16 A inrush current from PS873. 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 941356.

Potted Circuit Board
Install after device has been mounted on door
Do not cut device with potted circuit board installed

EL Wiring Diagram

Troubleshooting solenoid operation

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

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.
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.

**Note**
If 5/8” diameter wire access hole has been predrilled in door, cut device 5/16” from center of hole.