This instruction covers new installation of the 98/9949 concealed vertical device for hollow metal and aluminum doors.

Also covered is the CS 98/9949 retrofit cabling system for converting 98/9947 Series to 98/9949 Series (compatible with models 98/9947, 98/9947-F, 98/9947-LBR, and 98/9947-F-LBR).

1-Point Latch (LBL)

2-Point Latch includes these additional parts

HM = for Hollow Metal Door applications
AL = for Aluminum Door applications
RF = for Hollow Metal Door Retrofit applications

Customer Service
1-877-671-7011 www.allegion.com/us
1. Identify Cables and Locations.
   (If not preinstalled in door)

   For easy identification, each cable is labeled with part number and location.

   ! IMPORTANT:
   Ensure cable end is fully seated in clip

2. Install Cable(s).
   a. Position red cable end to clip on center slide
   b. Pull cable into clip to snap it into place
   c. Push cable snap against center slide to secure cable
   d. In the same way, install opposite end of red cable to top latch in the position marked red
   e. There is an adjuster on one end of the white cable. Install this end to the remaining top latch position (marked as white)
   f. Install opposite end of white cable to bottom latch

   ! IMPORTANT:
   Ensure cable end is fully seated in clip

   CABLE IDENTIFICATION (STANDARD SIZES)

<table>
<thead>
<tr>
<th>Door Opening Height</th>
<th>A Top Cable (Red)</th>
<th>B Bottom Cable (White)</th>
<th>A Top Cable (Red)</th>
<th>B Bottom Cable (White)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’ 8”</td>
<td>23925795</td>
<td>23926207</td>
<td>23925803</td>
<td>23926215</td>
</tr>
<tr>
<td>7’ 0”</td>
<td>23925761</td>
<td>23926173</td>
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<td>23926173</td>
</tr>
<tr>
<td>8’ 0”</td>
<td>23925647</td>
<td>23926058</td>
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<td>23926058</td>
</tr>
<tr>
<td>9’ 0”</td>
<td>23925522</td>
<td>23925936</td>
<td>23925522</td>
<td>23925936</td>
</tr>
<tr>
<td>10’ 0”</td>
<td>23925407</td>
<td>23925811</td>
<td>23925407</td>
<td>23925811</td>
</tr>
</tbody>
</table>

   CABLE REMOVAL

   A cable removal tool has been provided. Slot in tool fits over cable, holding tabs down. Pull on cable snap to loosen cable for removal.
3 Determine if Bottom Latch Retraction Adjustment is Necessary.

For 2-Point Latch Only

a. Flex the cable into an L-shape as shown to simulate the installed condition of the latches.

b. To determine whether an adjustment is required, actuate the top latch to the hold-open position by pressing down on the connecting rod. Bottom latch should retract to within $\frac{1}{16}$" of flush. If it does not, an adjustment is necessary.

If no adjustment is needed, proceed to Step 5.

4 Adjust Bottom Latch Retraction (if necessary).

For 2-Point Latch Only

\[\text{\textbf{NOTE: Adjustment must be made while the top latch is in the hold-open position, with cable flexed into an L-shape to simulate the installed condition of the latches.}}\]

\[\text{\textbf{NOTE: These (3) hex components are used to make the adjustment.}}\]

a. While holding the snap-fitting with a $\frac{3}{8}$" wrench, use a 10mm wrench to break loose the lock nut.

b. While holding the lock nut in place, rotate the barrel of the snap-fitting clockwise by hand until the bottom latch is retracted to within $\frac{1}{16}$" of flush.

c. While holding the conduit cap with a $\frac{3}{8}$" wrench, use a 10mm wrench to turn the locknut in a clockwise direction to close the gap between the lock nut and snap-fitting. Stop when the gap is closed and the snap-fitting begins to turn with the locknut.

d. While holding the snap-fitting with a $\frac{3}{8}$" wrench, continue to tighten the locknut until it is secure.
5. If Retrofit Installation

a. Remove device from existing door.

b. Remove existing door.

c. Remove and discard existing strikes.

6. With Door Laying Flat, Draw Horizontal Device Center Line (C).

- RHR shown (LHR uses same cutout and hole orientation)
- C aligns with center of hole

**NOTE:** Centerline is predetermined by cutout. If no cutout exists, refer to Step 8 to determine centerline.

7. Align Plastic Template and Mark Door.

- Plastic Template

**NOTE:** This hole is to be ½" diameter (disregard larger center hole of plastic template).

8. If Necessary, Prepare Door Cutouts.

- Latch
- Device
- ½" Dia. (Omit for EO, DT, & TL)
- 2¾" Backset
- 4½" Min. Stile

- 39½" to finished floor

Push side of door, RHR shown
9 If Necessary, Prepare 2 Center Slide Holes.

Push side of door, RHR shown

10 Prepare 4 Holes per Plastic Template.

Surface Mount (metal doors only)

- #25
- #10-24

OR

Sex Bolts or 990 Trims

- ¾" (device side)
- ⅞" (trim side)

11 Assemble Latch Mounting Brackets.

Hollow Metal

Top Door Channel

Top

- 3/4"
- ¼"

Bottom

For 2-Point Latch Only
12 Prepare Access Hole for Bottom Latch Adjustment Pin.

Hollow Metal | For 2-Point Latch Only

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13 If Necessary, Prepare Door for Top Strike Cutout.

14 Prepare Top of Door for Latch Mounting.

Aluminum

15 Prepare Bottom of Door for Latch Mounting.

Aluminum | For 2-Point Latch Only

16 If Using 696/697 Thru-Bolting Trim, Remove Center Slide Mounting Nut.

NOTE: Confirm top latch (and bottom latch, if applicable) is in correct orientation before proceeding.

17 Slide Latch and Center Slide Assembly thru Door.

Hollow Metal Door application shown

NOTE: It is normal for the cable to bend inside the door, forcing the latch outward.
Secure Center Slide to Door.

18. Secure center slide to door by lightly tightening lower screw.

Align upper hole visually.

Insert small screwdriver into upper hole to prevent center slide from rotating.

Fully tighten lower screw.

Align Bottom Latch and Install Mounting Screws.

19. Aluminum For 2-Point Latch Only

Secure Top Latch with 2 Screws.

20. Aluminum

Install Bottom Latch Mounting Bracket Assembly.

21. Hollow Metal For 2-Point Latch Only

NOTE: Confirm correct orientation of assembly before proceeding. Open side of housing should face pull side of door.

NOTE: Use 2 screws per bracket (center hole not used for this application).

If using ¾" undercut door, spacer blocks (2) are required.

Spacer Block Kit (24231516) purchased separately.
22 Insert Latch Adjustment Pin to Hold Bottom Latch in Place.

Hollow Metal For 2-Point Latch Only

Pin must go thru both sides of bracket

Bottom edge of latch housing should be flush with bottom of door (for 3/8" standard undercut)

Assemble pin

Squeeze tabs on cap, then insert pin

23 Secure Top Latch Mounting Bracket.

Hollow Metal

NOTE: It is normal for the cable to bend inside the door, forcing the latch outward as shown here.

#25 #10-24

NOTE: Use 2 screws per bracket (center hole not used for this application).

24 Hang Door on Frame.

CAUTION: For 2-point latches, bottom latch cannot be in locked position while hanging door on frame. Latch must be retracted.

25 If Necessary, Remove NL Drive Screw.

NL drive screw
Factory installed on back of center case

With the NL drive screw removed, key locks and unlocks lever, knob, or thumb piece. For the trims listed below, REMOVE NL drive screw.

996L  696TP  990TP
996K  697TP

With the NL drive screw installed, key retracts latch bolt. DO NOT remove NL drive screw for the following applications:

NL, EO, DT trims and 98/99-2 double cylinder devices (i.e. TP-2, L-2, and K-2).

*996L-BE  *E996L  *696TP-BE  *990TP-BE
*996K-BE  *E996L-BE  *697TP-BE

* If the trim being installed is "BE" (i.e. 996L-BE), the trim lock tumbler on the back of the device must be in the UP position before device is installed. This allows the trim to be unlocked at all times.

26 If Necessary, Cut Device.

Temporarily Remove Anti-Rattle Clip

Cover Plate Flush

1 1/8" (38 mm) Recommended

Correct Orientation (RHR shown)

Incorrect Orientation

360°
27 Install Top Center Slide Screw.

NOTE: If using 696/697 trim, this screw will pass thru top center slide hole and secure directly into trim during Step 28.

28 Attach Center Case to Door.

Thru-bolting Trim

Surface Mount (metal doors only)

Sex Bolts

(1 3/4" door)

(2 1/4" door)

OR

29 Mark and Prepare 2 Holes.

Surface Mount (metal doors only)

Sex Bolts

1/4" (device side)

1 1/2" (trim side)

OR

#25 #10-24

30 Install End Cap Bracket and End Cap.

Surface Mount or Sex Bolts

(1 3/4" door)

Sex Bolts

(2 1/4" door)
31 If New Installation, Prepare Door Frame for Top Strike.

- Use strike to mark location of 2 holes
- Edge of stop

32 If Retrofit Installation, Install Steel Cover Plate to Cover Existing Strike Opening in Accordance with the Frame Manufacturer’s Fire Listing.

- Strike Filler Plate (3FP0116A001-GL) purchased separately

33 Install 2 Top Strike Screws Using the Slot Features on the Strike.

- 249 Top Strike

34 Prepare Floor for Bottom Strike.

- Hollow Metal For 2-Point Latch Only

- Chisel out pocket ½" Deep
- ½" Dia. x 1¼" Deep 2 places

35 Install Bottom Strike.

- Hollow Metal For 2-Point Latch Only

- Clear holes of debris, then drop in anchors (slotted end first)
- Secure the anchors using a hammer and punch

- IMPORTANT: Anchors must be below flush.
36 Prepare Threshold.

**Aluminum For 2-Point Latch Only**

a. After closing door with bottom latch installed, mark the location the bottom latch bolt is contacting the threshold.

b. Drill a $\frac{3}{4}$" diameter hole in the threshold.

38 Adjust Lift Finger.

**NOTE:** Lift finger adjustment must be performed while the latches are in the extended (latched) position.

Loosen retainer clip screw

Loosen adjustment screw until the lift finger drops and you feel contact with the center slide

Tighten retainer clip screw

37 Install Lift Finger and Retainer Clip.

**NOTE:** The lift finger installation and adjustment must be performed while the latches are in the extended (latched) position.

Slide L-shaped lift finger thru block in device center case and then into center slide

**For 2-Point Latch Only**

Push cable to the side so it does not interfere with lift finger.

Insert adjustment screw and rotate with screwdriver to raise lift finger until it is snug against block

**For 2-Point Latch Only**

Install retainer clip against lift finger, snapping it into the slot of the adjustment screw

Secure lift finger and retainer clip with screw

39 Perform Functional Test of Door.

a. Depress pushbar. Door should begin to open when pushbar is nearly fully depressed. If necessary, refer to Step 38 to readjust lift finger.

b. With door closed, top latch should be secure.

c. With door closed, bottom latch should be secure.

d. Confirm that bottom latch does not drag against floor when door is opened.

**Hollow Metal For 2-Point Latch Only**

If this occurs, remove latch adjustment pin and raise latch, then reinsert pin in next notch.

Pin must go thru both sides of bracket

Squeeze tabs on cap before reinserting pin
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.

**OPTIONAL EQUIPMENT**

**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.

**CD function conversion**

**Dogging procedure**

- Turn cylinder key approximately 1/8 turn for standard dogging
- Depress pushbar