1. This kit converts all 33/35A and 98/99 series EL devices and fire devices built prior to Oct. 2014 to quiet electric latch (QEL) retraction devices.
2. Install according to instructions or device will not function and panic or fire label will be void.
3. The QEL wiring must be attached to the fire alarm system if installed on fire exit hardware.

**Parts**

- **Tools Required**
  - ⁵⁄₈" Drill Bit
  - Screwdriver

- **QEL Baseplate w/o Dogging** (replaces EL Baseplate and Fire Baseplate)

- **QEL Baseplate with Dogging** (replaces EL-HD Baseplate)

**WARNING**

If existing exit device is fire rated, do not install HD-QEL (hex dogging) baseplate. Doing so will void fire rating.
1  Disconnect Power

Disconnect AC power from power supply before proceeding with this conversion. If using Battery Backup option, unplug all four wires from battery terminals.

2  Detach Vertical Rods if present

Refer to device instructions as needed.

3  Remove Exit Device from Door

Device and trim must be held securely while screws are being removed, to prevent dropping to the floor.

4  Remove Old Baseplate Assembly

4a  Remove Mechanism Case

Keep all parts

4b  Remove Pushpad From Baseplate

Keep pushbar
4 Remove Old Baseplate Assembly (continued)

4c Discard retaining ring and pin

4d Discard old baseplate

5 Install New QEL Baseplate Assembly

5a Attach existing center case to new baseplate using two screws

5b Install new pin and retaining ring

Ensure that retaining ring is in groove.
5 Install New QEL Assembly (continued)

5c Install pushpad

Ensure plastic clips are attached

6 Install mechanism case

NOTE: During step A, verify that plastic pushbar clips are aligned properly inside case.

7 Prepare dogging cover for HD dogging key (if applicable and only on panic devices).

7a Locate and drill hole

Center of Cover

Deburr edge of hole

1 1/2"

1/4"

7b Install dogging cover

8 Drill Wire Access Hole (if required)

Drill 5/16" dia. access hole through device side of door.
9 Attach Exit Device to Door

For more detailed installation instructions for specific Exit Devices, visit the Support area of the Allegion website at www.allegion.com/us

10 Confirm Equipment Compatibility

The QEL is compatible with the following equipment (refer to individual instructions as needed):

- PS900-SERIES POWER SUPPLIES - PS902, PS904, PS906, PS914
- PS873 POWER SUPPLY PLUS 871-2, 871-2Q, 873-4TD/AO OPTION BOARDS

11 Route Two Wires from QEL Exit Device to Power Supply

QEL Electrical Load

Voltage: 24 VDC  
Current: 1.0 A inrush (0.5 sec)  
0.14 A holding

<table>
<thead>
<tr>
<th>Distance (one way)</th>
<th>Wire Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>200'</td>
<td>18AWG</td>
</tr>
<tr>
<td>320'</td>
<td>16AWG</td>
</tr>
<tr>
<td>500'</td>
<td>14AWG</td>
</tr>
<tr>
<td>800'</td>
<td>12AWG</td>
</tr>
</tbody>
</table>

Note: Power wires to QEL are not polarized.
Install 900-2Rs, 4Rl, or 4R Option Board(s) into Power Supply

**a** Review Available 900 series Option Board Mounting Locations (Gray)

- PS902
- PS904
- PS914
- PS906

**b** Plug Option Board Cable into any Available Option Connector

- PS902 1 Board
- PS904, 914 2 Boards
- PS906 3 Boards

**c** Secure Board(s) with Screws

Notes:
1. 24VDC output setting required when QEL device connected
2. If installing board in location 2 or 3, rotate board 180°
3. The QEL is compatible with an existing 900-2Q board if currently installed.
4. Latchbolt retraction of (2) sequenced QEL's requires more than 1 second to complete.
5. When powering multiple components, verify that the amperage requirements of all components combined does not exceed the power supply output rating.

Connect Input and Output Wires to Option Board (2RS Shown)

**Sequential Mode - Typical Wiring**

- 120/240 VAC 50/60Hz (PS900 Series only)
- Input I1 will activate both outputs

**Individual Mode - Typical Wiring**

- Input I1 will activate output 1
- Input I2 will activate output 2

Note:
Fail secure output only allowed if approved by Authority Having Jurisdiction.
### Check Operation

A. Activate each input and verify all QEL devices operate properly.
B. If any device does not operate properly, see step 15 for troubleshooting.

### If Necessary, Troubleshoot Operation (LED is only visible with the mechanism cover removed)

<table>
<thead>
<tr>
<th>Power at the QEL</th>
<th>QEL Response</th>
<th>Condition/Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>24VDC</td>
<td>LED - Solid green</td>
<td>Operation normal, latch retracted immediately</td>
</tr>
<tr>
<td></td>
<td>Latchbolt - retracted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LED - Solid red after latchbolt attempts to retract multiple times</td>
<td>Latchbolt cannot fully retract mechanically</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verify mechanical adjustment (on vertical rod or mortise lock devices if used). Remove and reapply input voltage to reset this condition.*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See Check Mechanical Operation on page 8 as needed.**</td>
</tr>
<tr>
<td></td>
<td>LED - Flashing green/red</td>
<td>Excessive tamper (while power applied, the pushpad was pulled out at least 3 times)</td>
</tr>
<tr>
<td></td>
<td>Latchbolt - not retracted</td>
<td>Wait 15 seconds and latchbolt will retract again OR remove and reapply power to clear condition</td>
</tr>
<tr>
<td>24VDC low</td>
<td>LED - Flashing green</td>
<td>Voltage low during latchbolt retraction (latchbolt retracts at reduced force)</td>
</tr>
<tr>
<td></td>
<td>Latchbolt - retracted</td>
<td>Wire length is too long, wire gauge is too small or power supply has poor regulation</td>
</tr>
<tr>
<td>29VDC or greater</td>
<td>LED- Flashing red</td>
<td>Input voltage is too high for proper operation</td>
</tr>
<tr>
<td></td>
<td>Latchbolt - will not retract</td>
<td>Wrong power supply, power supply defective.</td>
</tr>
<tr>
<td>13VDC or lower</td>
<td>LED - off</td>
<td>Input voltage is too low for proper operation</td>
</tr>
<tr>
<td></td>
<td>Latchbolt - not retracted</td>
<td>Wrong power supply, power supply defective or not set to the proper output voltage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To set, remove AC power from power supply, change power supply setting from 12 to 24VDC, then reapply AC power and verify proper operation.</td>
</tr>
<tr>
<td>0VDC</td>
<td>LED - off</td>
<td>No input voltage</td>
</tr>
<tr>
<td></td>
<td>Latchbolt - not retracted</td>
<td>Problem with the power supply, control switch or wiring</td>
</tr>
<tr>
<td>0VDC</td>
<td>LED - off</td>
<td>No input voltage</td>
</tr>
<tr>
<td></td>
<td>Latchbolt - retracted</td>
<td>Mechanical dogging is engaged</td>
</tr>
</tbody>
</table>

*For information about adjusting exit devices, you can find their installation instructions in the support area at www.allegion.com/us or call Technical Services at 1-877-671-7011*
1. Make sure device is not dogged for SD-QEL / HD-QEL.
2. Depress pushbar and make sure latch bolt retracts and extends fully (see Figure 1).
3. If latch bolt does not retract or extend fully, adjustments may be required per the device installation instructions.

### Checks for 33A/3527A, 98/9927, 98/9957

<table>
<thead>
<tr>
<th>Latch bolt</th>
<th>Latch bolt</th>
<th>Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>deadlocked (will not push in)</td>
<td>stays retracted</td>
<td>trigger extended</td>
</tr>
</tbody>
</table>

### Checks for 33A/3547A, 98/9947, 98/9947WDC

<table>
<thead>
<tr>
<th>Latch bolt</th>
<th>Flush within</th>
<th>Latch bolt</th>
</tr>
</thead>
<tbody>
<tr>
<td>deadlocked (will not push in)</td>
<td>1/16”</td>
<td>retracted</td>
</tr>
</tbody>
</table>

### Checks for 98/9975

<table>
<thead>
<tr>
<th>Latch bolt</th>
<th>Latch bolt</th>
</tr>
</thead>
<tbody>
<tr>
<td>extended</td>
<td>retracted</td>
</tr>
</tbody>
</table>

### Checks for Any HD Device

1. Fully depress pushbar.
2. Insert hex dogging key and turn clockwise.
4. Fully depress pushbar.
5. Insert hex dogging key and turn counter clockwise.
6. Release pushbar and verify latchbolt extends fully.

1. Make sure device is not dogged for SD-QEL / HD-QEL.
2. Depress pushbar. Door should begin to open with pushbar depressed halfway.
3. Close door. Top latch should be secure. If two point latch, bottom latch should be secure as well.
4. If device does not function as described in steps 2 and 3, adjustments may be required per the device installation instructions.

---

**Figure 1**