Motorized Electric Latch Retraction

**MEL 24/25 Series**

Installation Instructions

These instructions are for MEL conversion kits or MEL devices with preinstalled motors.

### Parts

- **MEL motor assembly**
- **Motor cable only** (114320)
- **MEL 6' cable with motor cable** (47269206)
- **MEL motor mounting**
  - 4-20 x ¼" FHP screws (qty 2)
- **MEL cover plate**
- **Allegion Connect accessories available to order**
  - 106198 MEL-CON adapter cable with 8-pin connector
  - 040069 MEL motor cable + MEL-CON adapter cable with 8-pin connector

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**If MEL is preinstalled in the device:**

A. Follow original device instruction up to the point where this end mounting bracket step has been completed.

B. Complete MEL wiring per steps 15-21 of this instruction.

C. Return to original device instruction at point you left off, and complete installation.

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If installing the MEL conversion kit, follow the instruction steps as written.

### 1 Remove end cap

[Diagram showing end cap removal]
2. Remove device end mounting bracket from door

3. Slide back, remove and discard old cover plate

4. Remove center case cover and device from door

5. With device laying on a table or bench, remove the 2 screws that connect mechanism case to center case.
   - Use long shank screwdriver.

6. Unhook baseplate from center case
   - a. Slide back mechanism case about 2” to access hooking parts.
   - b. Push bar guides will come loose and will need to be reinstalled later.
   - c. Unhook baseplate from center case.
<table>
<thead>
<tr>
<th></th>
<th>Slide baseplate out of mechanism case</th>
<th></th>
<th>Remove any existing dogging assembly</th>
</tr>
</thead>
</table>

- Slide baseplate out of mechanism case
- Remove any existing dogging assembly
a. Turn baseplate assembly upside down so pushpad is resting on a flat surface and motor mounting location is on the left.

b. Place motor in left hand with LED status sticker facing toward you. Gently extend silver hook arm outward (about 90°) until you meet some resistance, then hold.

c. While tilting baseplate assembly away from you slightly, move extended hook arm into position under baseplate. A post will be hanging down from baseplate; the hook arm should sit on the near side of that post. Rotate the motor assembly to hook the arm over the baseplate axle pin that is closest to the baseplate. Do not pull out on motor at this step.

d. Set motor on flat surface.

e. Push down firmly on baseplate so it bottoms out against push pad.

f. While depressing baseplate, lift up motor assembly and guide it along elongated baseplate slot until motor lip slips over baseplate.

g. Release baseplate. Secure motor assembly with 2 small self-tapping screws (provided).

h. Turn baseplate and motor assembly right side up.
10 Slide mechanism case onto baseplate

Insert pushbar guide ahead of motor assembly and hold in place (a) while sliding mechanism case onto baseplate (b)

11 Reconnect center case to baseplate via hooking parts

12 Insert remaining pushbar guide (nearest the center case) and slide mechanism case against center case

13 Reattach mechanism case to center case

Use long shank screwdriver.

14 Reattach device to door

x4

x2
15 Complete wiring

If not wiring at this time, **DO NOT DISCARD CABLE!**

After installing device or conversion kit, if there is room, store the cable inside the mechanism case until the electrical wiring occurs. Otherwise, store the cable in a designated location.

a. Drill wire access hole.
b. Route furnished 6’ MEL two-piece cable thru device end mounting bracket to connect MEL device to power transfer wires.
c. Plug cable connector into MEL motor.
d. Reinstall end mounting bracket.
e. Refer to table below to route proper gauge wires (from electric hinge, EPT, or door loop) to PS900-Series power supply.

<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>

MEL Electrical Load

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

Power wires to MEL are not polarized.
16 Confirm equipment compatibility

MEL is compatible with the following equipment (refer to individual instructions as needed):
- PS900-Series power supplies - PS902, PS904, PS906, PS914
- 900-Series option boards - 900-2RS, 900-4R, 900-4RL

17 Install 900-2RS, 4R, or 4RL option board(s) into power supply

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

| PS902 | 1 Board |
| PS904 | 2 Boards |
| PS914 | 3 Boards |
| PS906 | 4 Boards |

**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

**WARNING**

Fire alarm (FA) option board required if MEL is installed in fire exit hardware.

**Notes:**
1. 24 VDC output setting required when MEL device connected.
2. If installing board in location 2 or 3, rotate board 180°.
3. Latchbolt retraction of (2) sequenced MEL devices requires more than 1 second to complete.
4. When powering multiple components, verify that the amperage requirements of all components combined does not exceed the power supply output rating.
18 Connect input and output wires to option board (2RS shown)

Sequential Mode - Typical Wiring

Individual Mode - Typical Wiring

Note:
Fail secure output only allowed if approved by Authority Having Jurisdiction

19 Check operation

a. Activate each input and verify all MEL devices operate properly.
b. If any device does not operate properly, see next page for troubleshooting.
If necessary, troubleshoot operation (LED is only visible with the mechanism case removed)

<table>
<thead>
<tr>
<th>Power at the MEL</th>
<th>MEL Response</th>
<th>Condition/Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 VDC</td>
<td>LED - solid green Latchbolt - retracted</td>
<td>Operation normal, latch retracted immediately</td>
</tr>
<tr>
<td></td>
<td>LED - solid red after latchbolt attempts to retract multiple times</td>
<td>Latchbolt cannot fully retract mechanically Remove power. Depress pushbar and make sure latchbolt retracts and extends fully. If necessary, disconnect any vertical rods or mortise lock from device center case, and reapply power. If motor holds, mechanical adjustments may be required per the device instructions.*</td>
</tr>
<tr>
<td></td>
<td>LED - flashing green/red Latchbolt - not retracted</td>
<td>Excessive tamper (while power applied, the pushpad was pulled out at least 3 times) Wait 15 seconds and latchbolt will retract again OR remove and reapply power to clear condition.</td>
</tr>
<tr>
<td>24 VDC low</td>
<td>LED - flashing green Latchbolt - retracted</td>
<td>Voltage low during latchbolt retraction (latchbolt retracts at reduced force) Wire length is too long, wire gauge is too small, or power supply has poor regulation.</td>
</tr>
<tr>
<td>29 VDC or greater</td>
<td>LED - flashing red Latchbolt - will not retract</td>
<td>Input voltage is too high for proper operation Wrong power supply, power supply defective.</td>
</tr>
<tr>
<td>13 VDC or lower</td>
<td>LED - flashing red Latchbolt - will not retract</td>
<td>Input voltage is too low for proper operation Wrong power supply, power supply defective or not set to the proper output voltage. To set, remove AC power from power supply, change power supply setting from 12 to 24 VDC, then reapply AC power and verify proper operation.</td>
</tr>
<tr>
<td>0 VDC</td>
<td>LED - off Latchbolt - not retracted</td>
<td>No input voltage Problem with the power supply, control switch, or wiring.</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
21 Install MEL cover plate

- **Do not** cut from recessed end of cover plate
- **Install this end first**

![Diagram of MEL cover plate installation](image)

- back of new MEL cover plate
- back of old cover plate
22 Reinstall end cap

23 Reinstall center case cover
Warnings and Cautions

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:

ℹ️ 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.