



47848970

MEL 1690/1790 Series

FALCON®

Motorized Electric Latch Retraction Conversion Kit

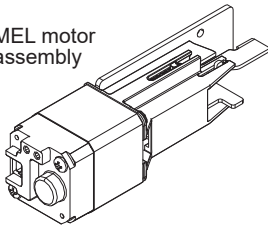
Installation Instructions



These instructions are for EL 1690/1790 devices or 1690/1790 devices with Standard Hex Dogging. (EL 1790 shown).

Parts

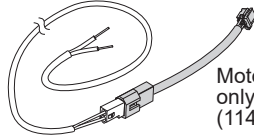
MEL motor assembly



10-24 5/8" FHP TRILOBE STL BD (2 qty) for mounting motor assembly to channel



Do not discard



Motor cable only (114320)

MEL 6' cable with motor cable (47269206)

Allegion Connect accessories available to order

106198 MEL-CON adapter cable with 8-pin connector

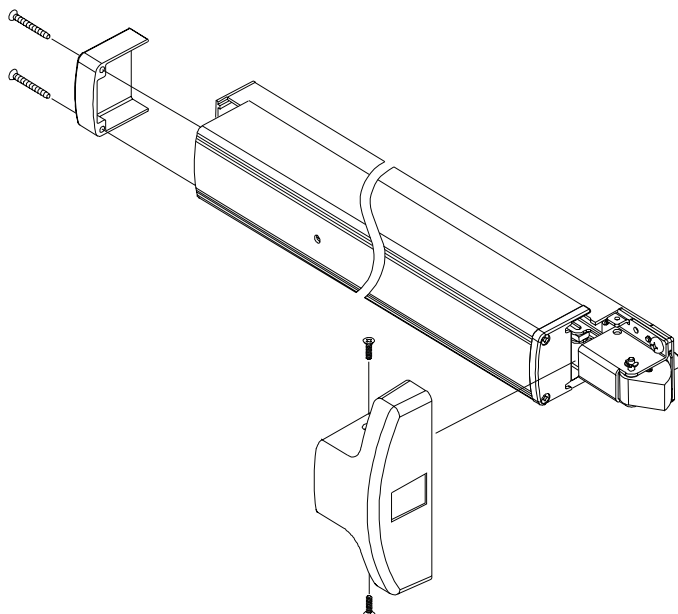
040069 MEL motor cable + MEL-CON adapter cable with 8-pin connector



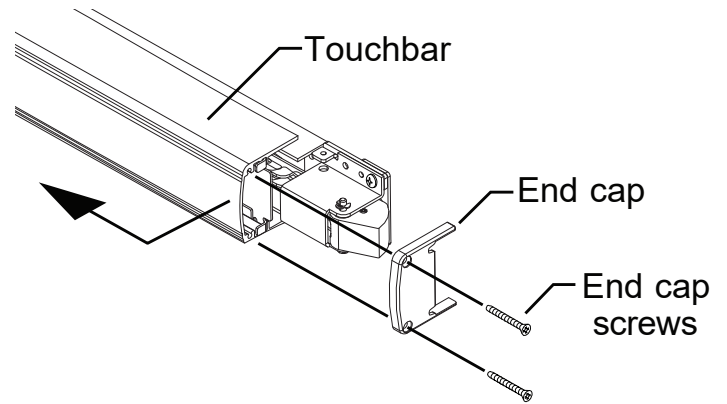
WARNING

To avoid risk of electric shock, turn off AC power to power supply before removing, installing or wiring device.

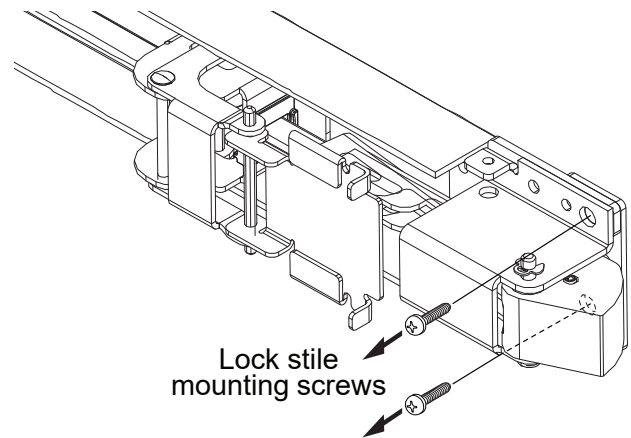
1 Remove hinge stile end cap and center case cover.



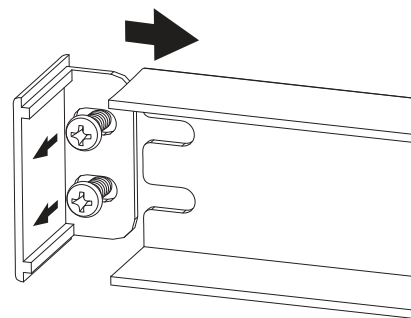
2 Remove two end cap screws, end cap, and touchbar.



3 Remove lock stile mounting screws.

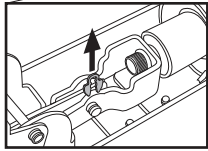


4 Loosen hinge stile mounting screws. Slide unit from under channel end cap.



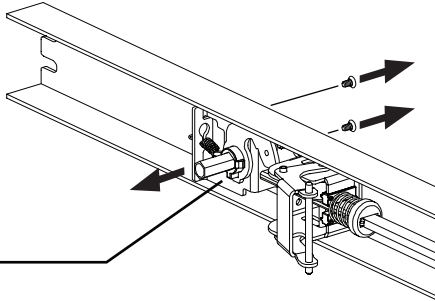
5 Disconnect and remove unit from door. Remove old solenoid motor or dogging assembly if present.

Old Solenoid
Style Motor

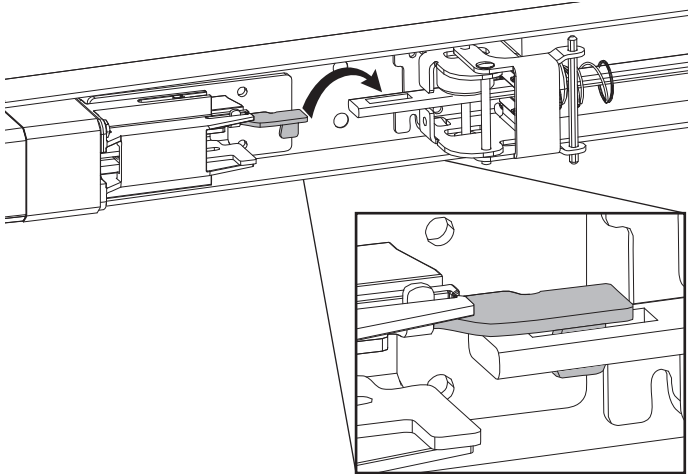


OR

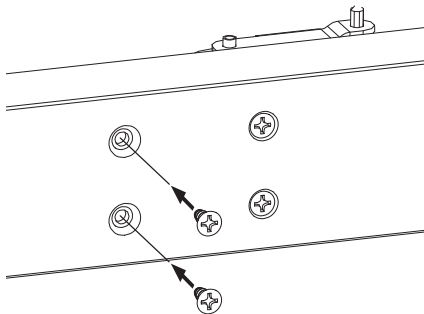
Dogging
Assembly



6 Slide MEL motor into channel while ensuring hook arm is fit into baseplate assembly slot.

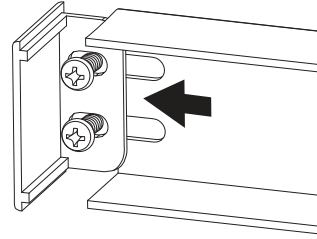


7 Secure motor assembly with two small self-tapping screws (provided).

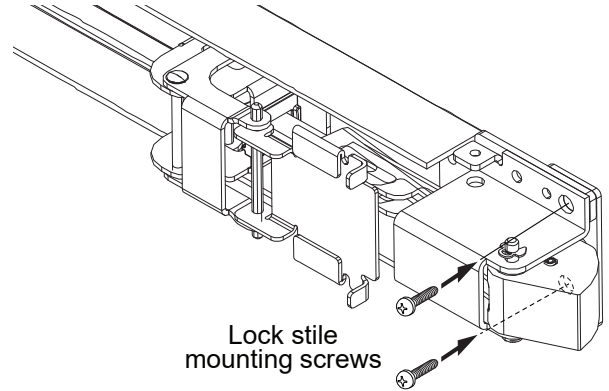


8 Remount device on door.

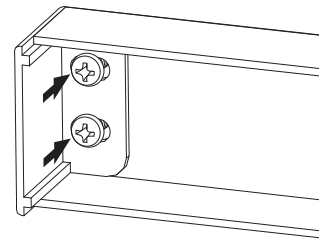
Slide device channel under channel end cap aligning slots.



9 Reinstall lock stile mounting screws.



10 Tighten hinge stile mounting screws on channel end cap

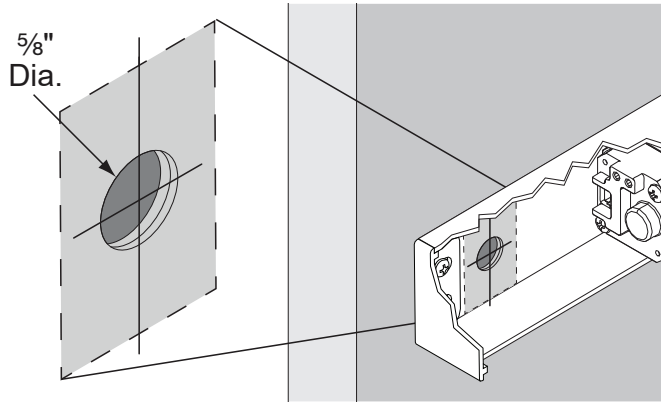




If not wiring at this time, **DO NOT DISCARD CABLE!**
After installing device or conversion kit, if there is room, store the cable inside the channel until the electrical wiring occurs. Otherwise, store the cable in a designated location.

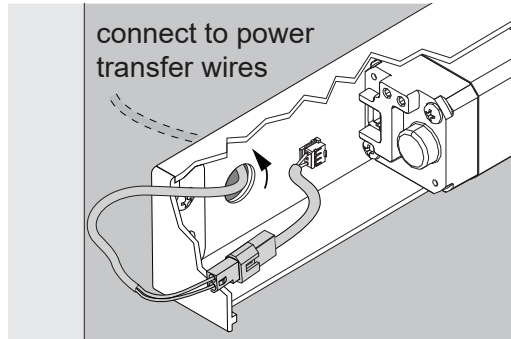
Refer to table below to route proper gauge wires (from electric hinge, EPT, or door loop) to PS900-Series power supply.

11 Drill wire access hole in device channel and door.

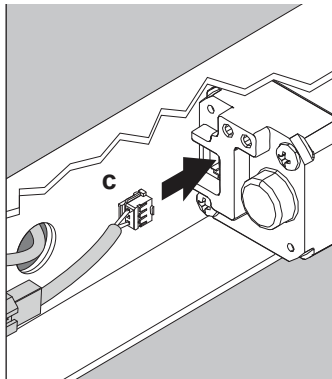


12 Route MEL cable thru device.

Route furnished 6' MEL two-piece cable thru device end mounting bracket to connect MEL device to power transfer wires.



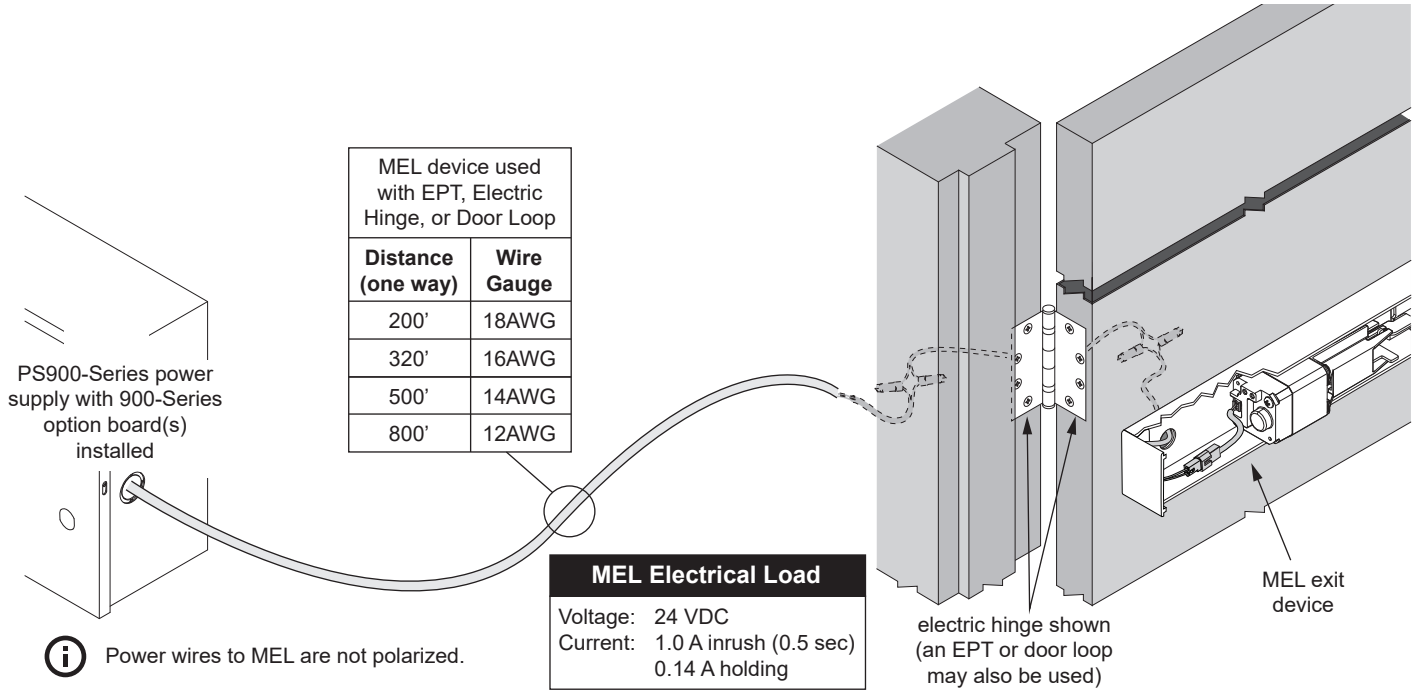
13 Plug cable connector into MEL motor.



! WARNING

To avoid risk of electric shock, turn off AC power to power supply before installing or wiring option board.

14 Complete Wiring



15 Confirm equipment compatibility

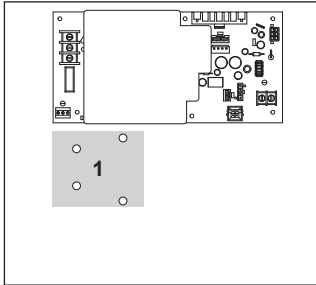
MEL is compatible with the following equipment (refer to individual instructions as needed):

- PS900-Series power supplies - PS902, PS904, PS906, PS914
- 900-Series option boards - 900-2RS, 900-4R, 900-4RL

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

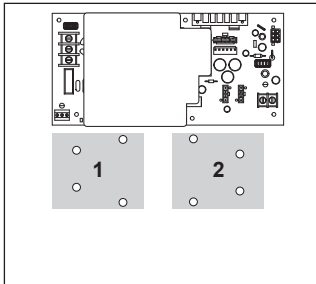
a Review Available 900 series Option Board Mounting Locations (Gray)

PS902

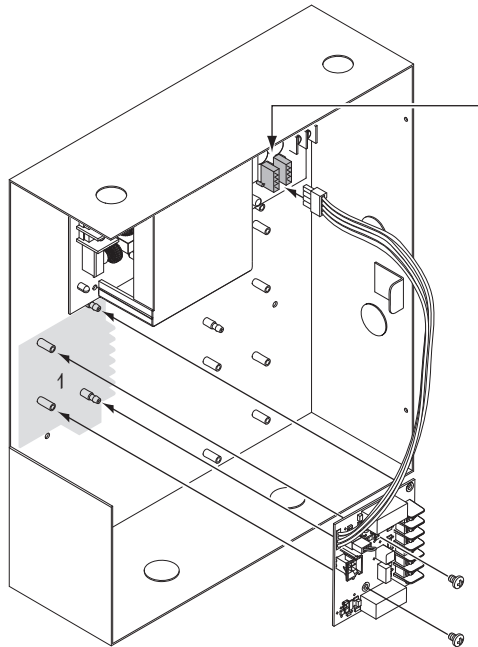
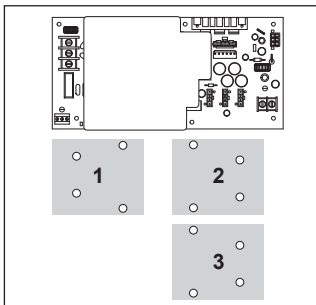


PS904

PS914



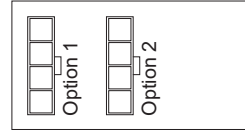
PS906



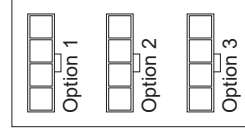
b Plug Option Board Cable into any Available Option Connector



PS902
1 Board



PS904, 914
2 Boards



PS906
3 Boards

c Secure Board(s) with Screws

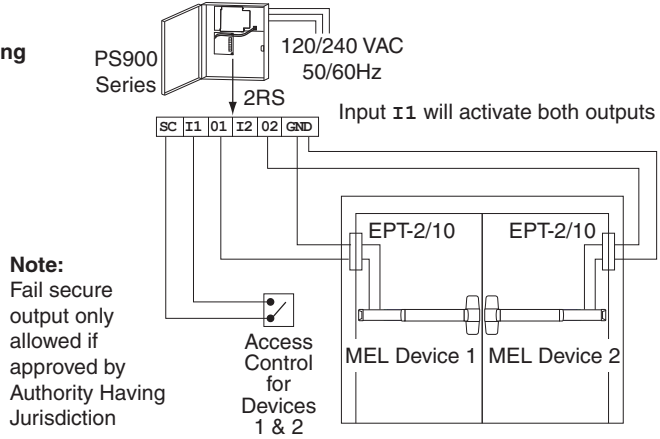
⚠ WARNING

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

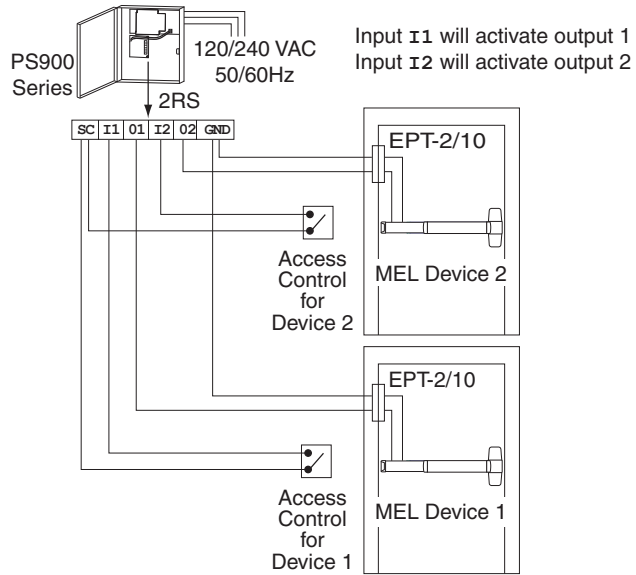
- Notes:**
1. 24 VDC output setting required when MEL device connected.
 2. If installing board in location 2 or 3, rotate board 180°.
 3. Latchbolt retraction of (2) sequenced MEL devices requires more than 1 second to complete.
 4. When powering multiple components, verify that the amperage requirements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

17 Connect input and output wires to option board (2RS shown)

Sequential Mode - Typical Wiring



Individual Mode - Typical Wiring



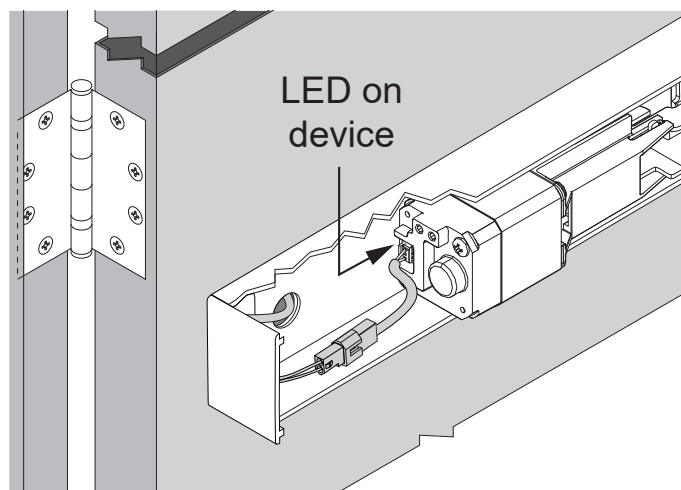
18 Check operation

- a. Activate each input and verify all MEL devices operate properly.
- b. If any device does not operate properly, see next page for troubleshooting.

19 If necessary, troubleshoot operation (LED is only visible with the mechanism case removed)

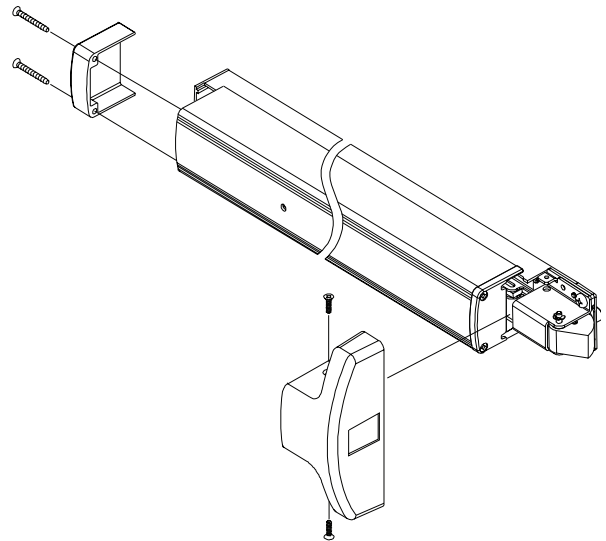
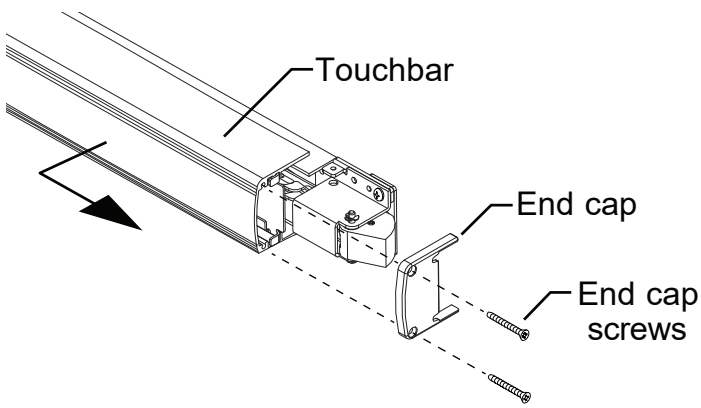
Power at the MEL	MEL Response	Condition/Solution
24 VDC	LED - solid green Latchbolt - retracted	Operation normal, latch retracted immediately
	LED - solid red after latchbolt attempts to retract multiple times	Latchbolt cannot fully retract mechanically Remove power. Depress pushbar and make sure latchbolt 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.*
	LED - flashing green/red Latchbolt - not retracted	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.
24 VDC low	LED - flashing green Latchbolt - retracted	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.
29 VDC or greater	LED- flashing red Latchbolt - will not retract	Input voltage is too high for proper operation Wrong power supply, power supply defective.
13 VDC or lower		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.
0 VDC	LED - off Latchbolt - not retracted	No input voltage Problem with the power supply, control switch, or wiring.

*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



20 Reinstall two end cap screws, end cap, and touchbar.

21 Reinstall hinge stile end cap and 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:



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.



Customer Service Servicio al cliente Service à la clientèle

1-877-671-7011

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