



## **CRL JACKSON PANIC EXIT DEVICE TROUBLE SHOOTING GUIDE**

### **BASIC ITEMS TO CHECK**

1. Ensure that the door is hanging plumb and square with the frame.
2. Check for proper clearances between door and frame.
3. Check exterior trim or lock cylinder for binding or interference with panic operation.
4. Ensure that the weather-stripping on the door is not preventing the door from closing or latching.
5. Check for protruding screws from weather-stripping, astragals, exterior trim, etc.
6. Check for over-torqued fasteners that could distort housings and restrict part movement.

### **RIM LATCH EXIT DEVICES**

1. Ensure full latch travel with no binding against case or strike.
2. Ensure the proper strike is installed for the application.
3. Ensure proper clearances between latch body and strike. (see installation templates)
4. If so equipped, make sure that the Anti-Pick Deadlock Latch is fully depressed when the door is closed. Thereby preventing the latch from being forced back into the panic from the outside. The proper strike must be installed correctly to prevent malfunction of this secure feature.

### **RIM LATCH EXIT DEVICES WITH 896 REMOVABLE MULLION**

1. Ensure proper alignment of Mullion with the frame and doors.
2. Ensure proper position of strike with center-line of the panic latch.
3. Ensure proper clearances between panic latch body, mullion and strike to minimize free-play.
4. Ensure installation of Stabilizers and proper 1/16" clearance between the door and Mullion portions of Stabilizers.

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## CONCEALED VERTICAL ROD EXIT DEVICES "CVR"

1. Ensure sufficient clearance within the strike cavities and proper alignment.
2. Ensure that the latch or rods are not binding anywhere.
3. Ensure that the rod silencers placed on the rods are not hanging up the rods. Move or trim as needed.

### ROD ADJUSTMENTS

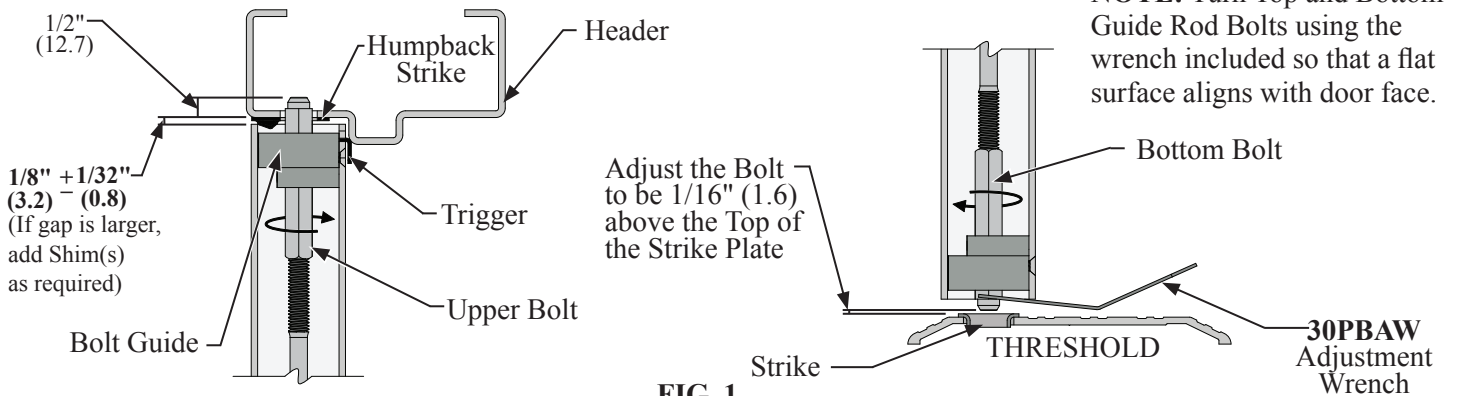
When making adjustments to the CVR Panic Exit Devices, **always start with the top rod.**

The top and bottom rods move in tandem. Whatever distances the top rod travels, so travels the bottom rod, in the opposite direction. As the panic is activated and the door opens, the bolt passes beneath the "Hump-Back" Strike to ensure that the top bolt is "captured" by the top bolt guide. The bottom rod is likewise retracted and both bolts remain so until the top bolt is released by activating the trigger mechanism when the door is closed.

**Only after the top rod has been adjusted properly, should you adjust the bottom rod.**

### TOP ROD ADJUSTMENT

1. **The "Hump-Back" Strike is there for a reason.** Make sure the "Hump-Back" Strike, provided with the Panic, is properly installed on the header. **Without this strike, accurate adjustment and proper operation will be very difficult to maintain.**



2. There should be no more than a 1/8" gap between top of door and bottom of header.
3. With door swung to the **open position**, release the top bolt by depressing the trigger mechanism located on the top bolt guide.
4. The top bolt should extend no more than 7/16"- 1/2" out of the door.
5. Adjust rod height by rotating the bolt clockwise to shorten or counterclockwise to lengthen.
6. Depress exit device push-pad and release. The top bolt should retract and remain down, "captured" by the bolt guide installed in the top of the door.
7. If the top bolt does not remain in the "captured" position, rotate the rod clockwise in half-turn increments until it does.
8. Depress exit device push bar or pad to repeat cycle several times to make sure the top rod is properly adjusted.

NOT TO SCALE

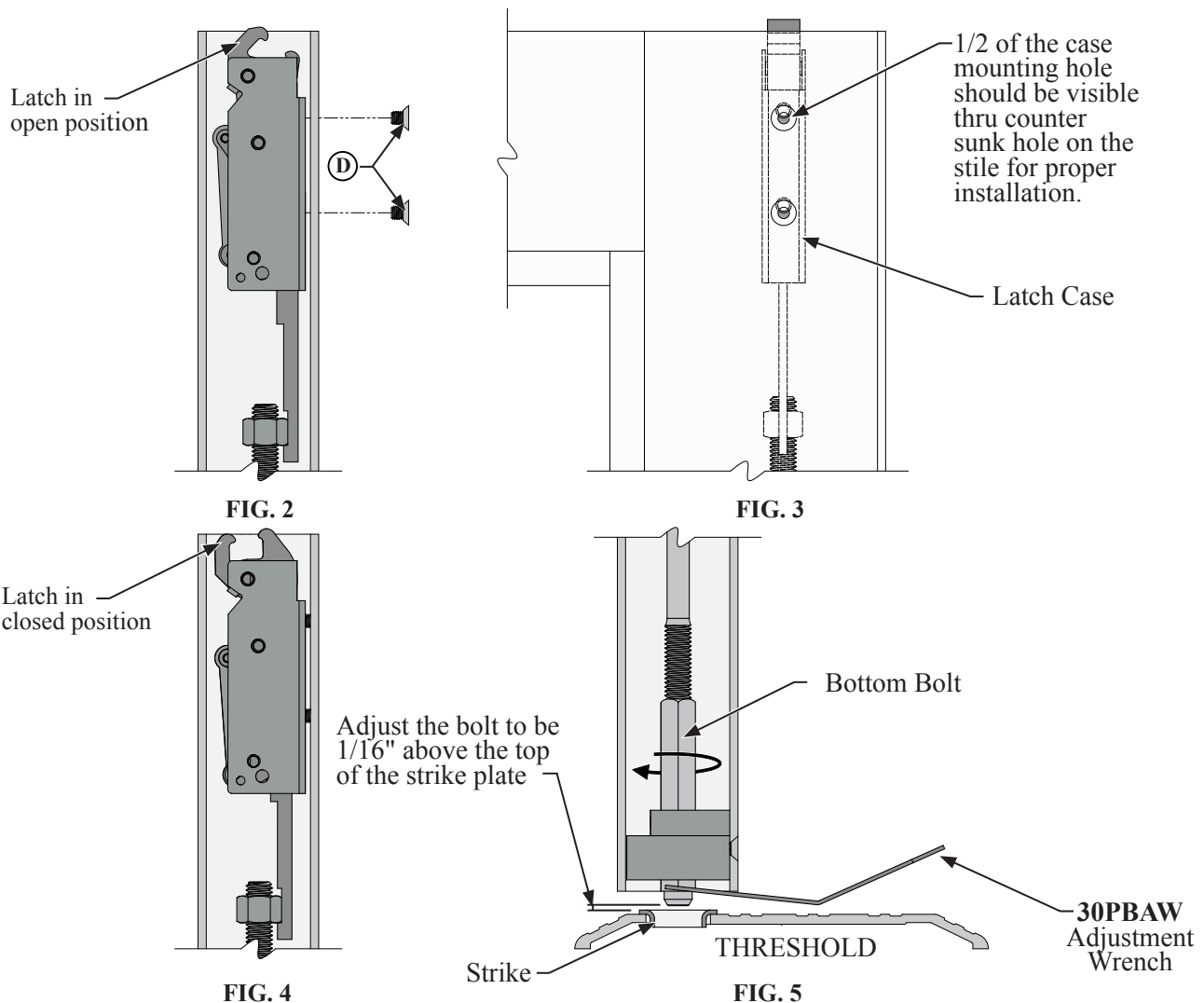
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## TOP LATCH ADJUSTMENT

1. With the door swung to the **open position**, the push bar or pad must be in the “dogged” position.
2. Remove the (2) 10-32 x 1/4" (D) flat head machine screws at the top of the active door stile. Adjust the top latch into the open position. (**Fig. 2**) Rotate the top latch case until the mounting holes on the latch case are off-center to the countersunk holes on the active stile. (**Fig. 3**) Re-attach and secure the latch case.

## BOTTOM ROD ADJUSTMENT

1. The door must be in the **closed position** and un-dogged.
2. The bottom bolt is held in place by a spring loaded ball catch located inside the bottom bolt guide.
3. Depress the push bar or pad. The top bolt or latch will move to the retracted / unlocked position (**Fig. 4**). With the top rod kept in this position, adjust the bottom bolt using the **30PBAW** wrench
4. Rotate the bolt counterclockwise to shorten or clockwise to lengthen the rod so that it clears the threshold / strike plate by 1/16" and does not extend past the bottom of the door.
5. Cycle the panic several times to make sure that the door opens and locks properly.



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## PANIC LOCKING AND DOGGING KEYED ACCESS

1. All Jackson **Rim Devices** accept a standard Rim Cylinder for outside keyed entry, mounted directly to the door to allow the tail piece to engage the panic.
2. All Jackson **Concealed Vertical Rod "CVR" Devices** are designed to accept 1-5/32" (29.4 mm) dia. Mortise Cylinder with AR-MS Cam, or similar, and require a Jackson **30821** Cylinder Mounting Pad to mount the cylinder to the door and allow the cam to engage the lift mechanism of the rod & case assembly.
3. All Jackson **Surface Vertical Rod Devices (7500 Series)** require use of 7500LV outside trim for keyed access.

## OUTSIDE TRIM

1. All Jackson Outside Lever Trim models are dedicated for use with a specific panic type and model, and designed to accept a standard 1" (25.4 mm) length x 1-5/32" (29.4 mm) dia. Mortise Cylinder with DRA10CAM, or similar, to lock the lever (ANSI Function-06).

## DOGGING

1. All Jackson Models offer a dogging feature that allows for mechanical dogging of the device by using either a key, flat blade, or hex key.
2. Cylinder "CD" Dogging is available as an optional feature for both the 1200 and 20 Series Panics.
  - Requires specific length mortise cylinder (not supplied) and special **Post-Cam P/N 302572**  
**1200 Series** = 1-1/4"  
**20 Series** = 1-1/8"
3. **Dual Dogging Feature** allows both mechanical and outside keyed cylinder dogging when using one of the Jackson Concealed Vertical Rod "CVR" model panic devices with outside cylinder.
  - **CAUTION:** This could leave the panic inadvertently dogged and allow unauthorized access.

### To remove the feature (see Fig. 6)

1. Remove Rod & Case Assembly From Door
2. Remove the two screws and Dogging Hold-Down Bracket (A)
3. Remove Dogging Pawl (B)
4. Re-Attach the Dogging Hold-Down Bracket (A).  
**NOTE:** Left screw is longer than right screw.

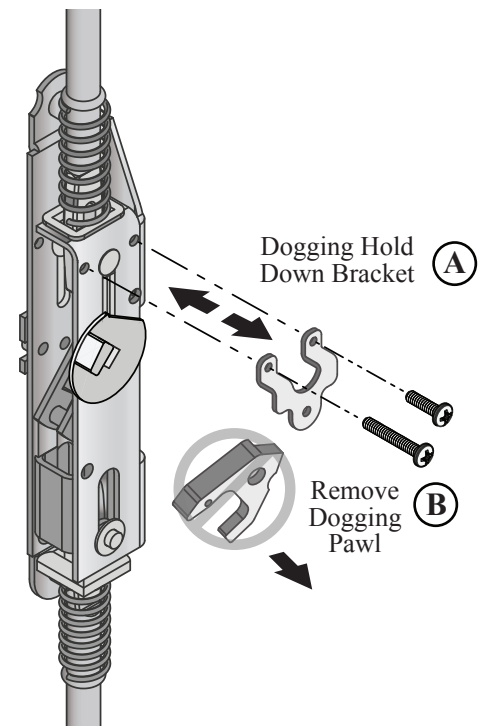


FIG. 6

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## 20 SERIES ELECTRIFIED LATCH RETRACTION PANICS

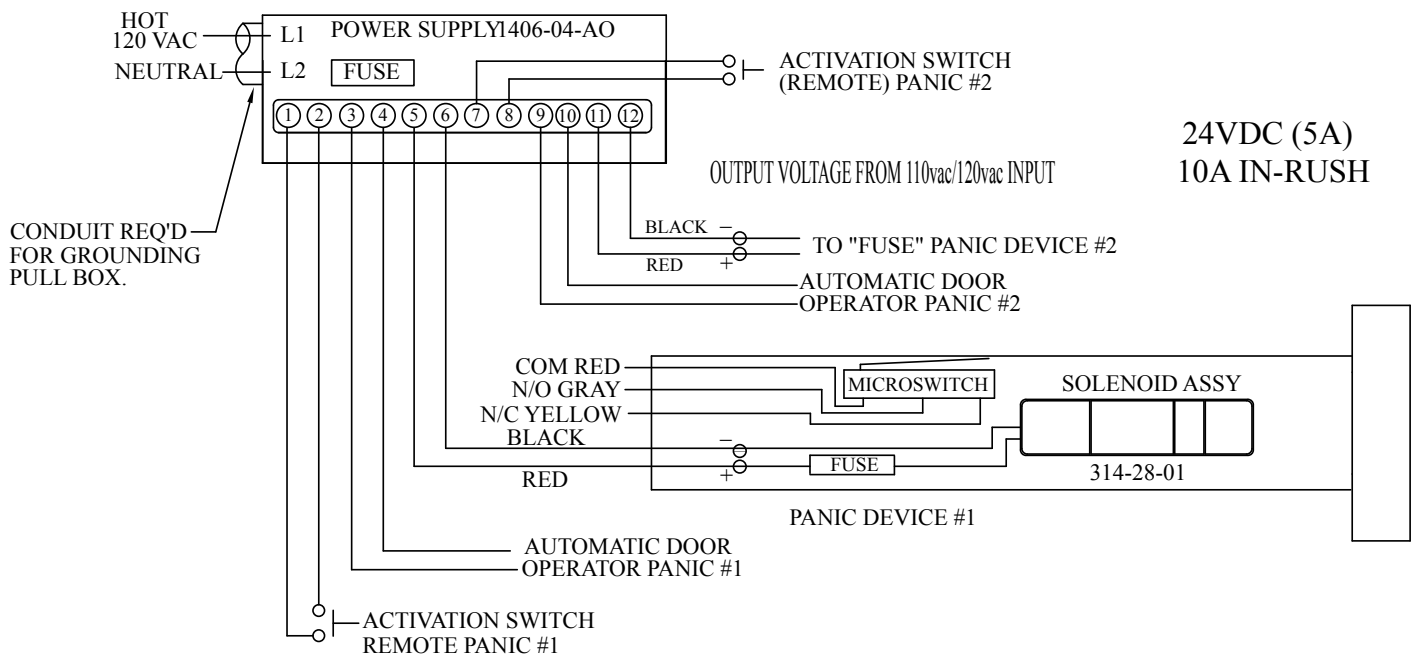
1. Verify that the Panic is a Jackson **20 Series** Rim or CVR Exit Device.
2. Verify that the Power Supply is a Jackson/ ACSI Model 302616 (1406) or 301420  
If Power Supply is by others, refer to brand specifications and wiring schematic.
3. Verify adequate power into the Power Supply — should be 110 (120) VAC
4. For model **302616 (1406)** Power Supply. (If model 301420, go to step 5)  
See wiring schematic (Fig. 7 on page 09)
  - a) Verify adequate power on terminals 5 & 6 and 11 & 12 — should be 24 VDC
  - b) Verify adequate power into Panic — needs 8~10 amp inrush to activate solenoid
  - c) Verify proper wire gauge is used
    - to 40 ft. = 16 AWG
    - to 60 ft. = 14 AWG
    - to 100 ft. = 12 AWG
5. For model **301420** Power Supply. (If model 301616 (1206), go to step 6)  
See wiring schematic (Fig. 8 on page 10)
  - a) Verify adequate power on terminals "FSC" and "FSF" — should be 24 VDC
  - b) Verify adequate power into Panic — needs to be no more than 2 amp
  - c) Verify proper wire gauge is used
    - to 70 ft. = 22 AWG
    - to 110 ft. = 20 AWG
    - to 180 ft. = 18 AWG
    - to 280 ft. = 16 AWG
    - to 450 ft. = 14 AWG
    - to 720 ft. = 12 AWG
1. Only **after** all wiring and required power has been confirmed, disable or minimize any timing device or circuitry.
  - a) If the motor drive is functioning properly but the push-pad is not retracting fully to the “dogged” position or able to remain in that position within 2 attempts, see page 8 for the **Motor Drive Adjustment Instructions**.
  - b) With the door in the open position and the panic in the “locked” position, activate the panic electronically. If the latch or bolts do not retract or have minimal movement:
    - Verify that mechanically the rim latch or top and bottom bolts are functioning properly, adjusted properly and not binding. **See page 2 for concealed rod adjustment instructions to ensure proper operation.**
2. Repeat the above steps to verify the panic is functioning properly. If problems continue, contact **CRL Technical Assistance at 800-421-6144, ext: 17520.**

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## CONNECTING THE ELECTRICAL

### POWER SUPPLY NO. 302616/1406 ELECTRICAL SCHEMATIC

1. Verify adequate power on terminals 5 & 6 and 11 & 12 – should be 24 VDC
2. Verify adequate power into Panic – needs 8~10 amp inrush to activate solenoid
3. Verify proper wire gauge is used



#### NOTES

- 1.) WHEN CONTACTS OF TIME CLOCK OR OVERRIDE SWITCH CLOSE. EXIT DEVICE LATCH BOLTS WILL CLOSE.
- 2.) —○— DENOTES A FIELD WIRE CONNECTION.
- 3.) RECOMMENDED WIRE Ga FROM POWER SUPPLY TO PANIC:
  - 16 Ga UP TO 40'
  - 14 Ga UP TO 60'
  - 12 Ga UP TO 100'

FIG. 7

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# CRL JACKSON PANIC EXIT DEVICE TROUBLE SHOOTING GUIDE

## CONNECTING THE ELECTRICAL

### POWER SUPPLY NO. 301420 ELECTRICAL SCHEMATIC

1. Verify adequate power on terminals “FSC” and “FSF” – should be 24 VDC
2. Verify adequate power into panic – needs to be no more than 2 amp
3. Verify proper wire gauge is used

**SPECIFICATIONS:**

INPUT VOLTAGE: 120VAC/240VAC, 50/60Hz  
 AC CURRENT: 900mA/120VAC, 600mA/240VAC  
 OUTPUT VOLTAGE: 24VDC FILTERED, REGULATED  
 OUTPUT CURRENT: 2.0A  
 OUTPUT POWER: 48W  
 PROTECTION: OVERLOAD, OVER VOLTAGE, SHORT CIRCUIT

USE INSTALLATION INSTRUCTIONS II - 1400-5

ACCESS CONTROL POWER SUPPLY CLASS 2 OUTPUTS



MFG. DATE:

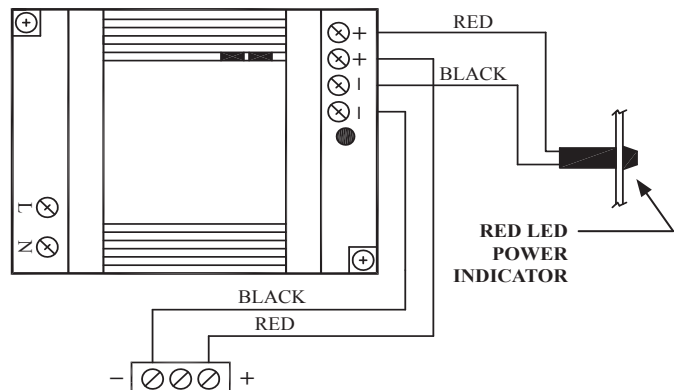
POWER SUPPLY INTENDED FOR INDOOR USE ONLY

STRIP WIRE BACK 6mm. WIRES MUST BE FULLY INSERTED INTO TERMINALS SO THAT NO BARE METAL IS EXPOSED. FLEXIBLE CABLE: ALL STRANDS MUST BE SECURED IN TERMINAL. USE COPPER CONDUCTORS ONLY.

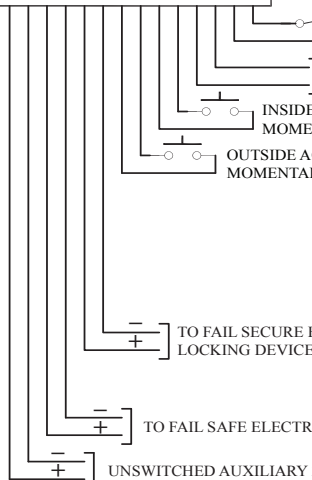
TERMINAL SIZE RANGE: AWG24-10 FOR A TYPE AWG24-14 FOR B TYPE

120VAC OR 24VAC INPUT

CLASS 2 DOUBLE INSULATION. NO EARTH GROUND WIRE REQUIRED.



**CONTROL BOARD I/O CONNECTOR**



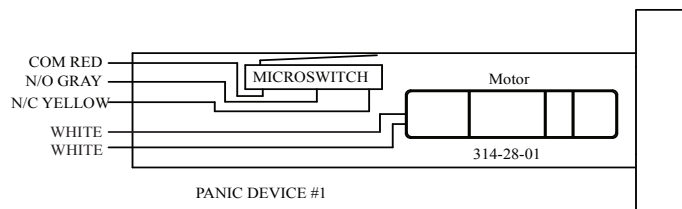
**CONTROL BOARD 24V POWER CONNECTOR J1**

RELEASING DEVICE (FIRE ALARM, EMERGENCY RELEASE SWITCH, ETC.). OPENING SWITCH CONTACTS WILL RELEASE ELECTRIFIED LOCKING DEVICE(S). NOTE: THIS INPUT IS DISABLED BY DEFAULT - REFER TO INSTALLATION INSTRUCTIONS.

RELAY N.O. DRY CONTACT OUTPUT TO “DOOR OPEN” ACTIVATION INPUT OF AUTOMATIC DOOR OPERATOR. MOMENTARY CLOSURE OF CONTACTS WILL ACTIVATE OPERATOR UNIT.

INSIDE ACTIVATION SWITCH FOR EXITING (HANDICAPPED WALL ACTUATOR, ETC.). MOMENTARY CLOSURE OF CONTACTS WILL SEQUENTIALLY RELEASE ELECTRIFIED LOCKING DEVICES(S) AND ACTIVATE OPERATOR UNIT.

OUTSIDE ACTIVATION SWITCH FOR ENTRY (HANDICAPPED WALL ACTUATOR, ETC.). MOMENTARY CLOSURE OF CONTACTS WILL SEQUENTIALLY RELEASE ELECTRIFIED LOCKING DEVICES(S) AND ACTIVATE OPERATOR UNIT.



WIRE GAUGE	MAX. LENGTH 2-COND. CABLE
22	70 FEET
20	110 FEET
18	180 FEET
16	280 FEET
14	450 FEET
12	720 FEET

**NOTES:**

- 1.) The sum of all outputs cannot exceed 2 AMPS.
- 2.) When contacts of time clock or override switch close.
- 3.) Denotes a Field Wire Connection.
- 4.) Recommended Wire Ga. from Power Supply to Panic:

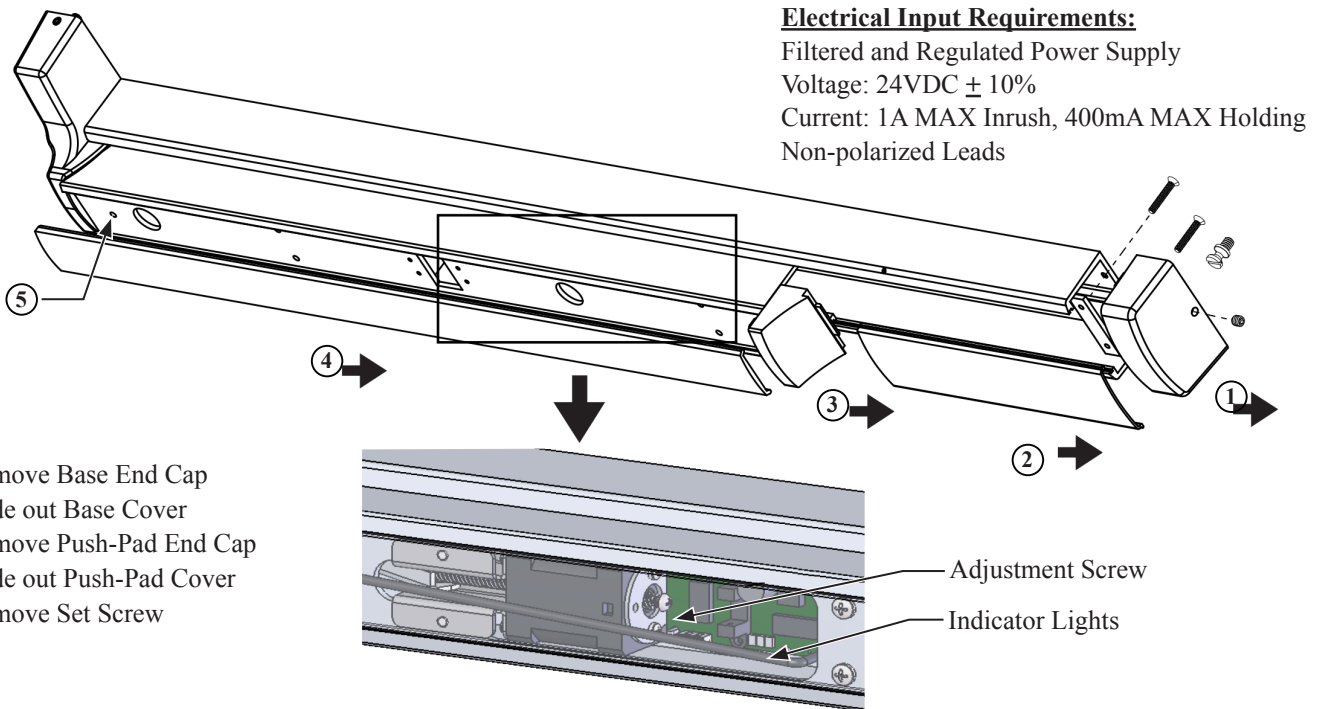
FIG. 8

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# CRL JACKSON PANIC EXIT DEVICE TROUBLE SHOOTING GUIDE

## MOTOR DRIVE ELECTRIC LATCH RETRACTION

### ADJUSTMENT INSTRUCTIONS



#### Electrical Input Requirements:

Filtered and Regulated Power Supply  
 Voltage: 24VDC  $\pm$  10%  
 Current: 1A MAX Inrush, 400mA MAX Holding  
 Non-polarized Leads

- ① Remove Base End Cap
- ② Slide out Base Cover
- ③ Remove Push-Pad End Cap
- ④ Slide out Push-Pad Cover
- ⑤ Remove Set Screw

#### Motor Drive Electric Latch Retraction Adjustment:

1. Verify the device is properly adjusted for mechanical operation. Electric operation should not exceed the mechanical operation or there will be a high risk of damage to the device. **We suggest setting the latch retraction under electric operation at 1/16" less than the latch retraction under mechanical operation.**
2. Locate the adjustment screw in the rear of the motor assembly. Rotate the adjustment screw clockwise to increase the latch retraction or counterclockwise to decrease the latch retraction.

#### Onboard Indicator Light Assignments:

Maintain input power to the exit device and check the onboard indicator lights.

**Remove input power before attempting a solution.**

Green (Power)	Yellow (Sensor)	Red (Error)	Indication	Possible Solution
Off	Off	Off	No Power	Connect the wiring between the power supply and the exit device.
On	On	Off	Normal Operation. The touch bar is retracted to the dogged position and dogged; the latch is retracted by default. The device is allowed 2 attempts.	
On	Off	On	Error in operation. The touch bar did not retract to the dogged position within 2 attempts.	Rotate the adjustment screw counterclockwise to decrease the latch retraction.
On	On	Blink	Error in Operation. The touch bar is retracted to the dogged position but not able to remain dogged. The device is allowed 5 attempts.	Rotate the adjustment screw counterclockwise to decrease the latch retraction.
On	On	On	Error in Operation. Without power being removed, the touch bar went from being dogged to unintentionally being extended, and then the touch bar did not retract to the dogged position within 2 attempts.	Cycle the input power.
On	Blink	On	Error in Operation. The touch bar is retracted to the dogged position but not able to remain dogged. The device is allowed 5 attempts.	Rotate the adjustment screw counterclockwise to decrease the latch retraction.

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