

**FIGURE 1**

## TROUBLESHOOTING GUIDE

- a) Identify problem.
- b) Follow numbered solutions, in sequence given.

### PROBLEM

- Device does not work.
- Touchbar does not stay depressed.
- Bar hot (not warm).
- Bolt(s) hangs retracted.
- Bolt(s) not retracting in full.
- Intermittent action.

**SOLUTION**

- 1,2,3,6,8
- 2,4,5,6,7,8,9
- 2,6,8
- 5,7
- 5,7,9
- 1,4,5,6,8,9

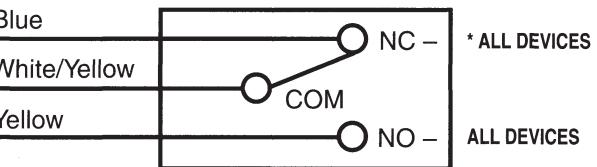
### SOLUTIONS

1. CHECK REMOTE SWITCH(ES)
2. CHECK CIRCUIT CONTINUITY.
3. CHECK FUSES.
4. CHECK DOOR (MUST SWING FREELY).
5. CHECK MANUAL DEVICE ACTION (MUST WORK PROPERLY).
6. CHECK WIRING (CONNECTIONS AND INSULATION).
7. CHECK FOR FOREIGN MATERIALS (DEVICE SHOULD BE FREE FROM OBSTRUCTIONS).
8. CHECK CIRCUIT BOARD OPERATION.
9. CHECK WIRES TO DEVICE (GAUGE VS. LENGTH).

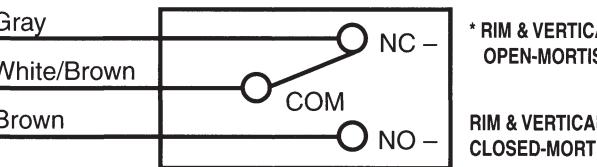
## MONITORS (M91, M92, and M93 Options)

CONNECT AS SHOWN BELOW TO DEVICE SPECIFIED ON SYSTEM SCHEMATIC. Discard unused lead (seal end with wire nut).

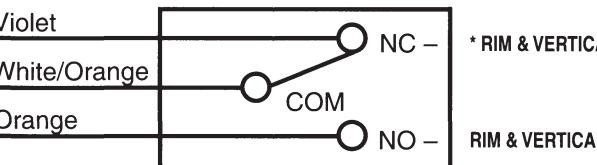
**"M92" TOUCHBAR MONITOR**  
Touchbar actuated SPDT switch to indicate egress in progress.



**"M93" TRIM MONITOR**  
Device actuated SPDT switch to indicate door open from outside.



**"M91" BOLT MONITOR**  
Slider actuated SPDT switch to indicate bolt(s) extended-retracted.



**\*SWITCH POSITION WITH DOOR SECURE AND DEVICE LATCH ENGAGED.**

## Exit Devices with: Electric Dogging (M97 Option) and/or Monitors

### Electric Dogging (M97 Option)

- a. INSTALL SYSTEM PERIPHERAL COMPONENTS (780 Power Supply, Controlling Switches, Power Transfer Hinge(s), etc.) AND RACEWAYS:

– DO NOT CONNECT POWER UNTIL ALL COMPONENTS ARE INSTALLED –

WIRES FROM POWER SUPPLY TO DEVICE (Minimum Gauge of Two-Conductor Cable)	
Up to 40 Feet of Wire	16 Gauge
Up to 60 Feet of Wire	14 Gauge
Up to 100 Feet of Wire	12 Gauge

INTEGRAL POWER SUPPLY - Connect Wires from Power Transfer Hinge, Controlling Switch(es)/ Console and Power (120VAC) Input to 780 FIRE RELEASE POWER SUPPLY as described in the enclosed installation instructions.

POWER TRANSFER HINGE - Follow Manufacturer's installation instructions. DOOR LEAF WIRES MUST EXIT THROUGH DOOR ACCESS HOLE UNDERNEATH DEVICE END CLAMP.

- b. INSTALL DEVICE (and TRIM, if used):  
Follow the installation instructions for device (and trim). Install the device less End Clamp and End Cap. Set bar level and prepare End Clamp mounting holes.
- c. PREPARE WIRING ACCESS HOLE:  
Drill a 3/4" (19mm) diameter hole on centerline of Device and in line with End Clamp mounting holes. See Figure 1. Mount End Clamp.
- d. CHECK DEVICE ACTION:  
Actuate device by touchbar (and by trim). Door and device should operate properly. Door should open freely and close securely.
- e. CONNECT DEVICE ELECTRIC DOGGING WIRES:  
Two Black wires from inactive (hinge) end of device connect to corresponding leads from the designated terminals in the 780 power supply. Wire nuts not supplied.
- f. CONNECT MONITORS (if Used):  
See "MONITORS" section. Connect as shown. Wire nuts not supplied.
- g. TWO DEVICE ZONES:  
When two devices are hooked to the same 780 fire release power supply, repeat steps b. through f. for each device.
- h. TEST SYSTEM:  
WITH POWER DISCONNECTED VERIFY THROUGHOUT THAT THERE ARE NO SHORT CIRCUITS. APPLY POWER TO CONSOLE (if used), THEN TO INTEGRAL POWER SUPPLY. Test Device: Touchbar should stay depressed after initial manual operation when controlling switch closes contacts, extend or release when switch contacts open. Momentary or continued operation, device status will correspond to switch contact status. WHEN NEEDED, FOLLOW TROUBLESHOOTING GUIDE.

# 780 FIRE RELEASE POWER SUPPLY INSTALLATION INSTRUCTIONS

## INSTALLATION

The 780 enclosure should be securely fastened to the wall using the four 1/4 inch diameter mounting holes located in the back of the box. Position the enclosure so that the transformer is facing towards the top. Do not obstruct the view of the power indicator. The 780 must not be installed outdoors. It can be located in the plenum or in an equipment room. To minimize wire run lengths, it is recommended that the 780 be installed as close to the electric locking device(s) as possible.

For the 120VAC power input, terminal TB1 will accommodate up to 14 gauge wire. Conduit must be used to provide an adequate earth ground to the enclosure.

The 780 is designed to be used with locking devices requiring a 24VDC Power Source. The number of locking devices used with the 780 depends on the current draw of the locking device and the current capacity of the fire release power supply. The Series 780 comes with 2 amp capacity. The total load must not exceed the maximum load specified on the wire diagram (located underneath the fire release power supply cover plate).

## OPERATION

When 120VAC power is applied to the 780 and connection is made from TB2, terminals 4 & 5 to the fire alarm normally closed contacts, the output across TB2, terminals 1 and 3 will produce an unregulated, unfiltered 24VDC, plus or minus 3V, depending on the size of the applied load. Use this output for all fail safe locking devices. There will be no voltage across terminals 2 and 3 of TB2, which is used as the output for all fail secure locking devices.

## TROUBLESHOOTING

**Symptom:** 120V is applied to TB1. There is no voltage across terminals 1 and 3 of TB2, but there is voltage across terminals 2 and 3.

**Cause:**

1. The 780 fire alarm input is not connected to the fire alarm.
2. The input is connected to the N.O. contacts instead of the N.C. contacts of the fire alarm.
3. An open wire or loose connection within the wiring to the fire alarm.

**Symptom:** 120V is applied to TB1, but 24VDC is not present at TB2, terminals 1 and 3 or 2 and 3.

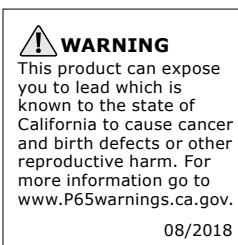
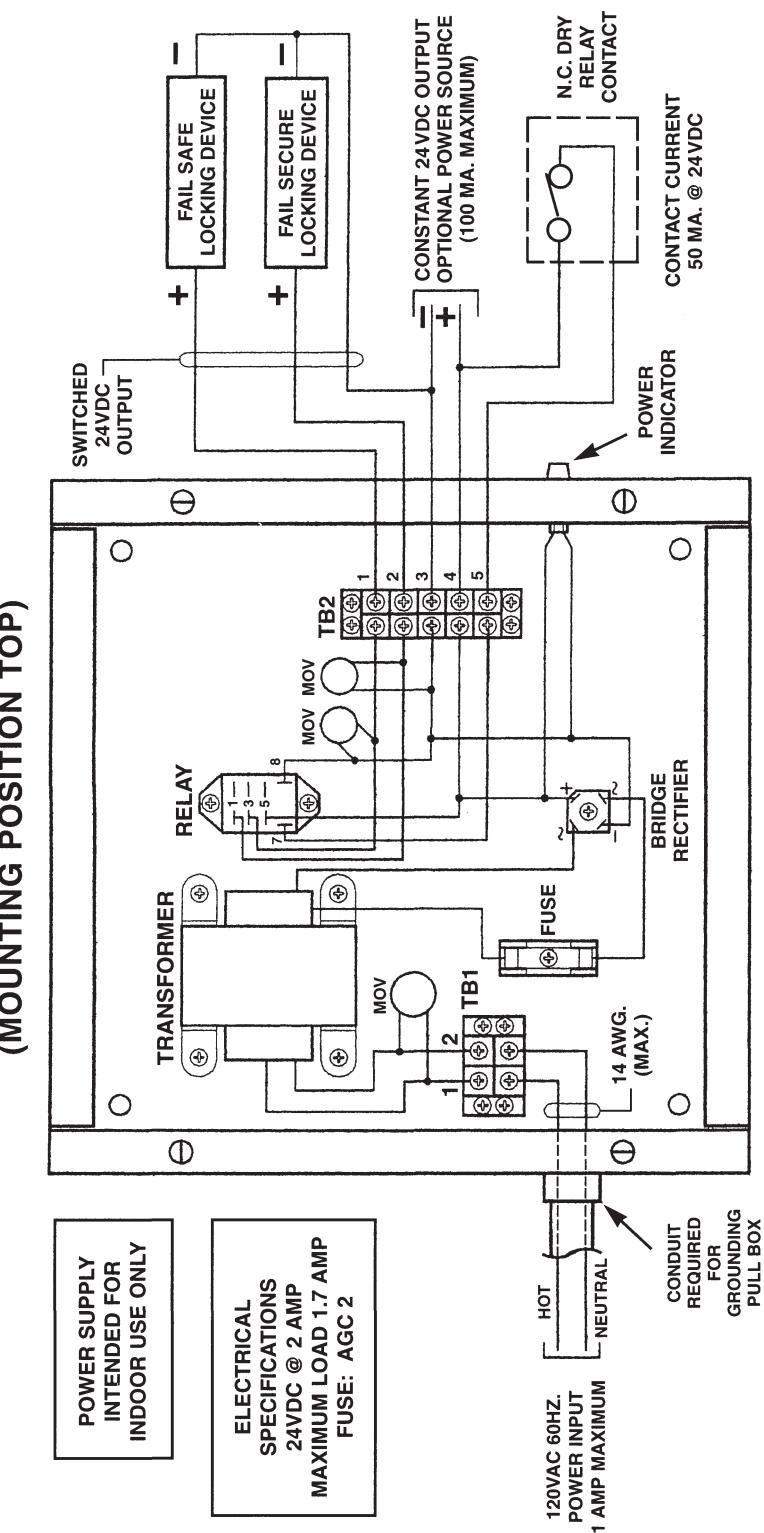
**Cause:**

1. Field wires to the load are shorted together against the conduit, door frame or electrical hinge (if used).
2. The applied load has exceeded the rating of the fuse.

Check for a blown fuse.

**WARNING: ALWAYS REPLACE WITH THE SAME SIZE FUSE. INSTALLING A FUSE THAT EXCEEDS THE RATING OF THE ORIGINAL FUSE WILL BLOW THE INTERNAL FUSE OF THE TRANSFORMER AND VOID THE WARRANTY. THE TRANSFORMER CAN NO LONGER BE USED AND MUST BE SENT BACK TO THE FACTORY FOR REPLACEMENT.**

## TYPICAL WIRING DIAGRAM FOR 780 FIRE RELEASE POWER SUPPLY



In U.S.:  
Corbin Russwin, Inc.  
225 Episcopal Road  
Berlin, CT 06037 USA  
Phone: 800-543-3658

Technical Product Support  
Phone: 888-607-5703

In Canada:  
ASSA ABLOY Door Security Solutions Canada  
160 Four Valley Drive  
Vaughan, Ontario, Canada L4K 4T9  
Phone: 800-461-3007