

VON DUPRIN®

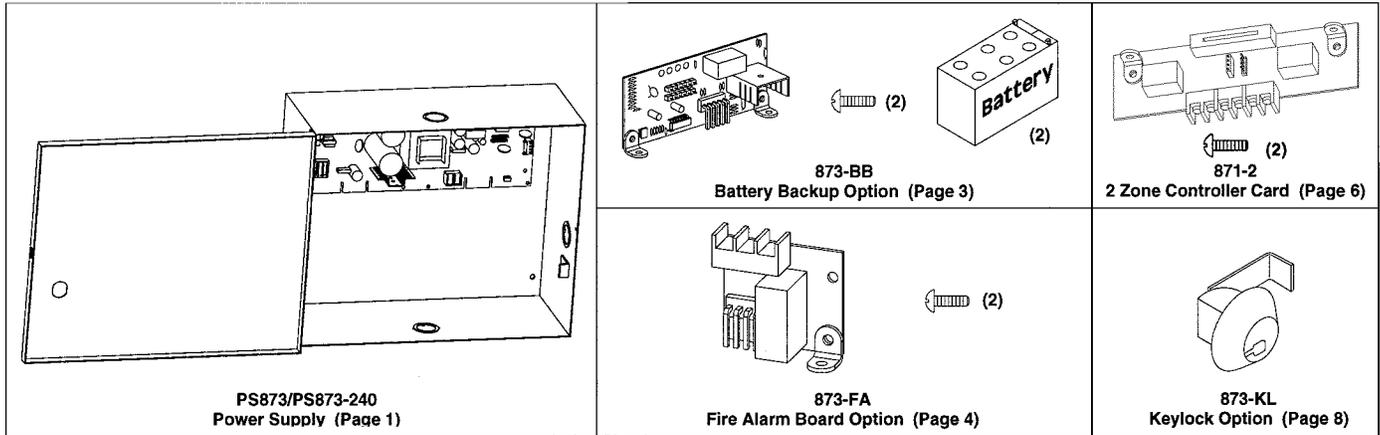
Installation Instructions



941352-00

PS873 Class 2 Power Supply & 873-FA, 873-BB, 873-KL Options

These instructions cover the following parts:



PS873 Specifications:

Input: PS873: 120VAC, 1.0 Amperes, 50/60 Hz
 PS873-240: 240VAC, 0.5 Amperes, 50/60 Hz

Output: 12VDC, 4 Amperes or 24VDC, 2 Amperes

Von Duprin EL compatible - 24VDC, 16 Amp-inrush (0.3 sec.).
 When using EL device: 871 option board required - see page 6.
 Output protected with 4 A slow blow, 250 V, 1/4" x 1-1/4" fuse (F2)

	CAUTION
For continued protection against risk of fire, replace fuse F2 with same type and rating.	

NOTE: During battery backup (873-BB required)
 Output Rating: 10.5 - 12 VDC, 4A or 22-24 VDC, 2A

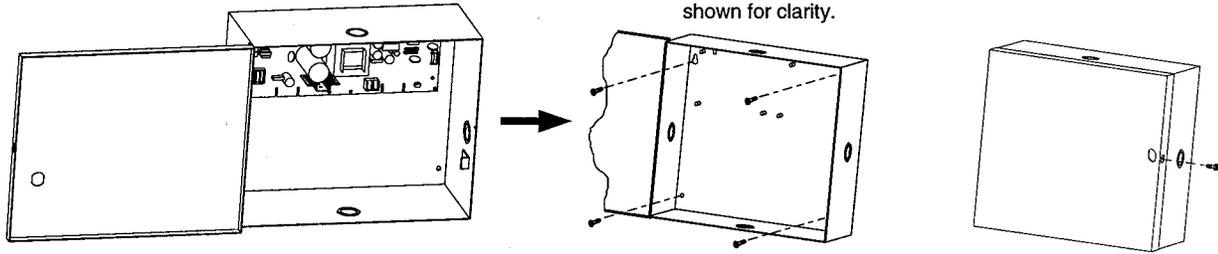
Enclosure: 10" H x 12.5" W x 5.0" D Hinged cover box
 19 GA steel, Five 1/2" x 3/4" knockouts total

Temperature: 0-120 degrees F

- Installation Notes:**
1. If installing a PS873 with an EL Device, see P.8 of these instructions and exit device instructions under "optional equipment - EL".
 2. If installing PS873 with a Chexit device, see Chexit instructions.
 3. For Canadian applications, the device must be installed in accordance with Canadian Electrical Code.

Step 1 Mount power supply.

PS873 or PS873-240

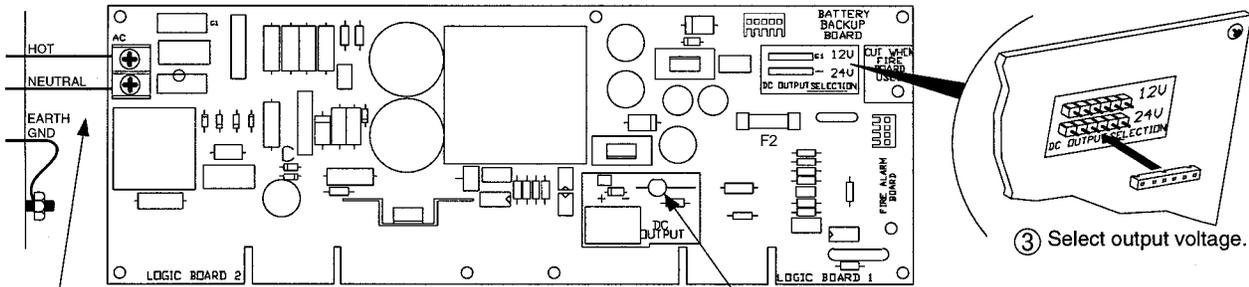


Note:
Circuit Board not
shown for clarity.

To secure door closed,
install screw as shown.

Step 2 AC Wiring.

- ① Ensure AC breaker is open.
- ② For supply connections, use wire suitable for at least 90°C temperature.

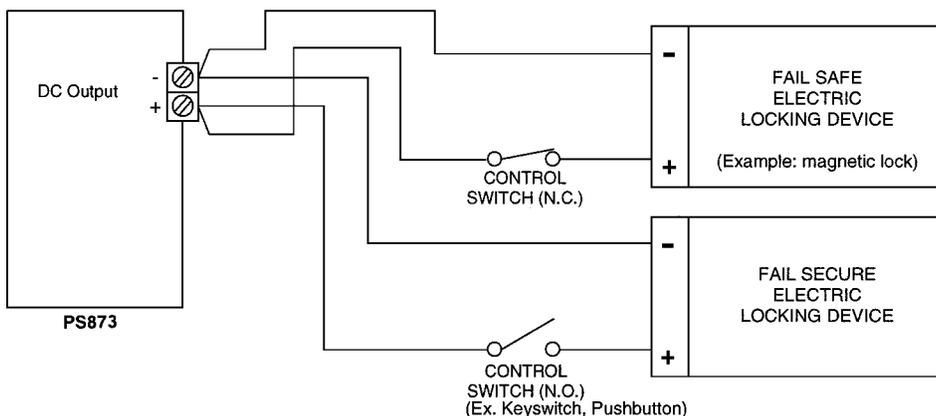


- ③ Select output voltage (12VDC or 24 VDC).
- ④ Connect AC voltage to two 6" black and white leads (hot and neutral) or remove the 6" leads and apply the AC voltage directly to terminal block.
NOTE: Maintain 1/4" spacing between AC input wiring and any other wiring (such as DC output wiring, switch contact wiring, etc.).
- ⑤ Close breaker to turn on power supply. Verify green LED (DS1) is illuminated, indicating output voltage is present.

Step 3 Device Wiring.

PS873 WIRING

- ① Temporarily remove AC voltage from PS873 while connecting loads to output terminal block.
- ② Wire Devices



Fail Safe: Upon ultimate power loss, the locking device will unlock. Use of the PS873 controlled output is not intended to replace the function of Listed panic hardware for emergency exit.

Fail Secure: Upon ultimate power loss, the locking device will remain locked. Install after consulting with local authority having jurisdiction. Listed panic hardware may be required to allow emergency exit from the secured area. Use of the PS873 controlled output is not intended to replace the function of Listed panic hardware for emergency exit.

- ③ See TROUBLESHOOTING table at end of instructions if devices do not work properly.

873-BB BATTERY BACKUP

SPECIFICATIONS:

BATTERY BACKUP TIME: 2 hours at 100% load
4 hours at 50% load
1000 EL Cycles (no other loads)

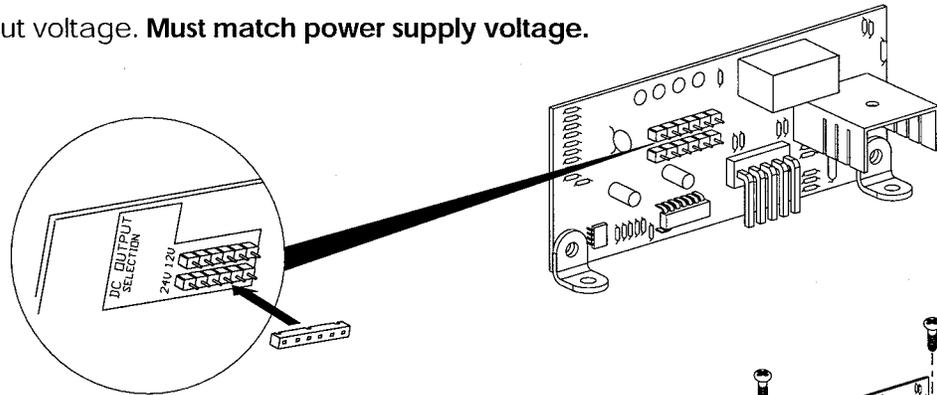
BATTERIES: (2) 12V, 7AH Lead Acid

CAUTION:
Charge only Von Duprin part number 991280 lead acid batteries. Other types of batteries may burst causing personal injury and damage. Observe the proper polarity when connecting the batteries.

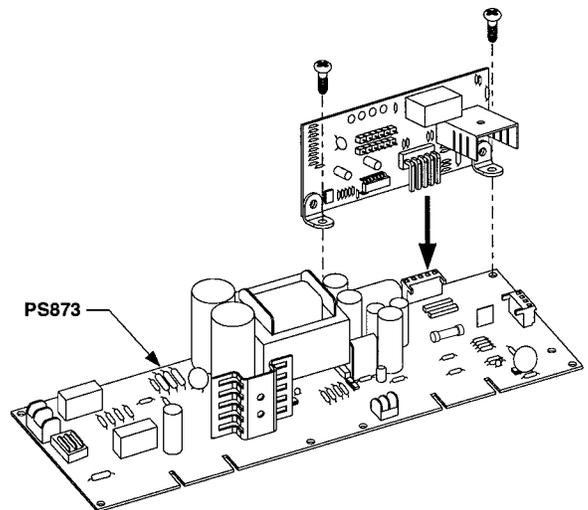
INSTALLATION:

Step 1 Ensure PS873 AC breaker is open.

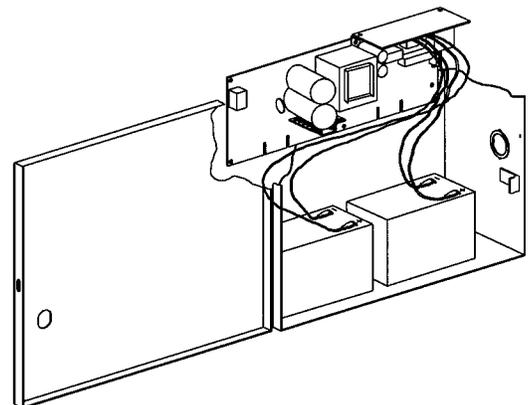
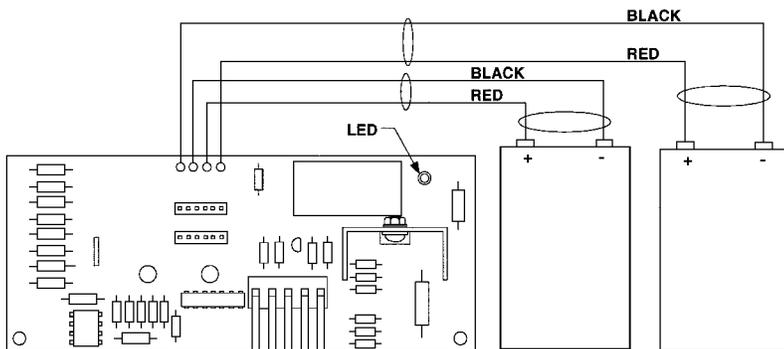
Step 2 Select output voltage. **Must match power supply voltage.**



Step 3 Install 873-BB onto PS873.



Step 4 Connect 873-BB leads to batteries, being careful to connect RED to "+" and BLACK to "-". Place batteries in bottom of enclosure.



Step 5 Close AC breaker. The yellow LED on the 873-BB will illuminate indicating the batteries are charging.

873-FA FIRE ALARM INPUT BOARD

The 873-FA option consists of one printed circuit board that plugs onto the PS873 power supply. In the event a fire alarm is active, this board will remove power from the PS873 output and any logic board* output. The Fire Alarm Input board can be configured for Automatic or Manual reset.

SPECIFICATIONS:

Automatic Reset: After a fire alarm condition is terminated, the 873-FA option will immediately restore power to all loads. The 873-FA is shipped in the Automatic configuration.

Manual Reset: After a fire alarm condition is cleared (or following a power outage), the 873-FA option will not restore power until a reset device has been toggled.

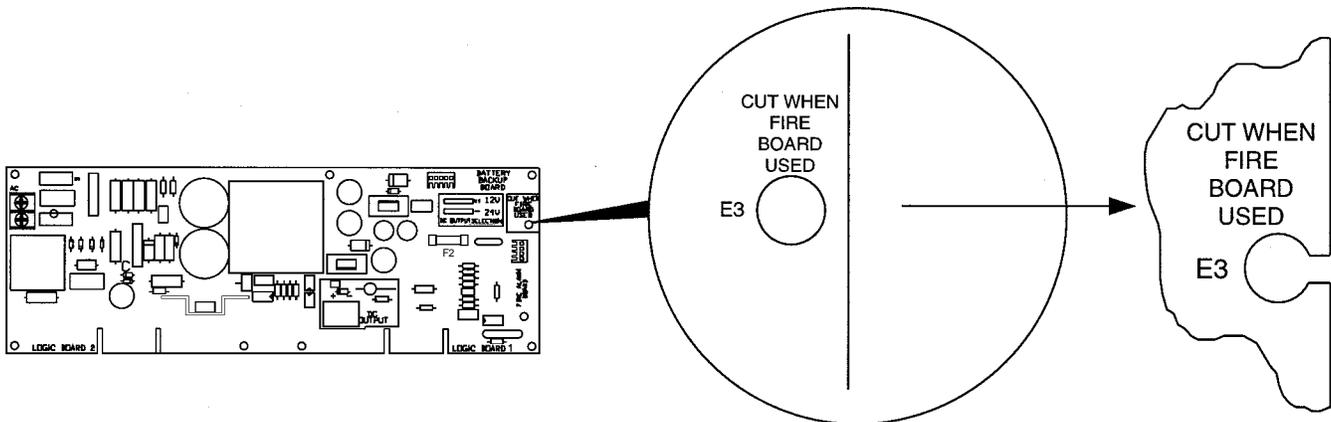
Reset

Device Contacts: 24 VDC, 0.1 ADC rating required.

INSTALLATION:

Step 1 Ensure PS873 AC breaker is open (Disconnect batteries if you have this option).

Step 2 Locate hole labeled "E3 CUT WHEN FIRE BOARD USED" on the right side edge of the PS873 power supply board and cut.

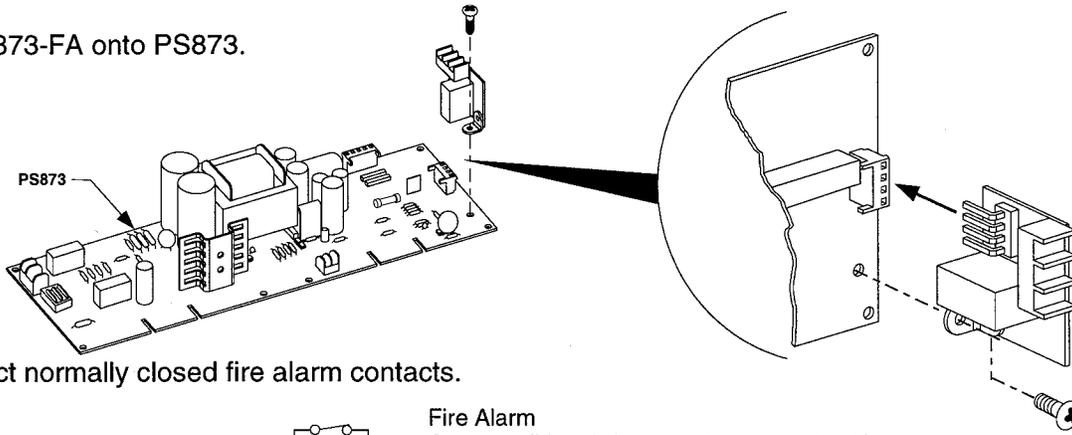


Step 3 Configure 873-FA as Automatic or Manual reset as shown on following page.

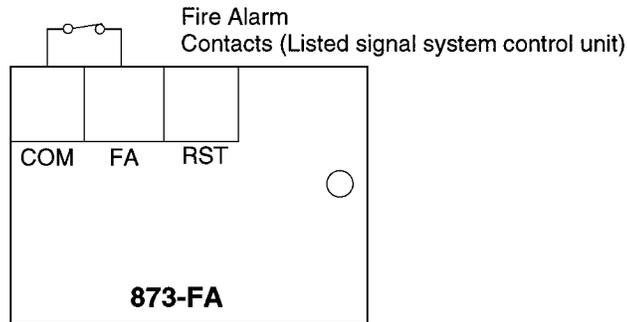
*PS873 supports optional logic cards which perform door control and monitoring functions. Consult factory for more information.

Automatic Reset

- ① Install 873-FA onto PS873.



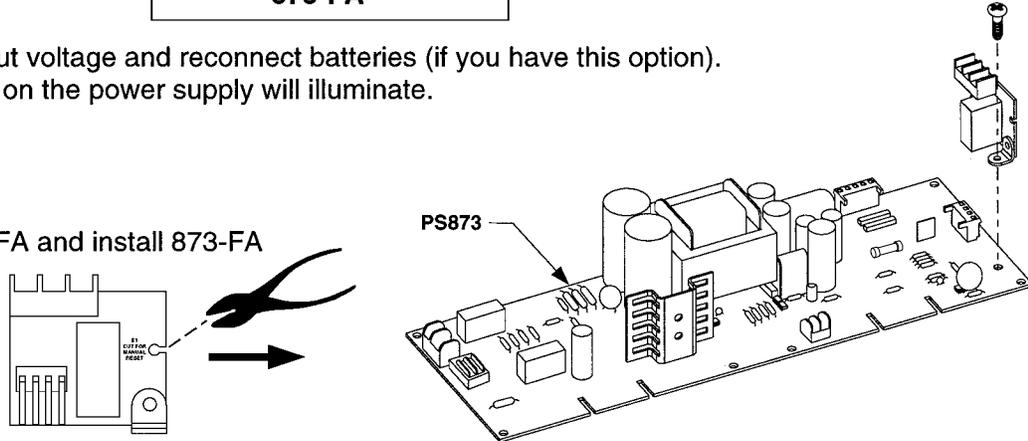
- ② Connect normally closed fire alarm contacts.



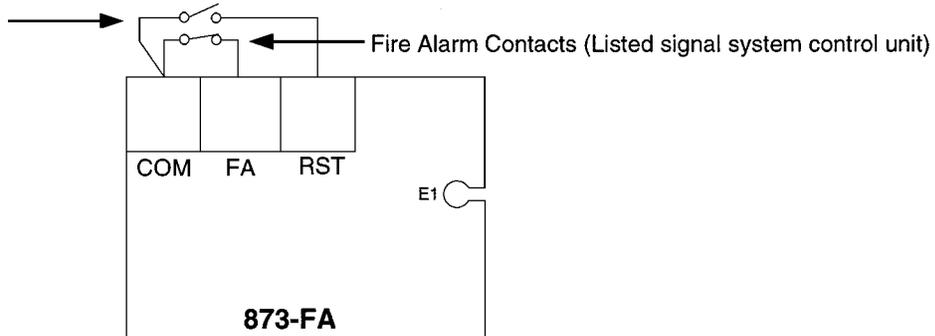
- ③ Restore AC input voltage and reconnect batteries (if you have this option). The green LED on the power supply will illuminate.

Manual Reset

- ① Cut E1 on 873-FA and install 873-FA onto PS873.



- ② Connect normally closed fire alarm contacts and normally open reset contacts.



- ③ Restore AC input voltage and reconnect batteries (if you have this option).
- ④ Momentarily close the reset device contacts. The green LED on the power supply will illuminate.
- ⑤ **NOTE:** If the reset device contacts are left in the closed position, the 873-FA will not work properly.

871-2 INSTALLATION

Note: The 871-2 board is for standard EL exit devices only and cannot be used with QEL devices. For QEL devices, an 871-2Q board is required. For information on 871-2Q, see instructions 941016.

The 871-2 option provides control over two zones. One or two 871-2 boards can be installed on each PS873.

INSTALLATION:

Step 1 Ensure PS873 breaker is open. (Disconnect batteries if you have this option.)

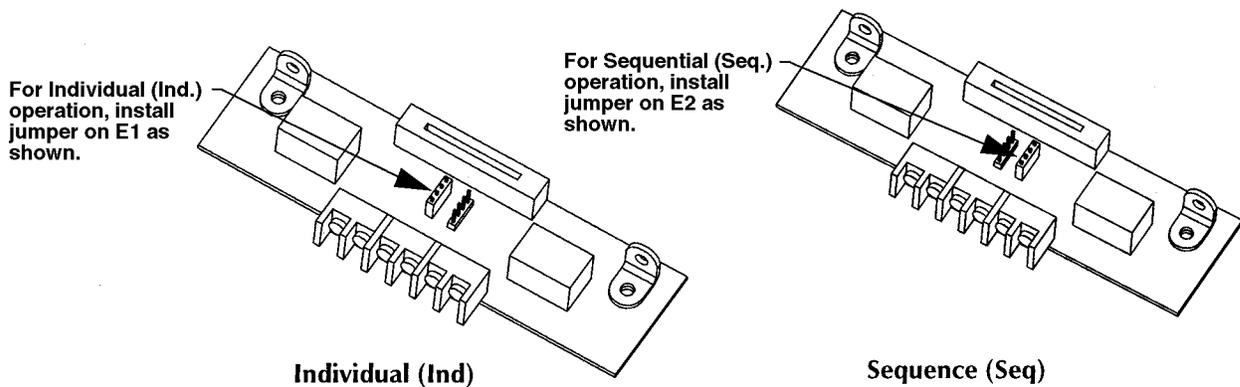
Step 2 Select between individual or sequential outputs.

Sequential outputs (factory shipped):

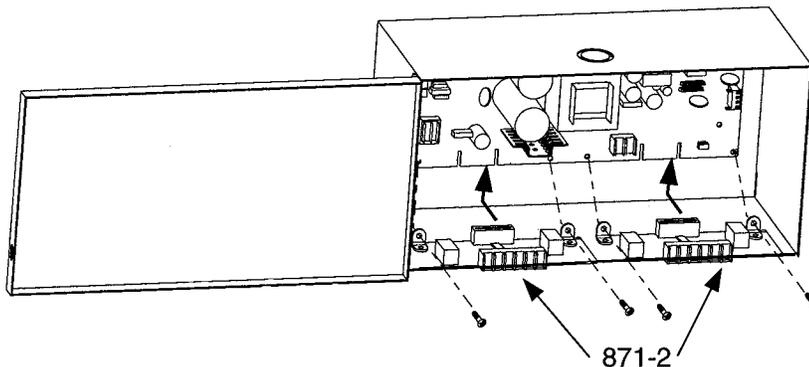
- Input 1 will sequence both outputs. (02 followed by 01)

Individual outputs (must be field programmed):

- Input 1 will control output 1.
- Input 2 will control output 2.



Step 3 Install 871-2 onto either PS873 receptacle as shown.

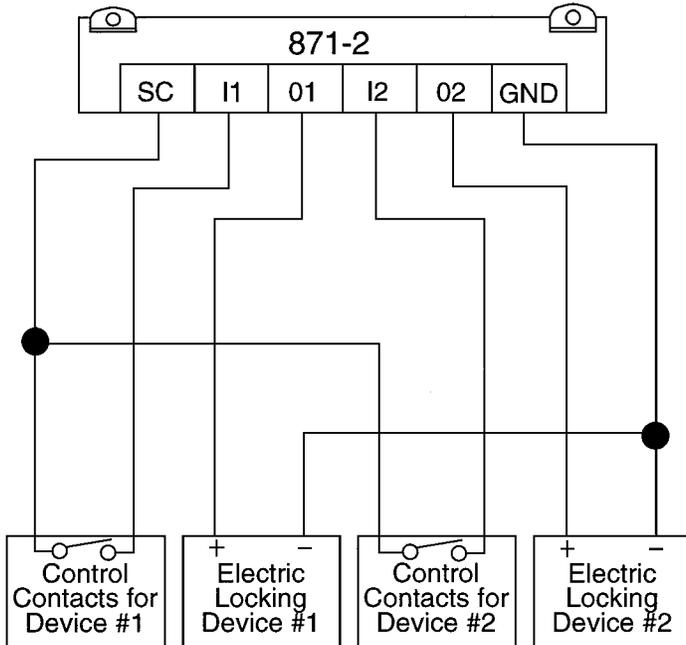


Step 4 Connect inputs and outputs (wire as individual or sequential mode).

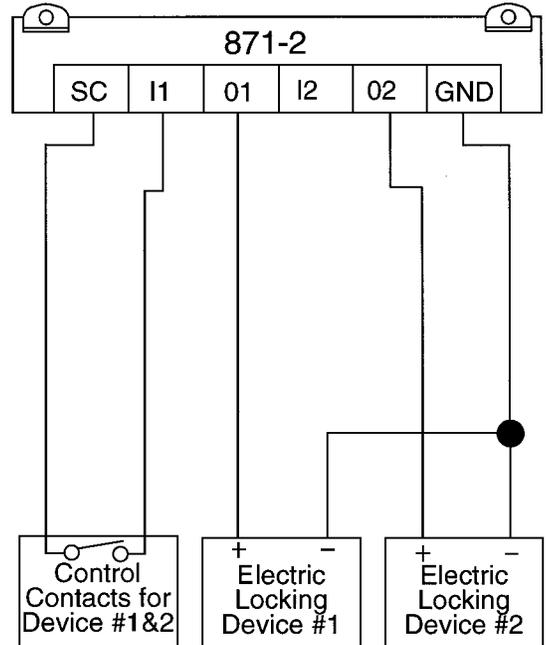
NOTE: When using an EL device such as EL33A, EL99, etc:
Use 12 AWG stranded wire for outputs 01 and 02 between PS873 and EL device (200' run maximum).

Use 18 AWG stranded wire for control contact input I1 and I2 to actuator button, access control devices, etc.

TYPICAL WIRING - INDIVIDUAL MODE



TYPICAL WIRING - SEQUENTIAL MODE



Step 5 Apply AC voltage to PS873 and test devices.

Step 6 Operation Summary

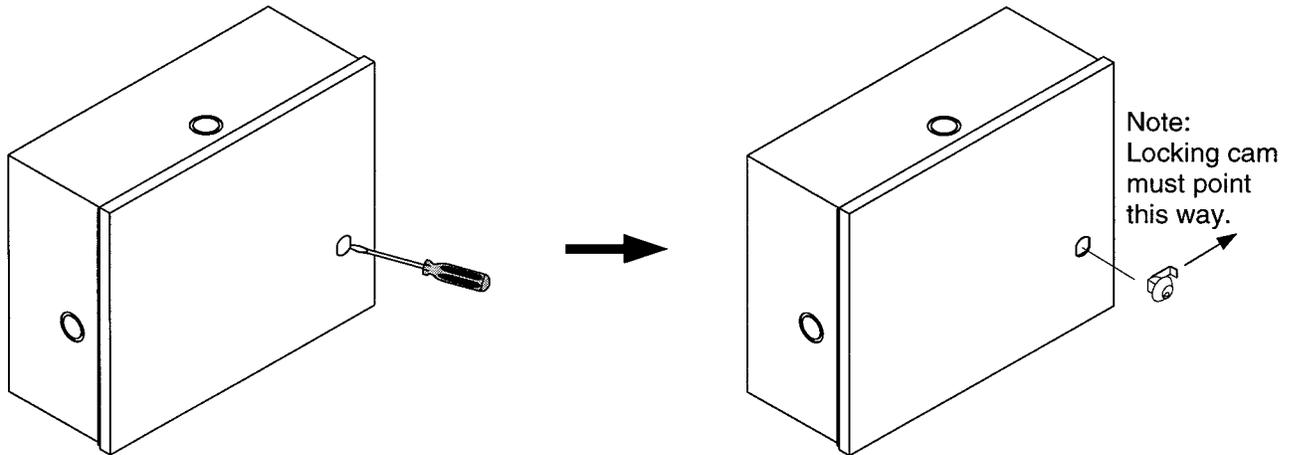
871-2 OPERATION SUMMARY		
871-2 MODE	IF	THEN
SEQUENTIAL	I1 = 0V I2 = 0V	01 = 0V AND 02 = 0V
	I1 = 24V	I2 = 24, 01 = 24V AND 02 = 24V
	I2 = 24V	I1 = 24, 01 = 24V AND 02 = 24V
INDIVIDUAL	I1 = 0V I2 = 0V	01 = 0V AND 02 = 0V
	I1 = 0V I2 = 24V	01 = 0V AND 02 = 24V
	I1 = 24V I2 = 0V	01 = 24V AND 02 = 0V
	I1 = 24V I2 = 24V	01 = 24V AND 02 = 24V

ALL DC VOLTAGES REFERENCED TO 871-2 GROUND TERMINAL.

873-KL KEYLOCK OPTION

The keylock consists of a one-piece lock with two keys.

- ① Remove knockout and install lock onto door.



TROUBLE SHOOTING

SYMPTOM	CAUSE	SOLUTION
No PS873 output, green LED off	No AC input voltage	See PS873 Step ②
	Output current exceeds max rating ⚠ See "Caution" below	1. Reduce output current. 2. Replace fuse F2. Use 4 A slow blow, 250 V, 1/4" x 1 1/4". ⚠ See "Caution" below.
	873-FA not properly connected	See 873-FA (pp. 4-5)
12V on output instead of 24V or vice versa	Improper DC output selection	See PS873 Step ②
EL device tries, but fails, to pull latchbolt	Wire size too small from power supply to EL device, or wire run too long	See "871-2 Installation"
	Device adjusted improperly	Consult factory



CAUTION

For continued protection against risk of fire, replace fuse F2 with same type and rating.