

# PE Series Annunciator Panel

## Universal BBU Annunciator Installation/Operation Manual Model: AP-8000



Section	Page
Safety Information.....	1
General Information.....	1
Installation and Wiring.....	1
Specifications.....	3
Regulatory Information.....	3
Troubleshooting.....	3
Limited Warranty.....	3
Circuit Board Illustration.....	4
Wiring Diagram.....	5

## Safety Information

FOR COMMERCIAL USE ONLY



### CAUTION

Up to 60 Volts DC may be present on the terminals.  
DO NOT SHORT ACROSS THE POWER SUPPLY TERMINALS

- Keep fingers and all metal objects from power terminals and wires.
- Use insulated hand tools.
- Recommended: When this device is connected to an alarm panel, place the alarm system in "Test Mode" prior to servicing.

**CAUTION:** Disconnect power before attempting to service or repair this product.

This device must be installed in accordance with all applicable electrical and building codes.

**NOTICE:** No user-serviceable parts inside. Refer all repairs to qualified service personnel.

## General Information

Materials provided:

- 1 ea. AP-8000 Annunciator Panel
- 1 ea. Installation/Operation Manual
- 4 ea. #10 x 3/4" Mounting Screws
- 1 ea. In-line Fuse Holder
- 1 ea. 2 Amp Slow Blow Input Power Fuse
- 1 ea. 1/2" NPT Cord Grip
- 1 ea. 3/4" NPT Cord Grip

The unit features:

1. Metal enclosure, NEMA-4 rated, Red
2. Microprocessor-Controlled
3. NFPA-Compliant LED Front Panel Indicators
4. Power Supply Operable from 7 to 60 Volts DC
5. QTY-(8) Building Fire Alarm Interface Relays, 2-Amps
6. Piezo Audio Alert with silence button (24 Hrs. max if alarm still present)

The Universal Annunciator provides one "Form-C" relay outputs each for connection of up to (8) eight alarm conditions to the building's main fire alarm panel or other device. Typical UL-2524 installations require at least the following alarm conditions to be annunciated:

1. Loss of AC power
2. Low battery, indicating the battery has discharged by 70%
3. Charger failure
4. BDA Failure
5. Donor Antenna Failure
6. BDA RF Component Failure
7. Reserved (not used)
8. Reserved (not used)

## Installation & Wiring

### A) Wall-Mount Installation:

The AP-8000 is designed to be wall mounted. Select a suitable location in accordance with any approved building plans or as specified by the Authority Having Jurisdiction.

Affix the cabinet to the wall using the supplied hardware.

If required, alternative mounting arrangements may be used but avoid drilling new holes into the box, or the front cover door, as doing so may void the enclosure's NEMA-4 environmental rating.

## B) Wiring

The following wiring is required to place the annunciator into service:

**1) Connection to a power supply:** See wiring diagram on page 5. Provide DC power from the DC output of the battery back-up (BBU) unit to the "Input Power" terminals located at the lower-left corner of the AP-8000 circuit board. This terminal accepts 12-22 AWG wire size. We recommend installing the provided 2 amp fuse and inline fuse holder on the positive DC input to the AP-8000, wired as close to the power source as practical. Connect the (+) to the top screw terminal, and (-) to the bottom screw terminal. The annunciator is protected against reverse polarity but will not function if the power input connections are reversed, resulting in blowing 2 amp fuse.

The main power supply is fused at 2 amps. Replace only with the same size fuse: Littelfuse 0.33002.MXP (or equivalent).

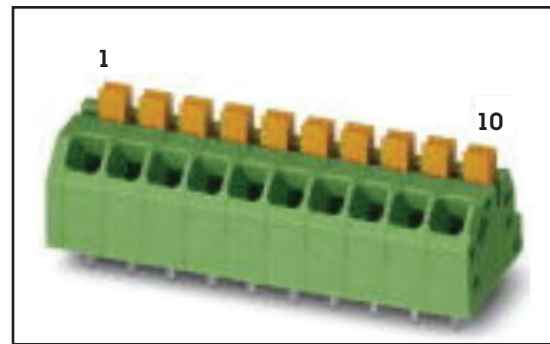
**2) Connection to alarm initiating circuits:** The annunciator is designed to accept up to (8) alarm initiating circuits, each of which shall provide a "ground", to the corresponding input for that circuit.

The input connector is colored green with orange push buttons, and is located just above the power supply input. The positions are numbered 1 through 10, from left-to-right, as shown in Figure 1.

This terminal block accepts wire sizes 16 through 24 AWG.

POSITION #	FUNCTION
1	Alarm Input #1
2	Alarm Input #2
3	Alarm Input #3
4	Alarm Input #4
5	Alarm Input #5
6	Alarm Input #6 – Piezo-Alert Output
7	Alarm Input #7
8	Alarm Input #8
9	Com/Ground
10	Regulated +5 Volts DC

Figure 1: Phoenix Contact P/N: 1862123



Note: If desired, a regulated 5-volts DC and ground may be applied directly to terminals #9 and #10, which effectively bypasses the functionality of the on-board regulator.

CAUTION: Do not simultaneously apply power to both the main Input Power Connector and the above terminals. Doing so may damage the annunciator or any external equipment connected to it.

Note: If desired, a regulated 5-volts DC and ground may be applied directly to terminals #9 and #10, which effectively bypasses the functionality of the on-board regulator.

CAUTION: Do not simultaneously apply power to both the main Input Power Connector and the above terminals. Doing so may damage the annunciator or any external equipment connected to it.

Position #6 is shipped from the factory pre-configured for use as a piezo-alert output.

### 3) Connection to the building's main fire alarm panel: *(This step #3 is optional.)*

The AP-8000 provides (8) Form-C relay outputs that may be connected to the building's fire alarm panel. Confirm with your local building inspector/authority having jurisdiction ("AHJ") whether such connections are permissible in your area.

Each Form-C alarm output relay has a separate wiring terminal. These terminals are located along the right-hand side of the circuit board with "Alarm 1" at the top, and "Alarm 8" at the bottom.

The alarm relay terminals accept wire sizes 18-22 AWG.

**End Of Line Resistors:** If desired, an in-series "End of Line" supervision resistor may be installed on the screw terminals adjacent to the relays. Any EOL resistors placed here will be "in-series" with the Common terminal of the Form-C relay. If these EOL terminals are not used, they must be shorted across, so that the Common terminal of the relay is presented to the wiring block. The AP-8000 ships from the factory will call (8) EOL terminal blocks shorted across.

**4) Connection to piezo-beeper:** A single expansion slot is provided near the upper center of the circuit board. Standard annunciator models ship from the factory with a single weatherproof NEMA-4 piezo beeper connected to this expansion slot.

Additional accessories may be available, now or in the future, and each such accessory item shall be accompanied by an instruction sheet describing its use of the expansion slot pins, if any.

**5) Press-to-Test Button:** The annunciator is equipped with a "Press-to-Test" button. When pressed, all front panel LED's will illuminate. (The piezo beeper and alarm relay outputs do not activate.)

2

## Specifications

Subject to Change without Notice

### General:

- Microprocessor controlled
- QTY-(8) Form-C, UL-Listed, Small Signal Relays
- "Heartbeat" indicator
- Front panel "Press-to-Test" button
- Easily adapted to fit nearly any situation

### Cabinet:

- Shipping weight: 8 Lbs.
- Dimensions (assembled): 10" H x 8" W x 4" D
- Environmental Rating: NEMA-4/IP66
- Closure: ¼ Turn Twist-Lock
- Color options: Red, Color# RAL-3001)
- Cord Set: None (Provided by installer)
- Form-C, UL-Listed Small Signal Relay
- 2-Amp DC Rating (Resistive)

### Electrical:

- 7 - 60V DC
- Input Current Draw: <100mA max.
- Max Power: 4.5 Watts
- Relay switching current: 2-Amp DC (resistive)

## Regulatory Information

**California Prop-65 Warning Notice:** This product contains lead, a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling lead products.

**Recycling Notice:** Please help protect the environment. We encourage all purchasers to recycle their lead-acid batteries. For the recycling location nearest you, please visit <https://www.call2recycle.org/>

**FCC Part-15:** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## Troubleshooting

This Universal Annunciator is designed and engineered to provide years of service in unattended commercial installations. With the exception of a single internal 2 amp ceramic fuse, there are no user serviceable parts inside.

In the event the annunciator fails to function properly, there are a few basic system checks that can be performed in the field:

- 1) Check for the green, blinking "Heartbeat" LED light located at the upper left portion of the circuit board. This green LED blinks under microprocessor control. If the LED is blinking, it means the microprocessor is running and operating normally. If the Heartbeat LED is not illuminated, or is blinking erratically, there may be a problem with the power supplied to the device.
- 2) Measure the voltage across Pins 9 & 10 on the Alarm Input connector. This value should be +5 Volts DC regardless of how the annunciator is powered (i.e., via the Main Power, or these pins 9 & 10).
- 3) Verify that all wiring connections to all terminals are clean and tight, and that the wiring is fully under the terminal screws.

If the above system checks do not resolve the problem, please contact our Technical Support staff for further assistance.

## Warranty

Newmar warrants that the AP-8000 PE Series Annunciator Panel to be free from defects in material and workmanship for two years from date of purchase. If a problem with your AP-8000 or if you have any questions about the installation and proper operation of the unit, please contact NEWMAR's Technical Services Department:

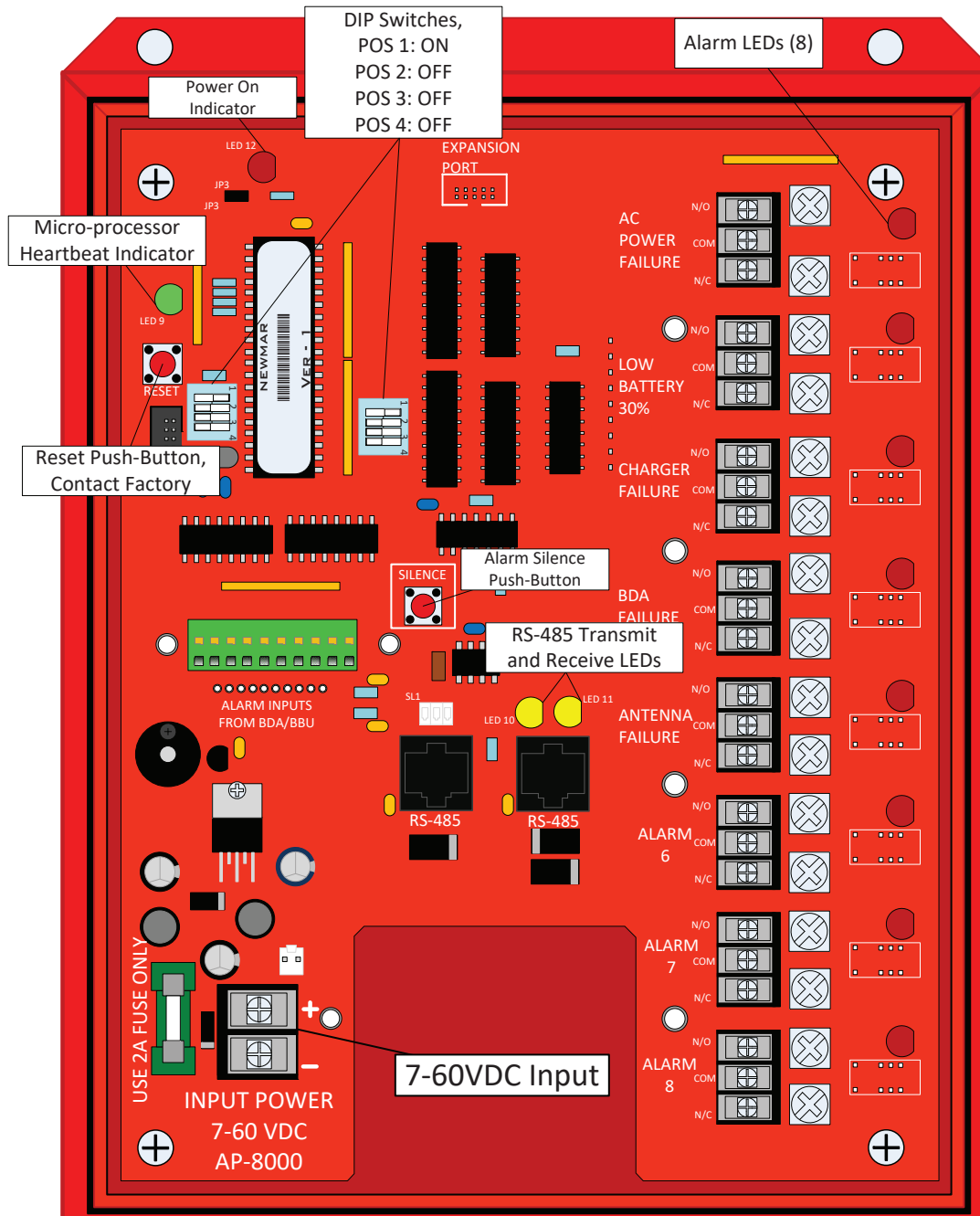
Phone: 714-751-0488 - From the hours of 7:30 a.m. to 5:00 p.m. weekdays, P.S.T.;

Fax: 714-957-1621

E-mail: [techservice@newmarpower.com](mailto:techservice@newmarpower.com)



**Figure 2: Circuit Board Illustration**





**AP-8000 Annunciator Panel**

