

INSTALLATION AND MAINTENANCE INSTRUCTIONS

PA400*, PS12LO, PS12M, PS24LO*, and PS24M*

Electronic Mini-Sounders and Optional Strobes

*ULC models add suffix "A"; available in 24VDC only. Add suffix "R" for red models; "W" for white models; "B" for Beige model. PA400, add suffix "F" to models with fire printed on front.



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The Products to which this manual applies may be covered by one or more of the following U.S. Patent numbers: 5,546,293 and 5,488,462

Specifications

PA400 Sounder

Operating Voltage: 9.6VDC (absolute min.) to 33VDC (absolute max.)

Current Drain: 12 mA at 12 volts

15 mA at 24 volts

Temperature Range: -10°C to +60°C (14°F to 140°F)

0°C to 49°C (32°F to 120°F) with strobe added

Sound Output: Greater than 90 dBA measured in anechoic room at 10 feet, 24 volts.

See Figure 1 for other voltages. 82 dBA minimum measured in UL reverberant room

(75 dBA minimum with strobe)

PS12/24 Strobe

	MODEL					
	PS12LO(W)	PS12M	PS24LO(W)	PS24M(W)	PS24LOA(W)	PS24MA(W)
Panel Voltage	12-17 VDC	12-17 VDC	22.5 - 30 VDC	22.5 - 30 VDC	22.5 - 30 VDC	22.5 - 30 VDC
Max. Current Drain @ Listed Panel Voltage	50 mA	180 mA	25 mA	75 mA	50 mA	180 mA
Min. Light Output @ 100% Viewing Angle (See Fig 2)	1.5 candela	15 candela	1.5 candela	15 candela	1.5 candela	15 candela

Temperature Range: 0°C to 49°C (32°F to 120°F)

Under no circumstances can the PS24 voltage exceed 33VDC or be less than 18VDC.

Under no circumstances can the PS12 voltage exceed 18.7VDC or be less than 9.6VDC.

To calculate battery requirements, use current values shown above. However, note that there is an in-rush current associated with strobe power-up. The information in Figures 3 and 4 is useful when selecting fuse values.

As Figure 3 shows, 12V strobe in-rush current typically peaks at 3A and drops to nominal in 600µS. In a 24V strobe (Figure 4), in-rush current typically peaks at 7.0A and drops to nominal in 800µS.

Note: If class "A" wiring is installed, the wire length may be up to 4 times the single wire length in this calculation.

Figure 1:

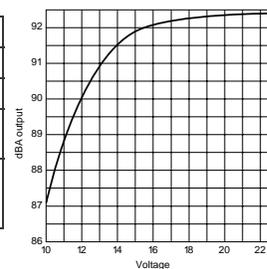


Figure 2:

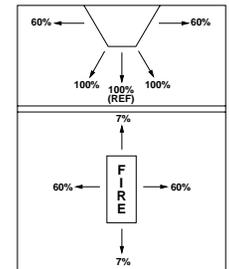


Figure 3. 12 volt strobe in-rush current:

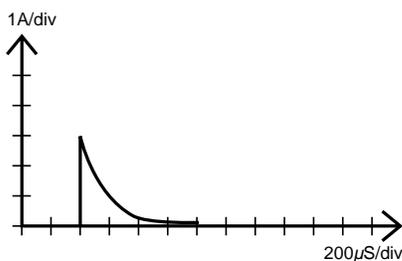
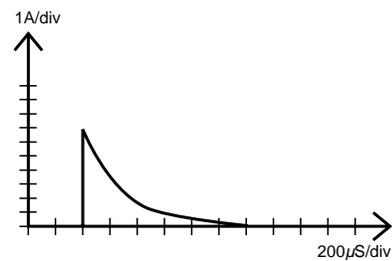


Figure 4. 24 volt strobe in-rush current:



General Information

The National Fire Protection Association has published codes, standards, and recommended practices for the installation and use of the above appliances. Therefore, the installer must be familiar with these requirements, with local codes, and any special requirements of the authority having jurisdiction.

Model PA400

The PA400W (white), PA400R (red), and PA400B (beige) Piezo Alert electronic sounder and optional supplementary signal strobes are intended to be connected to the alarm indicating circuit of a UL-listed 12 or 24 VDC fire alarm control panel. The models PS12 and PS24 optional strobe additions to the PA400

require a 12 VDC or 24 VDC panel, respectively and are able to operate from a full-wave rectified, unfiltered supply.

Installation Notes

The wiring must be in compliance with all codes and must not be of such length or wire size that would cause the appliance to operate outside of its published specifications. The appliances must also be tested after installation in accordance with the control panel manufacturer's test procedure.

NOTE: Do not loop wires under terminal screws. Wires connecting the device to the panel must be broken at the device screw terminal in order to maintain electrical supervision.

Mounting

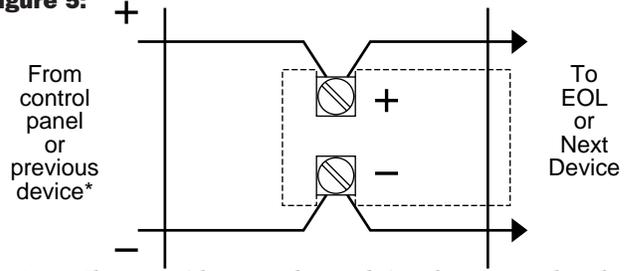
PA400 Sounders

1. The PA400 is intended for mounting to a standard 2-1/2" deep single-gang box which allows sufficient clearance for conduit entrance.
2. The PA400 is compatible with DC line supervision. The Piezo Alert is polarized and has terminals marked with polarity. Apply positive supply voltage to the (+) terminal and negative supply voltage to the (-) terminal. (See Figure 5.)
3. Mount the appliance to the electrical outlet box using the two mounting screws supplied.
4. Field repair of the PA400 should not be attempted. Return to factory for repair or replacement.

PS12 or PS24 Strobes

These optional strobes are interconnected to the PA400 by first removing the two mounting screws from the sounder. Use a small screwdriver to punch out the skinned-over areas as indicated in Figure 6. Install the adapter plate on top of the sounder and screw the combined sounder and adapter plate to the electrical outlet box. Make sure field wiring terminals are oriented in the upward position when mounted in the outlet box. Next, slide the strobe directly into the slots in the plates. The positive solder lug may be colored red or marked with a plus sign (+). This lug must be in the slot closest to the field wiring terminals. Grasp the catch area on each end of the strobe and squeeze while applying inward force. Make sure the strobe catches fully engage the slots in the adapter plate and that no gap appears at the interface between the strobe and adapter plate.

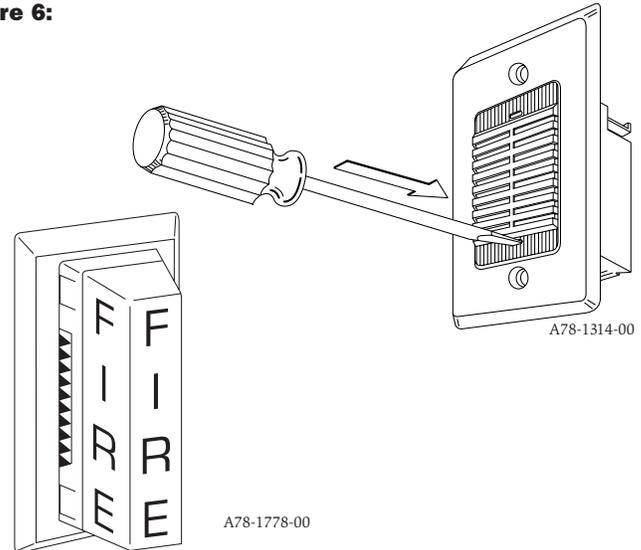
Figure 5:



*NOTE: Shown with control panel in alarm. Panel polarity reversed in supervisory condition.

A78-1315-00

Figure 6:



Please refer to insert for the Limitations of Fire Alarm Systems

WARNING

The Limitations of Sounders and Strobes

System Sensor's sounder and signal strobe is designed to provide fire and security hazard warning.

The strobe is for supplementary signaling use only.

The sounder or sounder/strobe combination will not work without power. The sounder or sounder/strobe gets its power from the fire or security panel monitoring the alarm system. If power is cut off for any reason, the sounder or sounder/strobe combination will not provide the desired audible or visual warning.

The sounder may not be heard. The loudness of the sounder meets or exceeds current Underwriters Laboratories' standards, however, the sounder may not alert a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages. The sounder may not be heard if it is placed in an area which is isolated by a closed door, or if it is located on a different floor from the person in hazard or if placed too far away to be heard over the ambient noise such as traffic, air conditioners,

machinery, or music appliances that may prevent alert persons from hearing the alarm. **The sounder may not be heard by persons who are hearing impaired.**

The signal strobe may not be seen. The electronic visual warning signal meets or exceeds current Underwriters Laboratories' standard 1638. The visual warning signal is suitable for direct viewing and must be installed within an area where it can be seen by building occupants. The strobe must not be installed in direct sunlight or areas of high light intensity where the visual flash might be disregarded or not seen. **The strobe may not be seen by the visually impaired.**

The signal strobe may cause seizures. Individuals who have a positive photic response to visual stimuli with seizures, such as epileptics, should avoid prolonged exposure to environments in which strobe signals, including this strobe, are activated.

Three-Year Limited Warranty

System Sensor warrants its enclosed sounder/strobe to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. System Sensor makes no other express warranty for this sounder/strobe. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the sounder/strobe which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning System Sensor's toll free number 800-SENSOR2 (736-7672) for a Return Authorization number, send defective units postage prepaid to: System Sensor, Repair

Department, RA # _____, 3825 Ohio Avenue, St. Charles, IL 60174. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.