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# Dual Strobe and Dual Strobe with Speaker Expander Plates for Emergency Communications

For use with the following models:

SEP-SPWL, SEP-SPSWL-P – Strobe Expander Plate models and SPSEP-BBSWL Back Box Skirt model are compatible with SWL, SWL-P, SPSWL, SPSW-P, P2WL.

**PRODUCT SPECIFICATIONS**

**SEP-SPSWL:** Universal Expander Plate, Amber Lens, White, ALERT

**SEP-SPSWL-P:** Universal Expander Plate, White, Plain

**SPSEP-BBSWL:** Universal Expander Plate Back Box Skirt, White

Operating Temperature:	Standard Products	32°F to 120°F (0°C to 49°C)
Humidity Range:	Standard Products	10 to 93% Non-condensing
Strobe Flash Rate:		1 flash per second
Nominal Voltage:		Regulated 12VDC/FWR or regulated 24DC/FWR
Operating Voltage Range (includes fire alarm panels with built in sync):		8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with MDL3 Sync Module:		8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Input terminal wire gauge:		12 to 18 AWG

**NOTE :** Strobes will operate at 12V nominal for 15 & 30 candela settings only. Switching between ranges is automatic.

**DIMENSIONS FOR PRODUCTS AND ACCESSORIES**

SEP-SPSWL (-P)			SPSEP-BBSWL		
Length	Width	Depth	Length	Width	Depth
13.05" (331.5 mm)	5.39" (136.9 mm)	2.41" (61.2 mm)	13.75" (349.3 mm)	6.10" (154.9 mm)	2.5" (63.5 mm)

**MOUNTING BOX OPTIONS**

SEP-SPSWL, SEP-SPSWL-P: 4" x 4" x 2 1/8" or deeper

SPSEP-BBSWL: 4" x 4" x 2 1/8"

**WARNING:** Amber lens versions not to be used as a visual public mode alarm notification appliance.

**NOTICE:** This manual shall be left with the owner/user of this equipment.

**BEFORE INSTALLING**

Please read the System Sensor Audible Visible Application Reference Guide, which provides detailed information on notification devices, wiring and special applications. Copies of this manual are available from System Sensor. NFPA 72 and NEMA guidelines should be observed.

Important: The notification appliance used must be tested and maintained following NFPA 72 requirements.

**GENERAL DESCRIPTION**

The L-Series Dual Strobe and Dual Strobe with Speaker Expander Plates for emergency communications use a single device plate to perform the functions of two to three devices on a back box. This combination of multiple devices on a single plate and back box lowers the overall cost of the installation and improves aesthetics by requiring fewer devices on the wall.

The expander plate provides fast and easy installation: Mount the expander plate to a junction box and connect its field wiring to the terminals. Attach the mounting plate of a strobe or speaker strobe device and connect its field wiring. Then, hinge and attach the strobe or speaker strobe device with a captured mounting screw to complete the installation. This product is comparable to existing L-Series mounting plate installations.

Dual Strobe and Dual Strobe with Speaker Expander Plates are designed to be used in 12 or 24 volt, DC or FWR (full wave rectified) systems. Clear lens version is listed to UL 1971 Listed and CAN/ULC S526-07 (Signaling Device for Hearing Impaired) for Public Mode Evacuation Signaling. Amber lens strobes are UL1638 Listed (Visual Signaling Appliances) for Private Mode General Utility Signaling. All L-Series products are suitable for use in synchronized systems. The System Sensor MDL3 module may be used to provide synchronization.

The Dual Strobe and Dual Strobe with Speaker Expander Plates are designed for use in wall applications.

**LOOP DESIGN AND WIRING**

The system designer must make sure that the total current drawn by the devices on the loop does not exceed the current capability of the panel supply, and that the last device on the circuit is operated within its rated voltage. The current draw information for making these calculations can be found in the tables within this manual. For convenience and accuracy, use the voltage drop calculator on the System Sensor website (www.systemsensor.com). See Figures 1-4 for wiring diagrams and shorting spring information.

When calculating the voltage available to the last device, it is necessary to consider the voltage drop due to the resistance of the wire. The thicker the wire, the smaller the voltage drop. Wire resistance tables can be obtained from electrical handbooks. Note that if Class A wiring is installed, the wire length may be up to twice as long as it would be for circuits that are not fault tolerant.

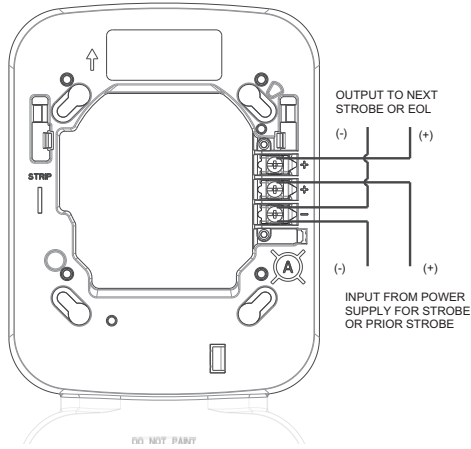
**CANDELA SELECTION**

The product will be set at 15 candela from the factory. To change the candela first remove the lower appliance from the expander plate by loosening the screw at the bottom of the appliance.

Adjust the slide switch on the rear of the product to position the desired candela setting in the small window on the front of the unit. All products meet the light output profiles specified in the appropriate UL Standards. For amber lensed strobes used for full profile measurement, listed candela ratings must be reduced in accordance with Table 2. Use **Table 1** to determine the current draw for each candela setting.

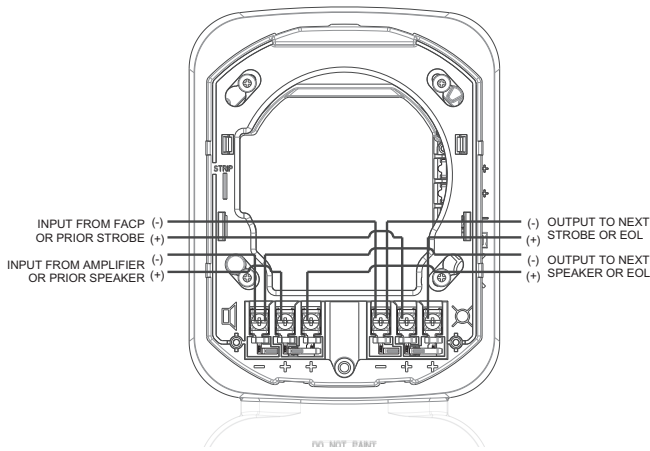
**NOTE:** L-Series products set at 15 and 30 candela work on either 12V or 24V power supplies. The products are not listed for 12V operating voltages when set to any other candela settings.

**FIGURE 1. WIRING SEP-SPWL(-P): CONNECTING THE UNIVERSAL EXPANDER PLATE'S LOWER STROBE**



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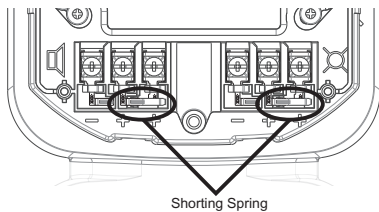
**FIGURE 2. WIRING SEP-SPWL(-P): ATTACHING A SPEAKER STROBE AS THE UPPER DEVICE**



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NOTE: Loop resistance on a single NAC should not exceed 120 ohms for 24 volt and 30 ohms for 12 volt systems.

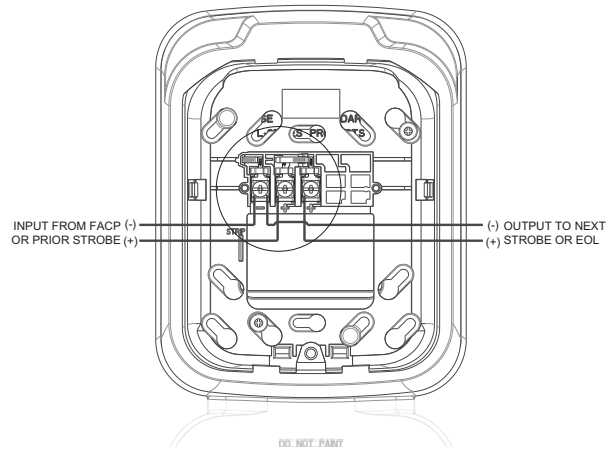
**FIGURE 3. SHORTING SPRING ON SPEAKER STROBE MOUNTING PLATE, STANDARD CANDELA, WHITE**



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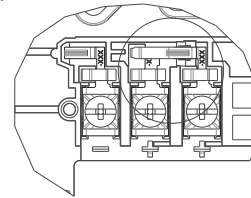
NOTE: Shorting springs are provided between terminals 2 and 3 and terminals 5 and 6 of the mounting plate to enable wiring checks after the system has been wired, but prior to installation of the final product. These springs will automatically disengage when the product is installed, to enable supervision of the final system.

**FIGURE 4. WIRING SEP-SPWL(-P): ATTACHING A HORN STROBE AS THE UPPER DEVICE**



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**FIGURE 5. SHORTING SPRING ON HORN STROBE MOUNTING PLATE, STANDARD CANDELA, WHITE**



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NOTE: A shorting spring is provided between terminals 2 and 3 of the mounting plate to enable wiring checks after the system has been wired, but prior to installation of the final product. This spring will automatically disengage when the product is installed, to enable supervision of the final system.

**TABLE 1. STROBE CURRENT DRAW (mA) FOR SEP-SPWL (-P), SEP-SPSWL (-P)**

Candela Switch Setting	8-17.5 Volts		16-33 Volts	
	DC	DC	DC	FWR
15	88	43	60	
30	143	63	83	
75	-	107	136	
95	-	121	155	
110	-	148	179	
135	-	172	209	
185	-	222	257	

NOTE: Products set at 15 and 30 candela automatically work on either 12V or 24V power supplies. The products are not listed for 12V DC operation when set to any other candela settings.

**TABLE 2: CANDELA DERATING FOR SEP-SPWL AND SEP-SPSWL AMBER LENS STROBE**

Cd Switch Setting	Private Mode	Emergency Warning
15	15	12
30	30	24
75	75	60
95	95	75
110	110	85
135	135	105
185	185	145

IMPORTANT: For more information on current draw, light output and sound output data, reference Speaker Strobe installation manuals I56-0002 and I56-0003 and Strobe only installation manual I56-5845 and I56-5847.

## MOUNTING THE UNIVERSAL EXPANDER PLATE AND SECOND DEVICE

**Junction Box Compatibility:** The expander plate and back box skirt are compatible with a 4" x 4" x 2<sup>1</sup>/<sub>8</sub>" junction box.

- 1a. **For flush mount applications:** Attach the expander plate to a 4" x 4" x 2<sup>1</sup>/<sub>8</sub>" junction box using the two screws provided with the expander plate.
  - Speaker Strobe as upper device: Figure 6.
  - Strobe as upper device: Figure 8.
- 1b. **For surface-mount applications with a back box skirt:** Snap the expander plate onto the skirt, and then attach the entire assembly to a 4" x 4" x 2<sup>1</sup>/<sub>8</sub>" junction box using the two screws provided with the expander plate.
  - Speaker Strobe as upper device: Figure 7.
  - Strobe as upper device: Figure 9.
2. Connect the lower strobe's field wiring to the expander plate terminals. (See Figure 1.)
3. Attach the device mounting plate with the four screws provided with the expander plate.
4. Connect the upper device's field wiring to the device mounting plate terminals. (See Figure 4.)
5. Attach upper device:
  - a. Hook tabs at the top of the product housing into the grooves on device mounting plate.
  - b. Swing the device down into position to engage the terminals on the device with the terminals on the device mounting plate.
  - c. Make sure that the tabs on the back of the product housing fully engage with the device mounting plate.
  - d. Secure the device by tightening the single mounting screw in the front of the device housing. For tamper resistance, the standard captive mounting screw may be replaced with the enclosed Torx screw. (See installation manual for upper device.)

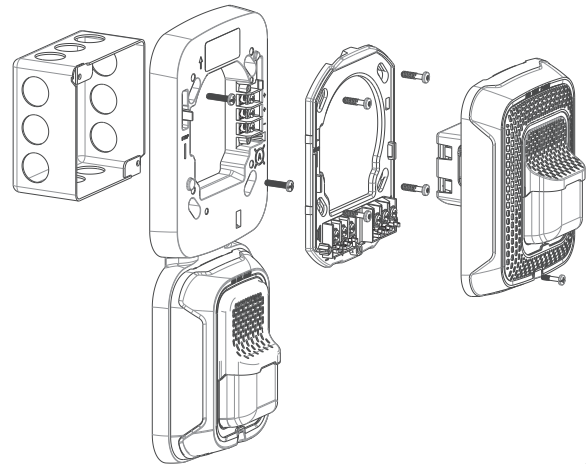
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### **CAUTION**

Do not over tighten mounting plate screws; this may cause mounting plate to flex.

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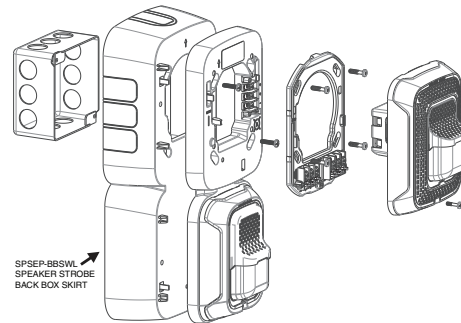
## FIGURE 6. UNIVERSAL EXPANDER PLATE WITH SPEAKER STROBE FOR FLUSH MOUNT APPLICATIONS



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Note: SEP-SPSWL expander plate shown.

## FIGURE 7. UNIVERSAL EXPANDER PLATE WITH SPEAKER STROBE SURFACE MOUNT APPLICATIONS



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Note: SEP-SPSWL expander plate shown.

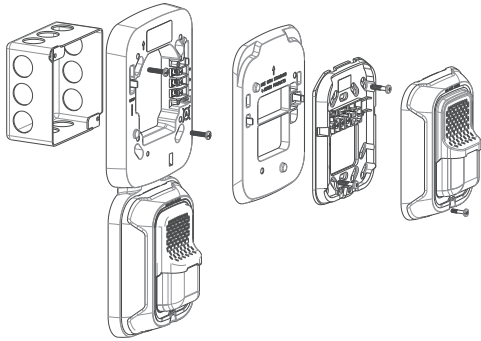
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### **CAUTION**

Only mount on a wall and in the orientation shown.

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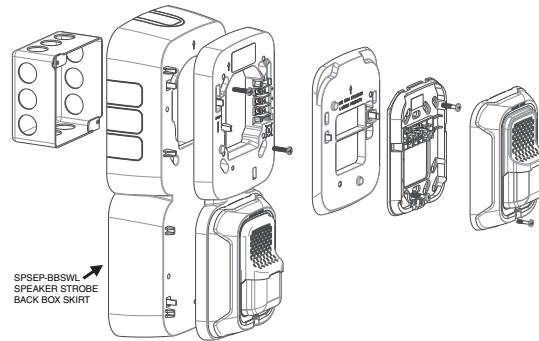
**FIGURE 8. UNIVERSAL EXPANDER PLATE WITH HORN STROBE FOR FLUSH MOUNT APPLICATIONS**



Note: SEP-SPWL expander plate shown.

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**FIGURE 9. UNIVERSAL EXPANDER PLATE WITH HORN STROBE FOR SURFACE MOUNT APPLICATIONS**



Note: SEP-SPWL expander plate shown.

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**CAUTION**

Only mount on a wall and in the orientation shown.

**Please refer to insert for the Limitations of Fire Alarm Systems**

**WARNING**

**THE LIMITATIONS OF STROBE AND SPEAKER STROBE EXPANDER PLATE**

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

**The horn may not be heard.** The loudness of the horn meets (or exceeds) current Underwriters Laboratories' standards. However, the horn may not alert a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages. The horn may not be heard if it is placed 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 horn may not be heard by persons who are hearing impaired.

**NOTE:** Strobes must be powered continuously for horn operation.

**The signal strobe may not be seen.** The electronic visual warning signal uses an extremely reliable xenon flash tube. It flashes at least once every second. The strobe must not be installed in direct sunlight or areas of high light intensity (over 60 foot candles) 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 positive photoic response to visual stimuli with seizures, such as persons with epilepsy, should avoid prolonged exposure to environments in which strobe signals, including this strobe, are activated.

**The signal strobe cannot operate from coded power supplies.** Coded power supplies produce interrupted power. The strobe must have an uninterrupted source of power in order to operate correctly. System Sensor recommends that the horn and signal strobe always be used in combination so that the risks from any of the above limitations are minimized.

**THREE-YEAR LIMITED WARRANTY**

System Sensor warrants its enclosed product 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 product. 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 replacement of any part of the product 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: Honeywell, 12220 Rojas Drive, Suite 700, El Paso TX 79936, USA for US returns and 6581 Kitimat Road, Unit 6 Mississauga, ON L5N 3T5 for

Canadian returns. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to 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.

**FCC STATEMENT**

L-series Strobes and Horn/Strobes have been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the

instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which the user will be required to correct the interference at his own expense. This Class B digital apparatus complies with Canadian ICES-003.