SpectrAlert®
SP2, SP3 Series: SP2_1224MC, SP3_1224MC
Selectable Output Wall Speaker/Strobes

General
System Sensor® SpectrAlert® Selectable Output Speaker/Strobes offer enhanced features that include the widest range of candela options available and the capability to recognize and self-adjust for either 12 or 24 volt operation, along with the fidelity sound quality expected from SpectrAlert speaker technology.

Performance. SpectrAlert Selectable Output Speaker/Strobes offer average current draws that are not only lower than conventional fixed-candela SpectrAlert products, but also lower than similar selectable candela products. In addition, the broad frequency response range and low harmonic distortion provided by SpectrAlert speaker technology provides an accurate and intelligible broadcast of evacuation messages.

Installation. SpectrAlert Selectable Output Speaker/Strobes offer a variety of installation-friendly features, such as the ability to mount to a 4.0" x 4.0" x 2.125" (10.16 x 10.16 x 5.398 cm) backbox without the need for an extension ring. Also, with the field-reversible strobe, the speaker/strobe may be either left- or right-mounted to avoid potential obstructions.

Flexibility. SpectrAlert Selectable Output Speaker/Strobes offer the broadest range of candela options. In addition, the 15 cd and 15/75 cd options can operate on either 12V or 24V, with no setting required; the device recognizes the applied voltage and self-adjusts to the correct setting automatically. The speaker voltage, either 25.0 or 70.7, and power tap settings, 1/4, 1/2, 1, or 2 watt, are field-selectable.

Aesthetics. SpectrAlert Selectable Output Speaker/Strobes incorporate the same stylish, low-profile design as the conventional SpectrAlert products, for a consistent and aesthetically pleasing appearance across the entire product line.

Features
• Fidelity sound quality (SP2).
• Enhanced SPL (SP3).
• Operates on either 12 V or 24 V.
• Widest range of candela options:
  • 12 V: 15 and 15/75 candela options.
  • 24 V: 15, 15/75, 30, 75, and 110 candela options.
• Easy candela selection.
• 25.0 and 70.7 volt speaker with four field-selectable power taps.
• Field-reversible strobe for left- or right-mounting.
• Synchronizable with MDL Sync•Circuit™ Module.
• Optional surface-mount backbox skirt available.

Engineering Specifications
Speaker/Strobe shall be a System Sensor Model ________ listed to UL 1480 and UL 1971 and be approved for fire protective signaling systems. Speaker shall be capable of operating at 25.0 or 70.7 nominal VRMS, and shall have a frequency range of 400 – 4000 Hz. Speaker shall have power taps that are selected by shunts. The strobe shall consist of a xenon flash tube with associated lens/reflector system and operate on either 12 V or 24 V. The strobe shall also feature selectable candela output, providing options for 15 or 15/75 candela when operating on 12 V, and 15, 15/75, 30, 75, or 110 when operating on 24 V. The strobe shall comply with the Americans with Disabilities Act requirement for visible signaling appliances, flashing at 1 Hz over the strobe’s entire operating voltage range.

Operating Specifications
Dimensions: 4.875" x 8.25" x 2.25" (12.383 x 20.955 x 5.715 cm).
Mounting: 4.0" x 4.0" x 2.125" (10.16 x 10.16 x 5.398 cm) back-box.
Indoor operating temperature: 32°F to 120°F (0°C to 49°C).

STROBE
Strobe operating voltage: 12 or 24 VDC and FWR unfiltered.
Operating voltage range: 12 V: 8 – 17.5 V; 24 V: 16 – 33 V.
Operating voltage range with Sync•Circuit module: 12 V: 9 – 17.5 V; 24 V: 17 – 33 V.

Explanation of published strobe specifications (see also current draws in Ordering Information below): In May 2004, Underwriters Laboratories changed standard UL 1971 to require that operating current measurements are made using RMS (root mean square) instead of peak or average values. RMS measurements more accurately predict the power consumption of a device since they take into account the entire current draw profile including surge, repetitive surge, and peak values. The published RMS current is the maximum operating current of that device within its operating voltage range. This current maximum may or may not occur at the endpoints of the voltage range.

In May 2004, UL also changed the way they list the voltage range of a device. All 12 V products will be listed between 8 – 17.5 V and all 24 V products will be listed between 16 – 33 V. These devices are considered “regulated.” Any product that does not operate within these ranges will be listed as a “special application” with its operating voltage specified on the device.
**SPEAKER**

Input voltage: 25.0 or 70.7 Vrms (nominal).

Input terminals: 12 to 18 AWG (3.31 to 0.821 mm²).

Frequency range: 400 – 4000 Hz. **NOTE:** The SP2 and SP3 Series are UL listed from 400 to 4000 Hz. The SP2 Series will provide a flat (±10 dB) output from 100 to 15,000 Hz. The SP3 Series will provide a flat (±10 dB) output from 500 to 13,000 Hz.

Power taps: 1/4, 1/2, 1, and 2 watts.

U.S. Patent numbers: 6,049,446, 6,127,935.

Sound output:

| UL Reverberant (dBA @ 10 ft./3.048 m) |
|-----------------|---|---|---|---|
|                | 2 W | 1 W | 1/2 W | 1/4 W |
| SP2            | 84  | 81  | 78    | 75    |
| SP3            | 89  | 87  | 84    | 81    |

**Reversible Strobe Feature**

Removing the strobe screw and lifting the strobe assembly out of the rib slot allows the strobe to be rotated 180° and remounted to the base, resulting in a left-mounted strobe configuration.

**Agency Listings and Approvals**

The listings and approvals below apply to SpectrAlert Selectable Output Wall Speaker/Strobes. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL Listed: file S4048.
- ULC Listed: file CS549 (SP2_1224MC[A]).
- CSFM approved: file 7320-1653.133.
- MEA approved:
  - 127-02-E (SP2_1224MC[A])
  - 461-05-E (SP3_1224MC).

**UL Reverberant (dBA @ 10 ft./3.048 m)**

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<td>SP2</td>
<td>84</td>
<td>81</td>
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<td>SP3</td>
<td>89</td>
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**Ordering Information and Current Draw**

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<tr>
<th>Description</th>
<th>Red Models</th>
<th>White Models</th>
<th>Candela Setting</th>
<th>UL Maximum FWR Operating Current, STROBE (mA RMS)</th>
<th>UL Maximum DC Operating Current, STROBE (mA RMS)</th>
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<tbody>
<tr>
<td>Wall Speaker/Strobes:</td>
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<td>8 – 17.5 V</td>
<td>16 – 33 V</td>
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<td>Standard SPL (SP2)</td>
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<td>SP2W1224MC</td>
<td>15/75</td>
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<td>High SPL (SP3)</td>
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<td>SP3W1224MC</td>
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<td>Surface-Mount Backbox Skirt</td>
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