Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 07/29/13

# Selectable Output Horns, Strobes, and Horn/Strobes

*SpectrAlert® Advance selectable-output horns, strobes, and horn/strobes are rich with features guaranteed to cut installation times and maximize profits.*

## Features

- Electrically compatible with existing SpectrAlert products
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Plug-in design
- Field selectable candela settings on wall and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185
- Same mounting plate for wall- and ceiling-mount units
- Shorting spring on mounting plate for continuity check before installation
- Tamper resistant construction
- Outdoor wall and ceiling products rated from –40°F to 151°F
- Design allows minimal intrusion into the back box
- Horn rated at 88+ dbA at 16 volts
- Rotary switch for horn tone and three volume selections
- Outdoor products UL listed to UL 1638 (strobe) and UL 464 (horn) outdoor requirements
- Outdoor products NEMA 4X rated
- Compatible with MDL sync module

## Agency Listings

SIGNALING UL LISTED
S4011
S5512
S3593

FM APPROVED
3023572

MEA approved
MEA452-05-E

7125-1653:186 (indoor strobes)
7300-1653:187 (outdoor strobes)
7125-1653:188 (horn/strobes, chime/strobes)
7135-1653:189 (horns, chimes)

**The SpectrAlert Advance series** of notification appliances is designed to simplify installations, with features such as plug in designs, instant feedback messages to ensure correct installation of individual devices, and 11 field-selectable candela settings for wall and ceiling strobes and horn/strobes.

When installing Advance products, first attach a universal mounting plate to a four-inch square, four-inch octagon or double-gang junction box. The two-wire mounting plate attaches to a single-gang junction box.

Next, connect the notification appliance circuit wiring to the SEMS terminals on the mounting plate.

Finally, attach the horn, strobe or horn/strobe to the mounting plate by inserting the product's tabs in the mounting plate's grooves. The device will rotate into position, locking the product's pins into the mounting plate's terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

The SpectrAlert Advance series includes outdoor notification appliances. Outdoor strobes and horn/strobes (two wire and four wire) are available for wall or ceiling. Outdoor horns are available for wall only. All System Sensor outdoor products are rated between minus 40 degrees Fahrenheit and 151 degrees Fahrenheit in wet or dry applications.

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# SpectrAlert Advance Specifications

## Architect/Engineer Specifications

### General

SpectrAlert Advance horns, strobes and horn/strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box box. Two-wire products shall also mount to a single-gang 2 × 4 × 1⅞-inch back box. A universal mounting plate shall be used for m products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance produc Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nor used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between nine and 17.5 volts; 24 appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC, or full-wave rectified, unfiltered power supply. Strobes and horn/strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.

### Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

### Horn/Strobe Combination

The horn/strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn/strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three-pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn/strobe models shall operate on a coded or non-coded power supply.

### Outdoor Products

SpectrAlert Advance outdoor horns, strobes and horn/strobes shall be listed for outdoor use by UL and shall operate between minus 40 degrees and 151 degrees Fahrenheit. The products shall be listed for use with a System Sensor outdoor/weatherproof back box with half inch and three-fourths inch conduit entries.

### Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn/strobe models over a single pair of wires. The module shall mount to a 4 11/16 × 4 11/16 × 2⅛-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

## Physical/Electrical Specifications

| | |
|---|---|
| **Standard Operating Temperature** | 32°F to 120°F (0°C to 49°C) |
| **K Series Operating Temperature** | –40°F to 151°F (–40°C to 66°C) |
| **Humidity Range** | 10 to 93% non-condensing (indoor products) |
| **Strobe Flash Rate** | 1 flash per second |
| **Nominal Voltage** | Regulated 12DC/FWR or regulated 24DC/FWR[1] |
| **Operating Voltage Range[2]** | 8 to 17.5 V (12V nominal) or 16 to 33 V (24 nominal) |
| **Input terminal wire gauge** | 12 to 18 AWG |
| **Ceiling mount dimensions (including lens)** | 6.8″ diameter × 2.5″ high (173 mm diameter × 64 mm high) |
| **Wall mount dimensions (including lens)** | 5.6″L × 4.7″W × 2.5″D (142 mm L × 119 mm W × 64 mm D) |
| **Horn dimensions** | 5.6″L × 4.7″W × 1.3″D (142 mm L × 119 mm W × 33 mm D) |
| **Wall-mount back box skirt dimensions (BBS-2, BBSW-2)** | 5.9″L × 5.0″W × 2.2″D (151 mm L × 128 mm W × 56 mm D) |
| **Ceiling-mount back box skirt dimensions (BBSC-2, BBSCW-2)** | 7.1″ diameter × 2.25″ high (180 mm diameter × 57 mm high) |
| **Wall-mount weatherproof back box dimensions (SA-WBB)** | 5.7″L × 5.1″W × 2.0″D (145 mm L × 130 mm W × 51 mm D) |
| **Ceiling-mount weatherproof back box dimensions (SA-WBBC)** | 7.1″ diameter × 2.0″ high (180 mm diameter × 51 mm high) |
| **Wall-mount trim ring dimensions (TR-HS, TRW-HS)** | 5.7″L × 4.812″W × 0.35″D (146 mm L × 122 W mm × 9 D mm) |
| **Ceiling-mount trim ring dimensions (TRC-HS, TRCW-HS)** | 6.9″ diameter × 0.35 high (176 mm diameter × 9 mm high) |

**Notes:**

1. Full Wave Rectified (FWR) voltage is a non-regulated, time varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

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## UL Current Draw Data

**UL Max. Strobe Current Draw (mA RMS)**

| | | 8–17.5 Volts | | 16–33 Volts | |
|---|---|---|---|---|---|
| | Candela | DC | FWR | DC | FWR |
| Standard Candela Range | 15* | 123 | 128 | 66 | 71 |
| | 15/75* | 142 | 148 | 77 | 81 |
| | 30* | NA | NA | 94 | 96 |
| | 75* | NA | NA | 158 | 153 |
| | 95* | NA | NA | 181 | 176 |
| | 110 | NA | NA | 202 | 195 |
| | 115 | NA | NA | 210 | 205 |
| High Candela Range | 135 | NA | NA | 228 | 207 |
| | 150 | NA | NA | 246 | 220 |
| | 177 | NA | NA | 281 | 251 |
| | 185 | NA | NA | 286 | 258 |

**UL Max. Horn Current Draw (mA RMS)**

| | | 8–17.5 Volt | | | |
|---|---|---|---|---|---|
| Sound Pattern | dB | DC | F | | |
| Temporal | High | 57 | 5 | | |
| Temporal | Medium | 44 | 4 | | |
| Temporal | Low | 38 | 4 | | |
| Non-temporal | High | 57 | 56 | 69 | 75 |
| Non-temporal | Medium | 42 | 50 | 60 | 69 |
| Non-temporal | Low | 41 | 44 | 50 | 50 |
| Coded | High | 57 | 55 | 69 | 75 |
| Coded | Medium | 44 | 51 | 56 | 69 |
| Coded | Low | 40 | 46 | 52 | 50 |

**UL Max. Current Draw (mA RMS), 2-wire Horn/Strobe, Standard Candela Range (15–115 cd)**

| | 8–17.5 Volts | | 16–33 Volts | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DC Input | 15 | 15/75 | 15 | 15/75 | 30 | 75 | 95 | 110 | 115 |
| Temporal High | 137 | 147 | 79 | 90 | 107 | 176 | 194 | 212 | 218 |
| Temporal Medium | 132 | 144 | 69 | 80 | 97 | 157 | 182 | 201 | 210 |
| Temporal Low | 132 | 143 | 66 | 77 | 93 | 154 | 179 | 198 | 207 |
| Non-temporal High | 141 | 152 | 91 | 100 | 116 | 176 | 201 | 221 | 229 |
| Non-temporal Medium | 133 | 145 | 75 | 85 | 102 | 163 | 187 | 207 | 216 |
| Non-temporal Low | 131 | 144 | 68 | 79 | 96 | 156 | 182 | 201 | 210 |
| **FWR Input** | | | | | | | | | |
| Temporal High | 136 | 155 | 88 | 97 | 112 | 168 | 190 | 210 | 218 |
| Temporal Medium | 129 | 152 | 78 | 88 | 103 | 160 | 184 | 202 | 206 |
| Temporal Low | 129 | 151 | 76 | 86 | 101 | 160 | 184 | 194 | 201 |
| Non-temporal High | 142 | 161 | 103 | 112 | 126 | 181 | 203 | 221 | 229 |
| Non-temporal Medium | 134 | 155 | 85 | 95 | 110 | 166 | 189 | 208 | 216 |
| Non-temporal Low | 132 | 154 | 80 | 90 | 105 | 161 | 184 | 202 | 211 |

**UL Max. Current Draw (mA RMS), 2-wire Horn/Strobe, High Candela Range (135–185 cd)**

| | 16–33 Volts | | | | | 16–33 Volts | | | |
|---|---|---|---|---|---|---|---|---|---|
| DC Input | 135 | 150 | 177 | 185 | FWR Input | 135 | 150 | 177 | 185 |
| Temporal High | 245 | 259 | 290 | 297 | Temporal High | 215 | 231 | 258 | 265 |
| Temporal Medium | 235 | 253 | 288 | 297 | Temporal Medium | 209 | 224 | 250 | 258 |
| Temporal Low | 232 | 251 | 282 | 292 | Temporal Low | 207 | 221 | 248 | 256 |
| Non-temporal High | 255 | 270 | 303 | 309 | Non-temporal High | 233 | 248 | 275 | 281 |
| Non-temporal Medium | 242 | 259 | 293 | 299 | Non-temporal Medium | 219 | 232 | 262 | 267 |
| Non-temporal Low | 238 | 254 | 291 | 295 | Non-temporal Low | 214 | 229 | 256 | 262 |

## Candela Derating

For K series products used at low temperatures, listed candela ratings must be reduced in accordance with this table.

**Strobe Output (cd)**

| Listed Candela | Candela rating at –40°F |
|---|---|
| 15 | Do not use below 32°F |
| 15/75 | |
| 30 | |
| 75 | 44 |
| 95 | 70 |
| 110 | 110 |
| 115 | 115 |
| 135 | 135 |
| 150 | 150 |
| 177 | 177 |
| 185 | 185 |

## Horn Tones and Sound Output Data

**Horn and Horn/Strobe Output (dBA)**

| | | | 8–17.5 Volts | | 16–33 Volts | | 24 Volt Nominal | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Reverberant | | Anechoic | |
| Switch Position | Sound Pattern | dB | DC | FWR | DC | FWR | DC | FWR | DC | FWR |
| 1 | Temporal | High | 78 | 78 | 84 | 84 | 88 | 88 | 99 | 98 |
| 2 | Temporal | Medium | 74 | 74 | 80 | 80 | 86 | 86 | 96 | 96 |
| 3 | Temporal | Low | 71 | 73 | 76 | 76 | 83 | 80 | 94 | 89 |
| 4 | Non-temporal | High | 82 | 82 | 88 | 88 | 93 | 92 | 100 | 100 |
| 5 | Non-temporal | Medium | 78 | 78 | 85 | 85 | 90 | 90 | 98 | 98 |
| 6 | Non-temporal | Low | 75 | 75 | 81 | 81 | 88 | 84 | 96 | 92 |
| 7† | Coded | High | 82 | 82 | 88 | 88 | 93 | 92 | 101 | 101 |
| 8† | Coded | Medium | 78 | 78 | 85 | 85 | 90 | 90 | 97 | 98 |
| 9† | Coded | Low | 75 | 75 | 81 | 81 | 88 | 85 | 96 | 92 |

†Settings 7, 8, and 9 are not available on 2-wire horn/strobe.

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## SpectrAlert Advance Dimensions

Wall-mount horn/strobes

Ceiling-mount horn/strobes

Wall back box skirt

Ceiling back box skirt

Wall weatherproof back box

Ceiling weatherproof back box

## SpectrAlert Advance Ordering Information

| Model | Description |
|---|---|
| **Wall Horn/Strobes** | |
| P2R*† | 2-wire Horn/Strobe, Standard cd‡, Red |
| P2RH* | 2-wire Horn/Strobe, High cd, Red |
| P2RK*¤ | 2-wire Horn/Strobe, Standard cd, Red, Outdoor |
| P2RHK¤ | 2-wire Horn/Strobe, High cd, Red, Outdoor |
| P2W* | 2-wire Horn/Strobe, Standard cd, White |
| P2WH* | 2-wire Horn/Strobe, High cd, White |
| P4R* | 4-wire Horn/Strobe, Standard cd, Red |
| P4RH* | 4-wire Horn/Strobe, High cd, Red |
| P4RK¤ | 4-wire Horn/Strobe, Standard cd, Red, Outdoor |
| P4RHK¤ | 4-wire Horn/Strobe, High cd, Red, Outdoor |
| P4W* | 4-wire Horn/Strobe, Standard cd, White |
| P4WH* | 4-wire Horn/Strobe, High cd, White |
| **Wall Strobes** | |
| SR*† | Strobe, Standard cd, Red |
| SRH*† | Strobe, High cd, Red |
| SRK¤ | Strobe, Standard cd, Red, Outdoor |
| SRHK | Strobe, High cd, Red, Outdoor |
| SW* | Strobe, Standard cd, White |
| SWH* | Strobe, High cd, White |
| **Ceiling Horn/Strobes** | |
| PC2R* | 2-wire Horn/Strobe, Standard cd, Red |
| PC2RH* | 2-wire Horn/Strobe, High cd, Red |
| PC2RK¤ | 2-wire Horn/Strobe, Standard cd, Red, Outdoor |
| PC2RHK¤ | 2-wire Horn/Strobe, High cd, Red, Outdoor |
| PC2W*† | 2-wire Horn/Strobe, Standard cd, White |
| PC2WH*† | 2-wire Horn/Strobe, High cd, White |
| PC4R | 4-wire Horn/Strobe, Standard cd, Red |
| PC4RH | 4-wire Horn/Strobe, High cd, Red |
| PC4RK | 4-wire Horn/Strobe, Standard cd, Red, Outdoor |
| PC4RHK¤ | 4-wire Horn/Strobe, High cd, Red, Outdoor |

| Model | Description |
|---|---|
| **Ceiling Horn/Strobes (cont'd.)** | |
| PC4W | 4-wire Horn/Strobe, Standard cd, White |
| PC4WH | 4-wire Horn/Strobe, High cd, White |
| **Ceiling Strobes** | |
| SCR* | Strobe, Standard cd, Red |
| SCRH* | Strobe, High cd, Red |
| SCRK¤ | Strobe, Standard cd, Red, Outdoor |
| SCRHK¤ | Strobe, High cd, Red, Outdoor |
| SCW*† | Strobe, Standard cd, White |
| SCWH*† | Strobe, High cd, White |
| **Horns** | |
| HR | Horn, Red |
| HRK¤ | Horn, Red, Outdoor |
| HW | Horn, White |
| **Accessories** | |
| BBS-2 | Back Box Skirt, Wall, Red |
| BBSW-2 | Back Box Skirt, Wall, White |
| BBSC-2 | Back Box Skirt, Ceiling, Red |
| BBSCW-2 | Back Box Skirt, Ceiling, White |
| TR-HS | Trim Ring, Wall, Red |
| TRW-HS | Trim Ring, Wall White |
| TRC-HS | Trim Ring, Ceiling, Red |
| TRCW-HS | Trim Ring, Ceiling, White |

**Notes:**

* Add "-P" to model number for plain housing (no "FIRE" marking on cover), e.g., P2R-P.

† Add "-SP" to model number for "FUEGO" marking on cover, e.g., P2R-SP.

‡ "Standard cd," refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd," refers to strobes that include 135, 150, 177, and 185 candela settings.

All outdoor units ending in "K" include a weatherproof back box.

¤ Add "-R" to model number for weatherproof replacement device (no back box included).


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