

SPECTRAlert®

Selectable Output Strobe and Horn/Strobes



Models Available

Strobes

Red	White
S1224MC	S1224MCW
S1224MCP	S1224MCPW
S1224MCK	
S1224MCSP	

Horn/Strobes

Red	White
P1224MC	P1224MCW
P1224MCP	P1224MCPW
P1224MCK	
P1224MCSP	

Horns

Red	White
H12/24	H12/24W
H12/24K	



Product Overview

Operates on either 12V or 24V

Widest range of candela options:
12V: 15 and 15/75 candela
24V: 15, 15/75, 30, 75, 110 candela

Easy candela selection

Lower current draw

Easy DIP switch selection for horn options

Easy mounting with QuickClick™

Synchronizable with MDL Sync•Circuit™ module

Meets UL1971, NFPA72, and ADA signaling requirements

All strobe and horn/strobe models incorporate a new patented voltage booster design that has a more consistent flash bulb voltage over the range of candela selections. The benefit to the customer is a high quality strobe device.

SpectrAlert® Selectable Output Horns, Strobes, and Horn/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. With an overall feature set that combines performance, installation ease, flexibility, and a consistent, aesthetically pleasing appearance, the SpectrAlert Selectable Output devices provide both the innovation and efficiency synonymous with the SpectrAlert name.

Performance. SpectrAlert selectable output wall-mount horns, strobes, and horn/strobes offer key performance features long associated with the SpectrAlert name. The selectable candela strobes and horn/strobes offer average current draws that are not only lower than conventional fixed-candela SpectrAlert products, but also lower than similar selectable candela products. By consuming less current, the ability to connect even more devices per loop is possible, resulting in a lower installed cost.

Installation. SpectrAlert selectable output horns, strobes, and horn/strobes offer the same installation-friendly features synonymous with the SpectrAlert name, such as the option of 2- and 4-wire operation; the ability to use standard size backboxes with no encroachment into the box; and universal mounting incorporating the labor-saving QuickClick™ feature. Such labor-savings features make wire connections simple and fast, further reducing installed cost.

Flexibility. SpectrAlert selectable output strobes and horn/strobes offer the broadest range of candela options. In addition, the selectable output strobes and horn/strobes can operate on either 12V or 24V, with no setting required; the device recognizes and self-adjusts to the correct current automatically. Temporal 3 or Continuous tone options continue to be available, in either an Electromechanical or 3kHz pattern.

Aesthetics. SpectrAlert selectable output horns, strobes, and horn/strobes incorporate the same stylish, low profile design of the conventional SpectrAlert products, for a consistent and aesthetically pleasing appearance across the entire product line.



Engineering Specifications

General

SpectrAlert horns, strobes and horn/strobes shall be capable of mounting to a standard 4" x 4" x 1 1/2" back box or a single gang 2" x 4" x 1 7/8" back box using the universal mounting plate included with each SpectrAlert product. Also, SpectrAlert products, when used in conjunction with the accessory Sync•Circuit Module, shall be powered from a non-coded power supply and shall operate on 12 or 24 volts. 12 volt rated devices shall have an operating voltage range of 9–17.5 volts. 24-volt rated devices shall have an operating voltage range or 17–33 volts. SpectrAlert products shall have an operating temperature of 32° to 120°F and operate from a regulated DC or full wave rectified, unfiltered power supply.

Strobe

Strobe shall be a System Sensor SpectrAlert Model _____ listed to UL 1971 and 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

Horn/Strobe shall be a System Sensor SpectrAlert Model _____ listed to UL 1971 and UL 464 and shall be approved for

fire protective service. 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 two tone options, two audibility options (at 24 volts) and the option to switch between a temporal 3 pattern and a non-temporal continuous pattern. Strobes shall be powered independently of the sounder with the removal of factory installed jumper wires. The horn on horn/strobe models shall operate on a coded or non-coded power supply (the strobe must be powered continuously).

Synchronization Module

Module shall be a System Sensor Sync•Circuit _____ listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1Hz and horns at temporal 3. Also, the module shall silence the horns on horn/strobe models, while operating the strobes, over a single pair of wires. The module shall be capable of mounting to a 4 11/16" x 4 11/16" x 2 1/8" back box and shall control two Style Y (class B) or one Style Z (class A) circuit. Module shall be capable of multiple zone synchronization by daisy chaining multiple modules together and re-synchronizing each other along the chain. The module shall not operate on a coded power supply.

Specifications

Walk Test

SpectrAlert horn/strobe and horn only work on "walk tests" with time durations of 4 seconds or greater

Input Terminals

12 to 18 AWG

Dimensions

Strobe and horn/strobe with universal plate

5" x 5 5/8" x 2 15/16"

Strobe and horn/strobe with small footprint plate

3 3/8" x 5 5/8" x 2 5/16"

Horn with universal mounting plate

5" x 5 5/8" x 1 5/16"

Horn without mounting plate

2 15/16" x 5 5/16" x 1 5/16"

Weight, horn only

7.2 oz.

Weight, strobe and horn/strobe

8.8 oz.

Mounting

4" x 4" x 1 1/2" or 2" x 4" x 1 7/8" standard boxes

Operating Temperature (Indoor)

32°F to 120°F (0°C to 49°C)

Maximum humidity (Indoor)

95% as tested per UL464

Outdoor (K Series) Operating Temperature

-40°F to 151°F
(-40°C to 66°C)

Outdoor rating

NEMA 3R (per UL 50)

Voltages

12 or 24VDC and FWR¹ unfiltered

Operating voltage range

12V: 8–17.5V; 24V: 16–33V

Operating voltage range (with Sync•Circuit module, MDL)²

12V: 9–17.5V; 24V: 17–33V

U.S. Patent Numbers

5,593,569

5,914,665

6,049,446

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. The MDL causes a one-volt voltage drop in the notification appliance circuit.

Table 1-A: SpectrAlert Strobe UL Max. Current Draw

Candela Setting	FWR Operating Current–Strobe (mA RMS)		DC Operating Current–Strobe (mA RMS)	
	8-17.5V	16-33V	8-17.5V	16-33V
15	112	64	127	59
15/75	135	74	127	69
30		93		90
75		158		160
110		208		209

Table 1-B: Horn UL Max. Current Draw Measurements (mA RMS)

Selectable Horn Tones			DC		FWR	
			8-17.5V	16-33V	8-17.5V	16-33V
Temporal	Low Volume	Electromechanical	15	23	13	23
		3000 Hz Interrupted	15	33	13	23
	High Volume	Electromechanical	36	53	20	44
		3000 Hz Interrupted	43	57	21	40
Non-Temporal	Low Volume	Electromechanical	16	37	19	29
		3000 Hz Interrupted	16	32	18	33
	High Volume	Electromechanical	38	49	46	49
		3000 Hz Interrupted	44	56	42	58

Table 1-C: 12VDC Horn/Strobe UL Max. Current Draw Measurements (mA RMS)

Candela Setting	Temporal			
	Low Volume		High Volume	
	Electromechanical	3000 Hz	Electromechanical	3000 Hz
15	111	111	112	112
15/75	127	127	126	129
Non-Temporal				
15	113	112	114	115
15/75	128	128	130	134

Table 1-D: 24VDC Horn/Strobe UL Max. Current Draw Measurements (mA RMS)

Candela Setting	Temporal			
	Low Volume		High Volume	
	Electromechanical	3000 Hz	Electromechanical	3000 Hz
15	71	70	73	75
15/75	86	85	87	88
30	99	98	100	100
75	166	166	167	170
110	209	209	210	213
Non-Temporal				
15	74	74	79	82
15/75	86	88	93	96
30	101	101	107	110
75	167	167	173	176
110	213	213	218	222

Explanation of Published Voltage, Current, and SPL Specifications

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.

Similarly, UL tests the audibility of devices in accordance with UL 464 by measuring them across the operating voltage range to determine the minimum sound pressure level produced at any particular setting.

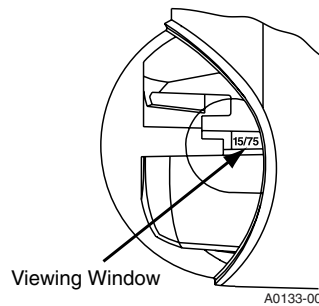
During May 2004, UL also changed the way they list the voltage range of a device. All 12V products will be listed between 8 – 17.5V and all 24V products will be listed between 16 – 33V. Those devices are considered “regulated”. Any product that does not operate within these ranges will be listed as a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

Notes

1. Current draw for strobe-only products is shown in Table 1-A.
2. Current draw for horn-only products is shown in Table 1-B.
3. 12VDC 2-wire horn/strobe current is shown in Table 1-C.
4. 24VDC 2-wire horn/strobe current draw is shown in Table 1-D.
5. Current draw for other horn/strobe power supplies can be calculated by adding the strobe current in Table 1-A to the horn current in Table 1-B from the chosen settings.

SpectrAlert Strobe Candela Selections

For strobe candela selection, adjust slide switch located on the rear of the product while watching the viewing window on the side of the reflector.

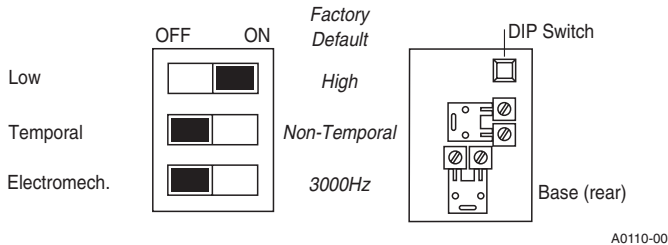


Candela Setting	Permissible Candela Settings	
	Operating Voltage 12V	Operating Voltage 24V
15	OK	OK
15/75	OK	OK
30		OK
75		OK
110		OK

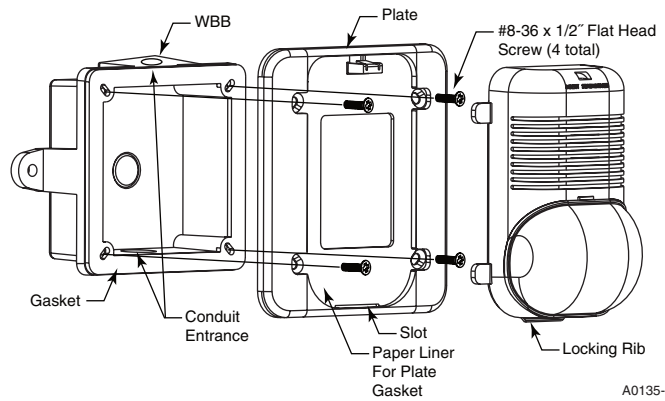
SpectrAlert Horn Sound Measurements (dBA)

Selectable Horn Tones			8-17.5V	16-33V
Temporal	Low Volume	Electromechanical	67	75
		3000 Hz Interrupted	68	75
	High Volume	Electromechanical	71	80
		3000 Hz Interrupted	72	81
Non-Temporal	Low Volume	Electromechanical	71	79
		3000 Hz Interrupted	72	79
	High Volume	Electromechanical	76	84
		3000 Hz Interrupted	77	86

DIP Switch Operation on P1224MC



Typical weatherproof mounting with universal plate



A0135-02

SpectrAlert Ordering Information

Model	Description	Model	Description
P1224MC	Selectable Output Horn/Strobe, 12/24 volt, red	H12/24	Horn, 12/24 volt, red
P1224MCW	Selectable Output Horn/Strobe, 12/24 volt, white	H12/24W	Horn, 12/24 volt, white
P1224MCP	Selectable Output Horn/Strobe, 12/24 volt, red, plain housing	H12/24K	Horn, 12/24 volt, red, outdoor
P1224MCPW	Selectable Output Horn/Strobe, 12/24 volt, white, plain housing	Accessories	
P1224MCK	Selectable Output Horn/Strobe, 12/24 volt, red, outdoor	MDL	Sync • Circuit Module, red
P1224MCSP	Selectable Output Horn/Strobe, 12/24 volt, red, "FUEGO" housing	MDLW	Sync • Circuit Module, white
S1224MC	Selectable Output Strobe, 12/24 volt, red	MDLWA	Sync • Circuit Module, white, Canadian model
S1224MCW	Selectable Output Strobe, 12/24 volt, white	S-MP	Small Footprint Mounting Plate, red, for single-gang back box
S1224MCP	Selectable Output Strobe, 12/24 volt, red, plain housing	S-MPW	Small Footprint Mounting Plate, white, for single-gang back box
S1224MCPW	Selectable Output Strobe, 12/24 volt, white, plain housing	BBS	Surface Mount Back Box Skirt, red
S1224MCK	Selectable Output Strobe, 12/24 volt, red, outdoor	BBSW	Surface Mount Back Box Skirt, white
S1224MCSP	Selectable Output Strobe, 12/24 volt, red, "FUEGO" housing	D-MP	Universal Mounting Plate (replacement), red
		D-MPW	Universal Mounting Plate (replacement), white
		WBB	Weatherproof Back Box

Notes

All of these SpectrAlert products are designed for wall mount only. All outdoor models must use weatherproof back box model WBB. Installation of less than 75 candela strobes may be permissible under the equivalent facilitation clause of the ADAAG (Sec. 2.2). However, it is the responsibility of the person or entity designing the fire alarm system to determine the acceptability of less than 75 candela strobes. All 15/75 candela strobes or horn/strobes are recommended for 20' x 20' rooms or less.

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