

L-Series

Low Frequency Sounders and Sounder Strobes



General

L-Series audible visible notification products have features to maximize profits with lower current draw and modern aesthetics.

The L-Series offers the most versatile and easy-to-use line of low frequency sounder and low frequency sounder strobes in the industry. With white and red plastic housings, listed for wall and ceiling mounting, L-Series Low Frequency can meet virtually any application requirement.

The low frequency sounder and low frequency sounder strobes were designed to address the NFPA 72 sleeping space requirements that require a low frequency notification appliance that operates within frequency range of 520 Hz \pm 10% and is of a square wave tone. Like the entire L-Series product line they include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, L-Series uses a universal mounting plate with an onboard shorting spring, so installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, 24-volt operation, and a rotary switch for 520 Hz low frequency sounder tones.

Low-frequency models include:

- Wall-mount sounder strobes: P2RL-LF, P2WL-LF, P2RLA-LF, P2WLA-LF
- Wall-mount sounders: HRL-LF, HWL-LF, HRLA-LF, HWLA-LF
- Ceiling-mount sounder strobes: PC2RL-LF, PC2WL-LF, PC2RLA-LF, PC2WLA-LF
- Ceiling-mount sounders: HCRL-LF, HCWLA-LF, HCRL-LF, HCWLA-LF
- Compact wall-mount sounders with hush function: HGRLZA-LF, HGWLZA-LF

Features

- 520 Hz \pm 10% square wave tone, NFPA compliance
- Full candela range plus High/Low tone options to optimize current draw for a wide variety of applications
- Compact, standard, and round ceiling options
- Field-selectable candela settings. Wall units: 15, 30, 75, 95, 110, 135, and 185. Ceiling units: 15, 30, 75, 95, 115, 150, and 177.
- Rotary switch for High/Low, Temp3, Temp4, and Continuous settings. Sounder-only models also offer a Coded setting.
- Plug-in design with minimal intrusion into the back box.
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with legacy SpectrAlert[®] and SpectrAlert Advance devices (directly replaces HW/R-LF, P2R/WH-LF)
- Compatible with SyncCircuit[™] modules MDL3R(A) and MDL3W(A)
- HGRLZA-LF and HGWLZA-LF include an LED alarm indicator and silence button
- Sounders listed for ceiling and wall
- Round Sounder Strobes listed for ceiling and wall



- Updated modern aesthetics

Product Line Information

Low-Frequency Sounder Strobes

P2RL-LF: Low-frequency sounder strobe, wall, red, UL-listed

P2RLA-LF: Low-frequency sounder strobe, wall, red, ULC-listed

P2WL-LF: Low frequency sounder strobe, wall, white, UL-listed

P2WLA-LF: Low frequency sounder strobe, wall, white, ULC-listed

PC2RL-LF: Low-frequency sounder strobe, ceiling, red, UL-listed

PC2RLA-LF: Low-frequency sounder strobe, ceiling, red, ULC-listed

PC2WL-LF: Low frequency sounder strobe, ceiling, white, UL-listed

PC2WLA-LF: Low frequency sounder strobe, ceiling, white, ULC-listed

Low-Frequency Sounders

HRL-LF[†]: Low frequency sounder, wall, red, UL-listed

HRLA-LF[†]: Low frequency sounder, wall, red, ULC-listed

HWL-LF[†]: Low frequency sounder, wall, white, UL-listed

HWLA-LF[†]: Low frequency sounder, wall, white, ULC-listed

HGRL-LF[†]: Compact low frequency sounder, wall, red, UL-listed

HGRLZA-LF[†]: Compact low frequency sounder, wall, red, with hush function, ULC-listed

HGWL-LF[†]: Compact low frequency sounder, wall, white, UL-listed

HGWLZA-LF[†]: Compact low frequency sounder, wall, white, ULC-listed

HCRL-LF[†]: Low frequency sounder, ceiling, red, UL-listed

HCRLA-LF[†]: Low frequency sounder, ceiling, red, ULC-listed

HCWL-LF[†]: Low frequency sounder, ceiling, white, UL-listed

HCWLA-LF[†]: Low frequency sounder, ceiling, white, ULC-listed

[†]Add -BP10 to order bulk pack of 10 units

Note: ULC-listed devices include required French labeling. Two-Stage operation is required to provide a fast pulsing pre-tone ahead of a Temporal 3 tone. Low frequency sounder-only units support two-stage operation when configured for "coded" mode. Low frequency sounder strobe units do not support two-phase operation.

Accessories

MDL3R: Sync•Circuit™ Module, red, UL-listed

MDL3RA: Sync•Circuit™ Module, red, ULC-listed

MDL3W: Sync•Circuit™ Module, white, UL-listed

MDL3WA: Sync•Circuit™ Module, white, ULC-listed

SBBRL: Surface mount back box, wall, red

SBBWL: Surface mount back box, wall, white

SBBCRL: Surface mount back box, ceiling, red

SBBCWL: Surface mount back box, ceiling, white

SBBGRL: Compact surface mount back box, wall, red

SBBGWL: Compact surface mount back box, wall, white

Architects/Engineers Specifications

GENERAL

L-Series low frequency sounder and low frequency sounder strobes shall mount to a standard $4 \times 4 \times 1\frac{1}{2}$ -inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang $2 \times 4 \times 1\frac{7}{8}$ -inch (10.16 cm x 10.16 cm x 4.76 cm) back box. A universal mounting plate shall be used for mounting wall products for all standard models and a separate universal mounting plate shall be used for mounting wall compact models. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 24 volts. When used with the Sync•Circuit Module, 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit (0°C to 49°C) from a regulated DC or full-wave rectified unfiltered power supply. Low Frequency Sounder Strobes shall have field-selectable candela settings. Wall units: 15, 30, 75, 95, 110, 135, and 185. Ceiling units: 15, 30, 75, 95, 115, 150, and 177. The field selectable tones will sound within the frequency range of 520 Hz \pm 10% square wave tone. The housing will be permanently marked "520 Hz".

LOW FREQUENCY SOUNDER

The low frequency sounder shall be a System Sensor L-Series Model _____ listed to UL 464 (ULC in Canada) and shall be approved for fire protective service. The low frequency sounder and the Sync•Circuit™ Module accessory, if used, shall be powered from a notification appliance circuit output and shall operate on a nominal 24 volts (includes fire alarm panels with built-in sync). When used with the Sync•Circuit Module, 24-volt rated notification appliance circuit outputs shall operate between 16.5 to 33 volts. If the notification appliances are not UL 9th edition listed with the corresponding panel or power supply being used, then refer to the compatibility listing of the panel to determine maximum devices on a circuit. The low-frequency sounder shall offer a choice of tone patterns: temporal three, temporal four, non-temporal (continuous) pattern, and coded supply. The low frequency sounder shall operate on a coded or non-coded power supply. It shall have high and low volume settings. The field selectable tones will sound within the frequency range of 520 Hz \pm 10% square wave tone.

LOW FREQUENCY SOUNDER STROBE COMBINATION

The low frequency sounder strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and UL 464 (ULC in Canada) and shall be approved for fire protective service. The low frequency sounder strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements (or Canadian accessibility laws) for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The low-frequency sounder shall offer a choice of tone patterns: temporal three, temporal four,

and non-temporal (continuous) pattern. The low frequency sounder on low frequency sounder strobe models shall operate on a non-coded power supply. It shall have high and low volume settings. The field selectable tones will sound within the frequency range of 520 Hz \pm 10% square wave tone.

SYNCHRONIZATION MODULE

The module shall be a System Sensor Sync•Circuit model MDL3W/MDL3R listed to UL 464 (MDL3RA/MDL3WA listed to ULC in Canadian applications) and shall be approved for fire protective service. The module shall synchronize strobes at 1 Hz and low frequency sounders at temporal three. Also, while operating the strobes, the module shall silence the low frequency sounder on low frequency sounder strobe models over a single pair of wires. The module shall mount to a $4\frac{11}{16} \times 4\frac{11}{16} \times 2\frac{1}{8}$ -inch back box. The module shall also control two Class B circuits or one 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.

UL/ULC Current Draw and Sound Output Data

Low Frequency Wall Sounder Strobe Current Draw (mA)																
Pos	Tone	Volume Setting	Current Draw (mA)													
			16-33 VDC							16-33 FWR						
			15cd	30cd	75cd	95cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	110cd	135cd	185cd
1	Temporal 3	High	98	115	158	173	182	212	266	136	153	188	206	228	258	304
2	Temporal 3	Low	98	102	141	162	173	202	255	150	150	176	194	216	242	280
3	Temporal 4	High	98	108	137	151	178	202	252	200	198	169	188	212	242	290
4	Temporal 4	Low	102	104	122	136	163	187	237	176	174	154	173	197	227	275
5	Continuous	High	141	158	198	216	234	264	305	190	207	249	268	289	321	368
6	Continuous	Low	120	128	179	196	215	244	285	165	182	226	244	266	297	342

Low Frequency Ceiling Sounder Strobe Current Draw (mA)																
Pos	Tone	Volume Setting	Current Draw (mA)													
			16-33 VDC							16-33 FWR						
			15cd	30cd	75cd	95cd	115cd	150cd	177cd	15cd	30cd	75cd	95cd	115cd	150cd	177cd
1	Temporal 3	High	98	115	158	173	182	212	266	136	153	188	206	228	258	304
2	Temporal 3	Low	98	102	141	162	173	202	255	150	150	176	194	216	242	280
3	Temporal 4	High	98	108	137	151	178	202	252	200	198	169	188	212	242	290
4	Temporal 4	Low	102	104	122	136	163	187	237	176	174	154	173	197	227	275
5	Continuous	High	141	158	198	216	234	264	305	190	207	249	268	289	321	368
6	Continuous	Low	120	128	179	196	215	244	285	165	182	226	244	266	297	342

Low Frequency Wall Sounder Strobe Sound Output (dBA)							
Pos	Tone	Volume Setting	Sound Output (dBA) UL Reverberant		Sound Output (dBA) ULC Anechoic		
			16-33 V		16-33 V		
			DC	FWR	DC	FWR	
1	Temporal 3	High	80	80	82	82	
2	Temporal 3	Low	76	76	78	78	
3	Temporal 4	High	80	80	82	82	
4	Temporal 4	Low	76	76	78	78	
5	Continuous	High	80	80	82	82	
6	Continuous	Low	76	76	78	78	

Low Frequency Ceiling Sounder Strobe Sound Output (dBA)							
Pos	Tone	Volume Setting	Sound Output (dBA) UL Reverberant		Sound Output (dBA) ULC Anechoic		
			16-33 V		16-33 V		
			DC	FWR	DC	FWR	
1	Temporal 3	High	80	80	82	82	
2	Temporal 3	Low	76	76	78	78	
3	Temporal 4	High	80	80	82	82	
4	Temporal 4	Low	76	76	78	78	
5	Continuous	High	80	80	82	82	
6	Continuous	Low	76	76	78	78	

Wall and Ceiling Sounder: Max. Low Frequency Sounder Current Draw (mA RMS) and Sound Output (dBA)								
Pos	Tone	Volume Setting	Current Draw (mA)		Sound Output (dBA) UL Reverberant		Sound Output (dBA) ULC Anechoic	
			16-33 Volts		16-33 Volts		16-33 Volts	
			DC	FWR	DC	FWR	DC	FWR
1	Temporal 3	High	108	150	80	80	82	82
2	Temporal 3	Low	78	76	76	76	78	78
3	Temporal 4	High	111	151	80	80	82	82
4	Temporal 4	Low	80	76	76	76	78	78
5	Continuous	High	111	151	80	80	82	82
6	Continuous	Low	80	76	76	76	78	78
7	Coded	High	111	151	80	80	82	82
8	Coded	Low	80	76	76	76	78	78

*NOTE: For coded tones, temporal coding must be provided by the NAC. If the NAC voltage is held constant, the sounder output will remain constantly on. Coded ratings provided are for continuous voltage.

SYSTEM SPECIFICATIONS

Physical/Electrical Specifications

- **Standard Operating Temperature:** 32°F to 120°F (0°C to 49°C)
- **Humidity Range:** 10 to 93% non-condensing
- **Frequency Range:** 520 Hz \pm 10%
- **Strobe Flash Rate:** 1 flash per second
- **Nominal Voltage Low Frequency Sounder:** Regulated 24 DC/FWR¹
- **Nominal Voltage Range Low Frequency Sounder Strobe:** Regulated 24 VDC/FWR¹
- **Operating Voltage Range:** 16 to 33 V (24 V nominal)
- **Operating Voltage Range MDL3R(A) or MDL3W(A) Sync•Circuit Module:** 16.5 to 33 V (24 V nominal)
- **Input Terminal Wire Gauge:** 12 to 18 AWG

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.

DIMENSIONS

- **Wall Sounder Strobe Dimensions (including lens):** 5.6" L x 4.7" W x 1.9" D (142 mm L x 119 mm W x 49 mm D)
- **Ceiling Sounder Strobe Dimensions (including lens):** 6.8" diameter x 2.47" high (173mm diameter x 62.7 mm D)
- **Standard Wall Sounder Dimensions:** 5.6" L x 4.7" W x 1.5" D (142 mm L x 119 mm W x 38 mm D)
- **Compact Wall Sounder Dimensions:** 5.25" L x 3.46" W x 1.5" D (133mm L x 88mm W x 38mm D)
- **Ceiling Sounder Dimensions:** 6.8" diameter x 1.4" high (173mm diameter x 36mm high)
- **Standard Wall Sounder with SBBRL/SBBWL Surface Mount Back Box:** 5.7" L x 4.8" W x 3.3" D (145 mm L x 120 mm W x 87 mm D)
- **Compact Wall Sounder with SBBGRL/SBBGWL Surface Mount Back Box:** 5.4" L x 3.6" W x 3.0" D (137 mm L x 91mm W x 76 mm D)
- **Low Frequency Ceiling Sounder with SBBCRL/SBBCWL Surface Mount Back Box:** 6.9" diameter x 3.9" high (175mm diameter x 99mm high)

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.

- **UL/ULC Listed:** S4011
- **FM Approved:** PR452768
- **CSFM:**
Horns only: 7135-1653:0516
Horn/Strobes: 7125-1653:0517

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Country of Origin: Mexico